

**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

**MEETING**

**June 14, 2023**

**1:00 pm**

**Meeting conducted electronically/in-person pursuant to the Procedure Bylaw  
28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia**

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

**1. ADOPTION OF THE AGENDA**

**1.1 June 14, 2023 Meeting Agenda**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for June 14, 2023 as circulated.

**2. ADOPTION OF THE MINUTES**

**2.1 May 17, 2023 Meeting Minutes**

That the Liquid Waste Committee adopt the minutes of its meeting held May 17, 2023 as circulated.

*pg 4*

**3. DELEGATIONS**

**4. INVITED PRESENTATIONS**

**5. REPORTS FROM COMMITTEE OR STAFF**

**5.1 North Shore Wastewater Treatment Plant Program - Program Overview and Background**

*Verbal Update*

Designated Speaker: Cheryl Nelms, General Manager, Project Delivery

*pg 8*

**5.2 Change Order to the Contract Resulting from RFP No. 19-007: Northwest Langley Wastewater Treatment Plant - Design and Construction Engineering Services**

That the GVS&DD Board:

- a) approve a change order in the amount of up to \$20,655,821 (exclusive of taxes) to CH2M Hill Canada Ltd., subject to final review by the Commissioner; and

*pg 28*

---

<sup>1</sup> Note: Recommendation is shown under each item, where applicable.

- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

**5.3 Amendment to Central Aggregates Biosolids Management Contract Resulting from SRFOI 21-018** *pg 31*

That the GVS&DD Board:

- a) approve an amendment to the contract with Lafarge Canada Inc. resulting from Standing Request for Expressions of Interest No. 21-018: Biosolids Management, in the amount of up to \$4,097,000 (exclusive of taxes) for biosolids management at the Central Aggregates gravel pit, 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 amendment should proceed.

**5.4 Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2021-2022** *pg 34*

That the GVS&DD Board direct staff to:

- a) submit the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, to the Ministry of Environment and Climate Change Strategy, in accordance with the requirements of the *Integrated Liquid Waste and Resource Management Plan*; and
- b) arrange for the Liquid Waste Committee to receive public comments on the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, at the September 13, 2023 Liquid Waste Committee meeting.

**5.5 Manager’s Report** *pg 38*

That the Liquid Waste Committee receive for information the report dated May 31, 2023 titled “Manager’s Report”.

**6. INFORMATION ITEMS**

**7. OTHER BUSINESS**

**8. BUSINESS ARISING FROM DELEGATIONS**

**9. RESOLUTION TO CLOSE MEETING**

*Note: The Committee 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 Liquid Waste Committee close its meeting scheduled for June 14, 2023 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions as follows:

- 90 (1) A part of a council 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 council considers that disclosure could reasonably be expected to harm the interests of the municipality;
  - (k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public;
  - (m) a matter that, under another enactment, is such that the public may be excluded from the meeting.

**10. ADJOURNMENT/CONCLUSION**

That the Liquid Waste Committee adjourn/conclude its meeting of June 14, 2023.

---

Membership:

Hurley, Mike (C) – Burnaby	Johnstone, Patrick – New Westminster	Little, Mike – North Vancouver District
Knight, Megan (VC) – White Rock	Kim, Steve – Coquitlam	Loo, Alexa – Richmond
Albrecht, Paul – Langley City	Kirby-Yung, Sarah – Vancouver	West, Brad – Port Coquitlam
Cassidy, Christine – West Vancouver	Kooner, Pardeep – Surrey	Yousef, Ahmed – Maple Ridge
Ferguson, Steve – Langley Township		

**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

**2.1**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Liquid Waste Committee held at 1:02 pm on Wednesday, May 17, 2023 in the 28<sup>th</sup> Floor Boardroom, 4515 Central Boulevard, Burnaby British Columbia.

**MEMBERS PRESENT:**

Chair, Mayor Mike Hurley, Burnaby  
Vice Chair, Mayor Megan Knight\*, White Rock  
Councillor Paul Albrecht, Langley City  
Councillor Christine Cassidy, West Vancouver  
Councillor Steve Ferguson, Langley Township  
Councillor Steve Kim, Coquitlam  
Councillor Pardeep Kooner, Surrey  
Councillor Alexa Loo, Richmond  
Mayor Brad West\*, Port Coquitlam  
Councillor Ahmed Yousef\*, Maple Ridge

**MEMBERS ABSENT:**

Mayor Patrick Johnstone, New Westminster  
Councillor Sarah Kirby-Yung, Vancouver  
Mayor Mike Little, North Vancouver District

**STAFF PRESENT:**

Heather McNell, Deputy Chief Administrative Officer, Policy and Planning  
Peter Navratil, General Manager, Liquid Waste Services  
Morgan Mackenzie, Legislative Services Coordinator, Board and Information Services

**1. ADOPTION OF THE AGENDA**

**1.1 May 17, 2023 Meeting Agenda**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for May 17, 2023 as circulated.

**CARRIED**

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



**2. ADOPTION OF THE MINUTES**

**2.1 April 12, 2023 Meeting Minutes**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the minutes of its meeting held April 12, 2023 as circulated.

**CARRIED**

**3. DELEGATIONS**

No items presented.

**4. INVITED PRESENTATIONS**

No items presented.

**5. REPORTS FROM COMMITTEE OR STAFF**

**5.1 Stage Gate 2: Northwest Langley Wastewater Treatment Plant Expansion Project**

Report dated May 5, 2023, from Marie-Liesse Marc, Director, Major Projects, Project Delivery, seeking GVS&DD Board approval for the Northwest Langley Wastewater Treatment Plant Expansion Project to advance to detailed design (Stage Gate 2), providing information to support this decision, and providing a progress update on the entire program of work, including the projects that support the treatment plant expansion.

Members were shown a Metro Vancouver video on the construction at the Golden Ears site, associated with the Northwest Langley Wastewater Treatment Plant. This video is not retained with the agenda.

Members were provided with a presentation on the Northwest Langley Wastewater Treatment Plant Expansion Project, highlighting the stage gate process, program overview, program benefits, program status, the value engineering exercise, program cost estimates, risk management, and the expert advisory panel's review.

Presentation material titled "Stage Gate 2: Northwest Langley WWTP Expansion Project" is retained with the May 17, 2023 Liquid Waste Committee agenda.

**It was MOVED and SECONDED**

That the GVS&DD Board approve the Northwest Langley Wastewater Treatment Plant Expansion Project advancing to detailed design (Stage Gate 2), as described in the report dated May 5, 2023, titled, "Stage Gate 2: Northwest Langley Wastewater Treatment Plant Expansion Project".

**CARRIED**

**5.2 Annacis Island Wastewater Treatment Plant – Stage 5 Expansion and Outfall Updates**

Report dated May 5, 2023, from Bob Cheng, Director, Major Projects, Project Delivery, and Murray Gant, Director, Major Projects, Project Delivery, providing the GVS&DD Board with an update on the progress of the Annacis Island Wastewater Treatment Plant (AIWWTP) – Stage 5 Expansion and Outfall projects.

Members were provided with a presentation on the AIWWTP Stage 5 Expansion and Outfall projects, highlighting the background on the project, the status of the work, the impact of completed early works, the schedule, and an update on the Annacis Outfall project.

Presentation material titled “Annacis Island Wastewater Treatment Plant” is retained with the May 17, 2023 Liquid Waste Committee agenda.

**It was MOVED and SECONDED**

That the GVS&DD Board receive for information the report dated May 5, 2023, titled, “Annacis Island Wastewater Treatment Plant – Stage 5 Expansion and Outfall Updates”.

**CARRIED**

**5.3 2023 Liquid Waste Capital Projects**

Report dated May 4, 2023, from Colin Meldrum, Director, Engineering, Design and Construction, Liquid Waste Services, providing the GVS&DD Board with information on the Liquid Waste capital projects under its purview for 2023, as approved by the GVS&DD Board on October 28, 2022.

**It was MOVED and SECONDED**

That the GVS&DD Board receive for information the report dated May 4, 2023 titled “2023 Liquid Waste Capital Projects”.

**CARRIED**

**5.4 Manager’s Report**

Report dated May 8, 2023, from Peter Navratil, General Manager, Liquid Waste Services, providing the Liquid Waste Committee with an update on the North Shore Wastewater Treatment Plant, the First Narrows Pump Station (ACEC) Award of Merit, the Bylaw Notice Authority for GVS&DD and GVWD, the Recreational Water Quality Monitoring Program, and the Liquid Waste Committee’s 2023 Work Plan.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated May 8, 2023 titled “Manager’s Report”.

**CARRIED**

**6. INFORMATION ITEMS**

**6.1 2023 Update on Liquid Waste Sustainability Fund Projects**

**7. OTHER BUSINESS**

No items presented.

**8. BUSINESS ARISING FROM DELEGATIONS**

No items presented.

**9. RESOLUTION TO CLOSE MEETING**

**It was MOVED and SECONDED**

That the Liquid Waste Committee close its meeting scheduled for May 17, 2023 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions as follows:

“90 (1) A part of a council 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 council considers that disclosure could reasonably be expected to harm the interests of the municipality.”

**CARRIED**

**10. ADJOURNMENT/CONCLUSION**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adjourn its meeting of May 17, 2023.

**CARRIED**

(Time: 1:43 pm)

---

Morgan Mackenzie,  
Legislative Services Coordinator

---

Mike Hurley,  
Chair

60093924 FINAL

---

To: Liquid Waste Committee

From: Cheryl Nelms, General Manager, Project Delivery

Date: May 25, 2023 Meeting Date: June 14, 2023

Subject: **North Shore Wastewater Treatment Plant Program - Program Overview and Background**

---

Cheryl Nelms will be providing a verbal update to the Liquid Waste Committee on the North Shore Wastewater Treatment Plant Program – Program Overview and Background at the June 14, 2023 meeting. The presentation slide deck for this update is attached.

**Attachment**

North Shore Wastewater Treatment Plant Program - Program Overview and Background

60252317



Architectural Rendering of NSWWTP

# North Shore Wastewater Treatment Plant Program

## PROGRAM OVERVIEW AND BACKGROUND

Cheryl Nelms, P.Eng., Ph.D.  
General Manager, Project Delivery

Liquid Waste Committee – June 14, 2023  
59680597

**metro**vancouver

1

## AGENDA

- Program Overview
- Project History & Background
- Termination & Transition
- Activities Since Transition
- Next Steps

**metro**vancouver





## WHY ARE WE BUILDING THE NORTH SHORE WASTEWATER TREATMENT PLANT?

- Regulatory requirement to upgrade to secondary treatment
- Return Lions Gate WWTP lands to Squamish Nation



# REGULATORY REQUIREMENT

Upgrade to Secondary

- Federal Wastewater Systems Effluent Regulation (2012) required upgrade to secondary by end of 2020
- Requirement of 2011 Liquid Waste Management Plan, approved by provincial Minister of Environment



Lions Gate WWTP and Lions Gate Bridge, 2013

## NORTH SHORE WASTEWATER TREATMENT PLANT PROGRAM





# WHY THIS LOCATION WAS SELECTED

Site Location



metrovancover

7

# CONVEYANCE PROJECT – NOW COMPLETE

Includes Pump Station and 3km of Conveyance Pipes



Project | 2023 Municipal & Civil Infrastructure | 2023 Winner

2023 Award of Merit

## First Narrows Pump Station Design-Build

WSP Canada



General Contractors – \$20 Million to \$50 Million

Kenaidan Contracting Ltd.

North Shore Wastewater Treatment Plant Conveyance Project



## TREATMENT PLANT

In transition to new contractor



## DESIGN POPULATION

2014 Project Definition Report

- On track to meet design population targets
- Design population of ~250,000 people
- Internal efficiency improvements to treatment process = increased capacity beyond 250,000

*Design team monitoring growth projections and flows/loads*

## TERTIARY TREATMENT

- Added in 2019
- Improves effluent quality
- Protects the Salish Sea
- Future-proofs the plant
- Ensures regulatory requirements are met



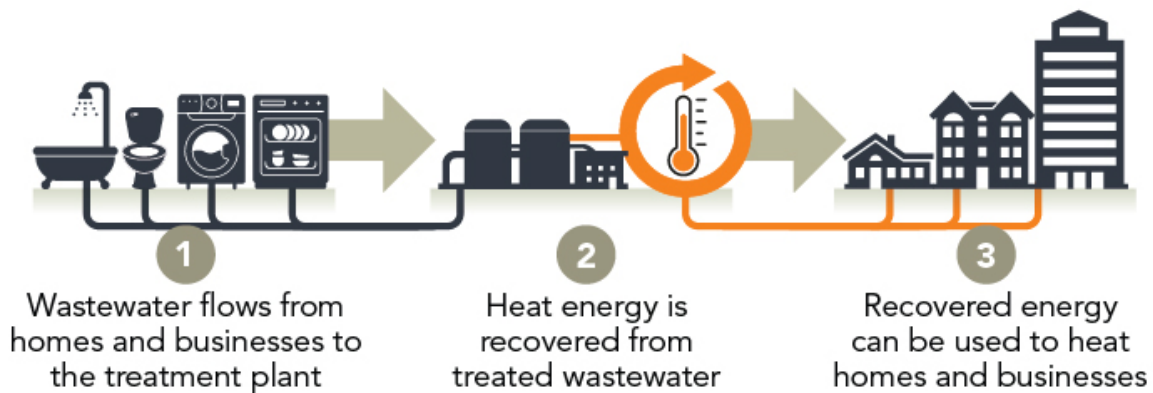
Coho Salmon Fry



Orca

## DISTRICT ENERGY SYSTEM

Will provide 5,700 tonnes GHG reduction credits to Metro Vancouver



# CLIMATE ACTION, RESILIENCE, AND ENVIRONMENTAL PROTECTION FEATURES

- Leadership in Energy and Environmental Design (LEED) Gold
- ENVISION Gold certification
- Reclaimed water
- Meet seismic standards
- Biogas cogeneration used to produce heat and power for plant



NSWWTP Architectural Rendering

# COMMUNITY INTEGRATION & AMENITIES



NSWWTP Architectural Rendering



NSWWTP Site aerial, April 2023



# INNOVATIVE USE OF SPACE

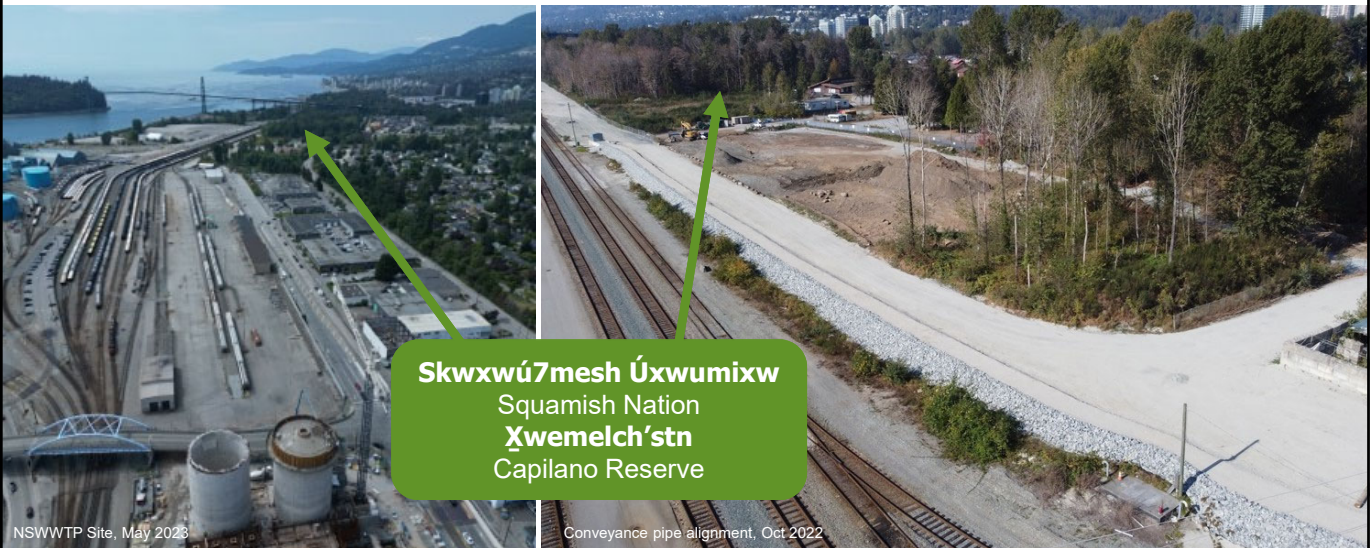


NSWWTP Architectural Rendering

metrovancover

15

# SQUAMISH NATION



NSWWTP Site, May 2023

Conveyance pipe alignment, Oct 2022

**Skwxwú7mesh Úxwumixw**  
 Squamish Nation  
**Xwemelch'stn**  
 Capilano Reserve

metrovancover

16

# INITIATIVES AT LIONS GATE WWTP

- Still operational
- Working with regulators
- Reduce influent loading
- Improve quality of effluent discharged to Burrard Inlet
- Operating strategy changes
- Treatment technology improvements
- Public education initiatives

metrovancover

Get just as clean with less



Managing Soaps and Detergents Campaign, 2022



LGWTP Aerial, 2017

metrovancover

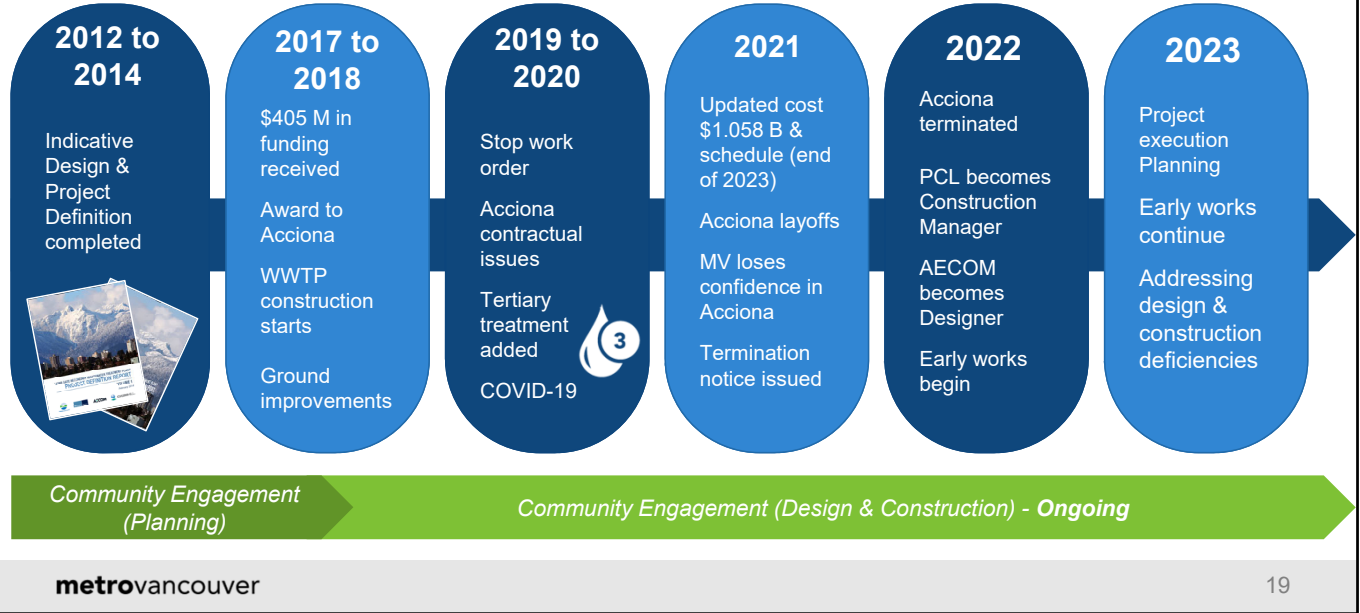
# Project History & Background

NSWWTP architectural Rendering

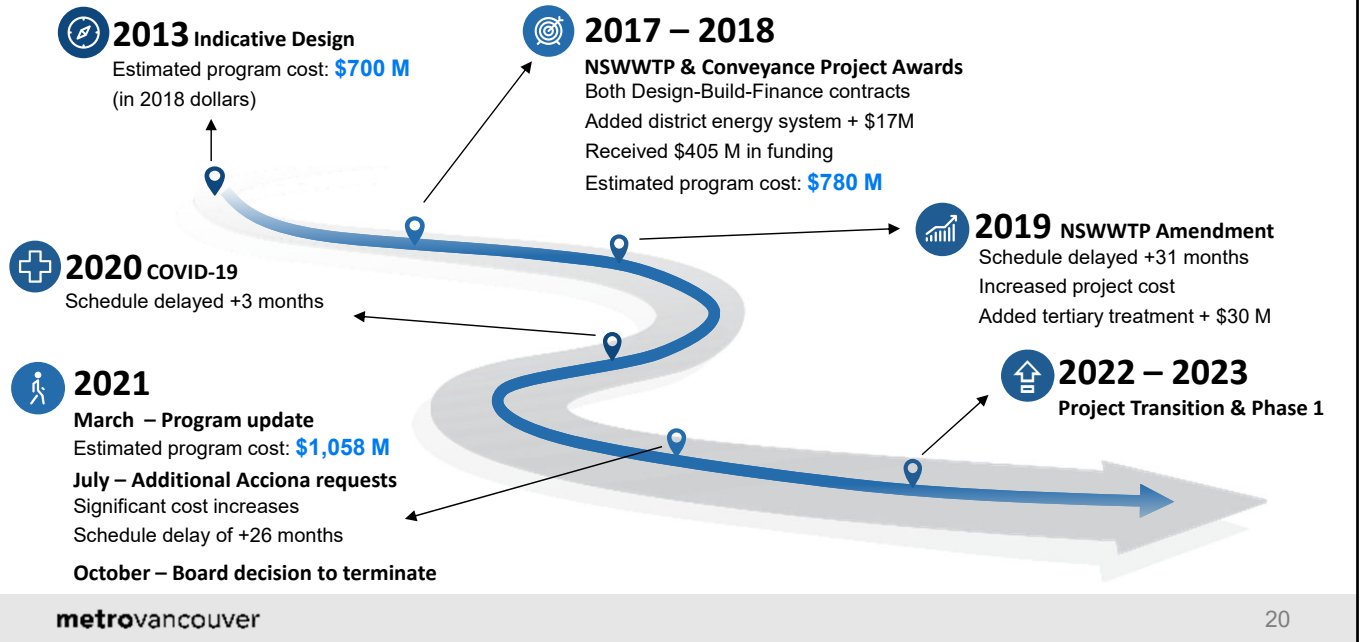




# PROJECT TIMELINE



# PROGRAM COSTS





## REASONS FOR ACCIONA TERMINATION

June to September 2021

### *June 2021*

- Already 2.5 years behind schedule with increased cost
- Acciona informed GVS&DD it would take 2+ more years to complete
- Asked for a further budget increase (almost double the original contract price)

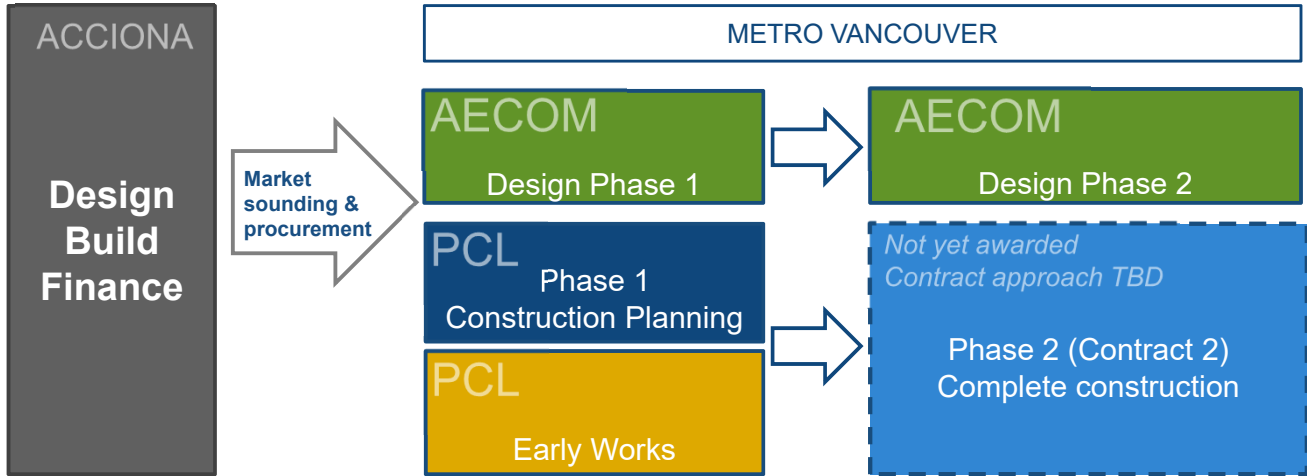
### *September 2021*

- Without warning, Acciona laid off majority of staff working on the project

**Acciona underperformed and consistently failed to meet its contractual obligations, causing Metro Vancouver to lose confidence in Acciona's ability to deliver the project.**

# PROJECT DELIVERY MODEL

Transition from Termination



# OVERSIGHT & GOVERNANCE



Project controls



Oversight by MV team



Transparency and communication



Integrated project team



Clear and timely decision making





## ACTIVITIES SINCE TRANSITION

- Due diligence review of existing design & construction
- Developing project execution plan, cost estimate, and schedule
- Correction of design deficiencies and non-compliances
- Advancing detailed design
- Early Works construction (including ongoing concrete deficiencies repairs)



Activated Sludge Tanks, April 2023



# CONCRETE DEFICIENCIES



metrovancover

27

# CONCRETE DEFICIENCIES



metrovancover

28



# CONCRETE DEFICIENCIES



metrovancover

29

# EARLY WORKS CONCRETE PLANNED



NSWTR Site, Jun 2022

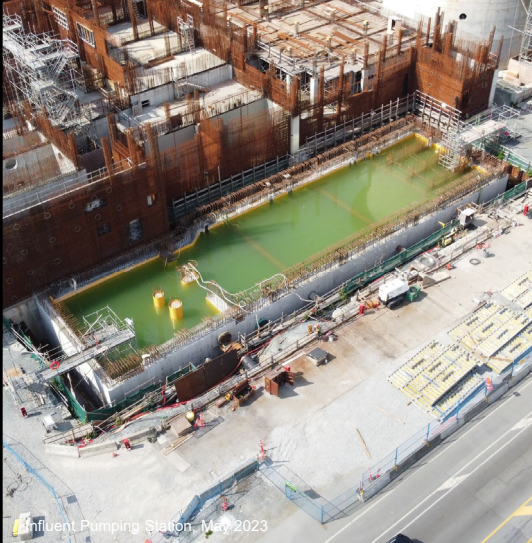
metrovancover

30



# CONSTRUCTION PROGRESS

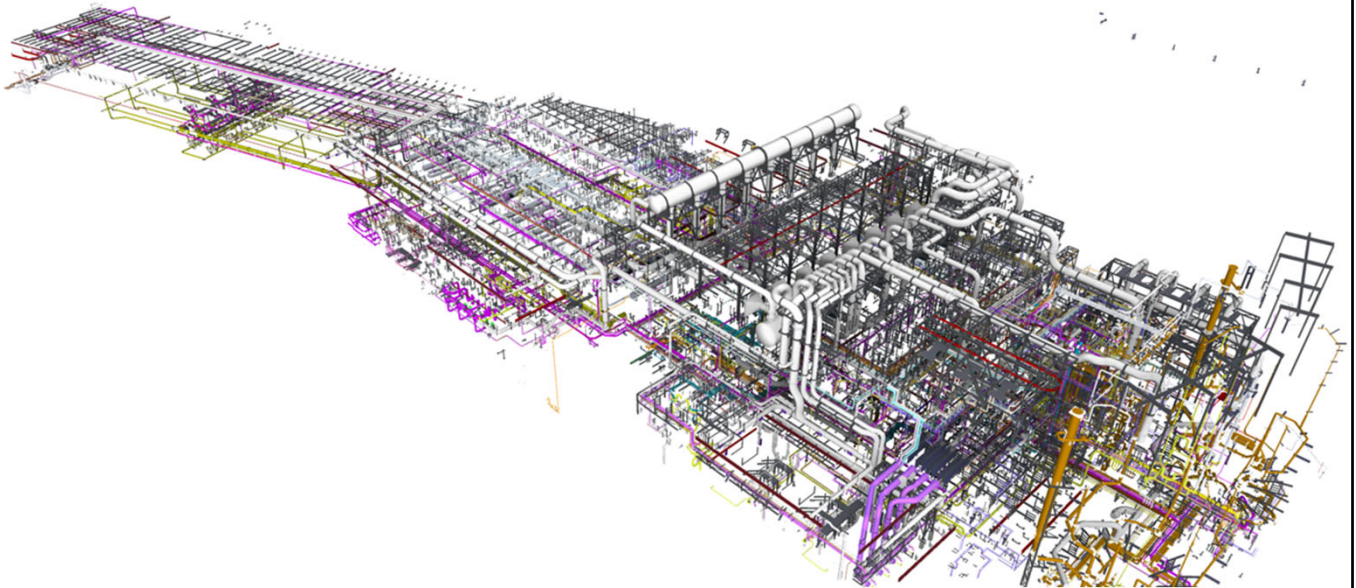
Early Works - Concrete



metrovancover

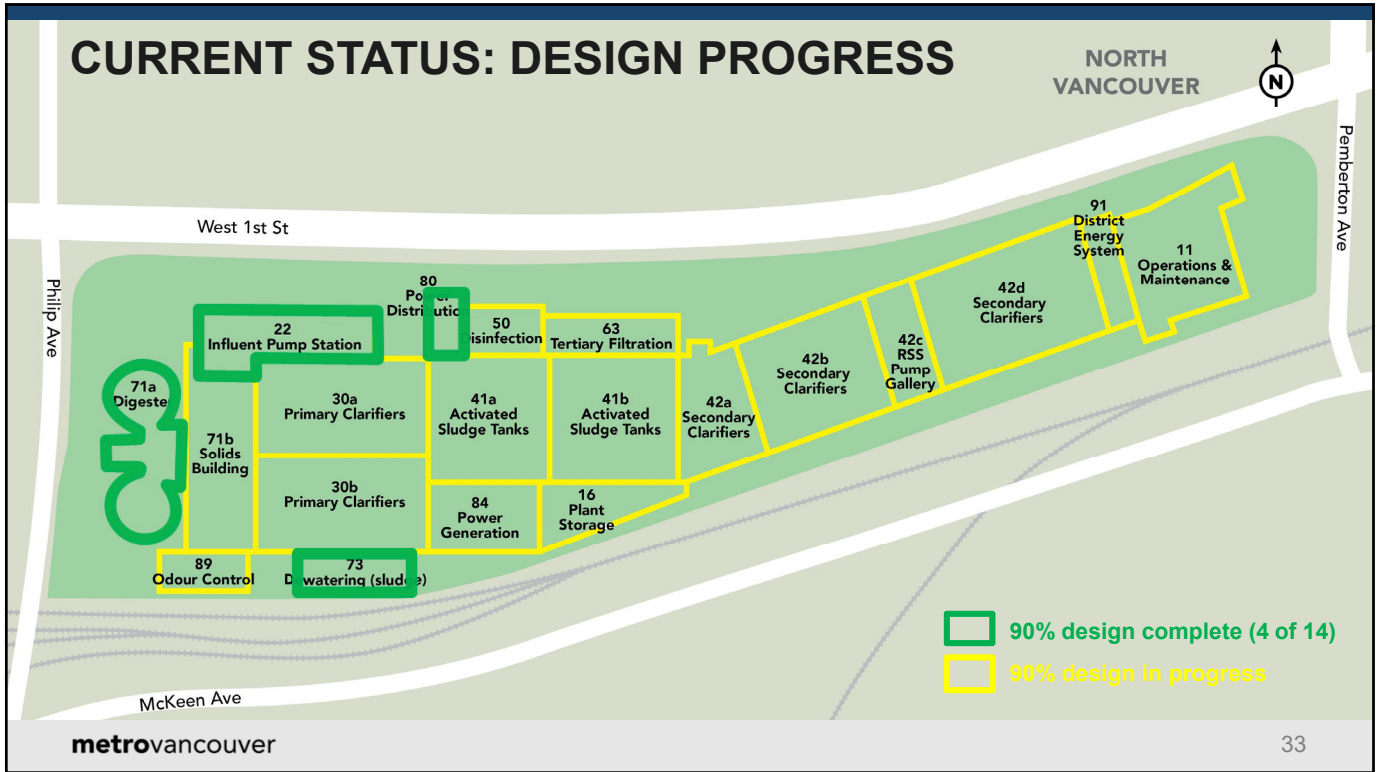
31

# DESIGN DEFICIENCIES



metrovancover

32





**North Shore Wastewater Treatment Plant Project**

April 2023

About the Project

Metro Vancouver is building the North Shore Wastewater Treatment Plant to replace the current Lions Gate Wastewater Treatment Plant. This new treatment facility is being built to serve 250,000 residents and businesses on the North Shore and will provide tertiary treatment to better protect the environment. The project is located on West 1st Street, between Philip and Pemberton Avenues, in the District of North Vancouver (see map below for location).

[Visit the project webpage to learn more](#)



Senior Municipal Finance Staff Site Tour, Nov 2022

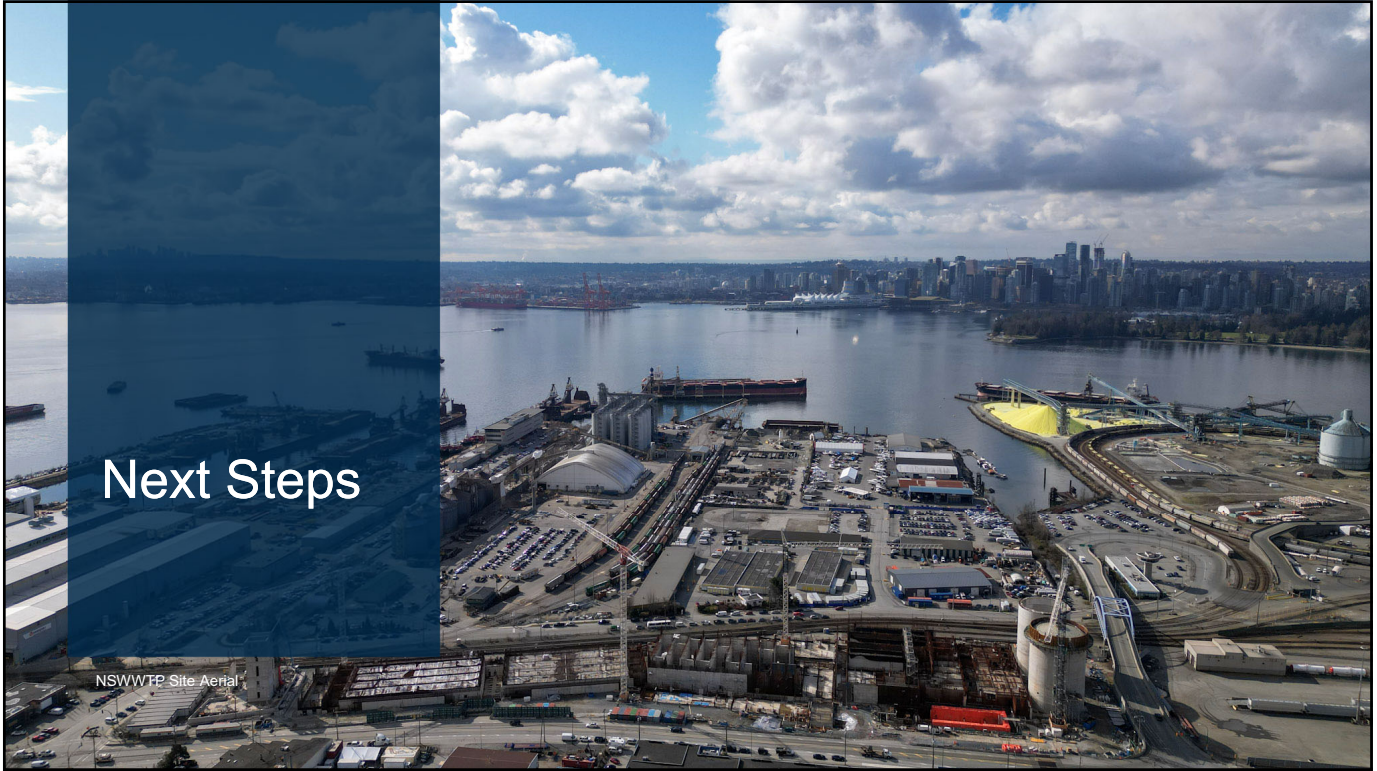
**metrovancover**

## ENGAGEMENT & COMMUNICATIONS

- Member jurisdictions
- Squamish Nation
- LEC, BC Hydro, Fortis
- Business and industry neighbours
- Community and public
- Construction impact mitigation

34





## NEXT STEPS

### June

- Liquid Waste Committee Site tour
- GVS&DD Board

### July

- Cost and Schedule Updates
  - Liquid Waste Committee & Finance Committee
  - GVS&DD Board



NSWWTP Architectural Rendering

# Discussion

**metro**vancouver

---

To: Liquid Waste Committee

From: Marie-Liesse Marc, Director, Major Projects, Project Delivery  
George Kavouras, Director, Procurement and Real Estate Services

Date: June 2, 2023 Meeting Date: June 14, 2023

Subject: **Change Order to the Contract Resulting from RFP No. 19-007: Northwest Langley Wastewater Treatment Plant - Design and Construction Engineering Services**

---

### RECOMMENDATION

That the GVS&DD Board:

- a) approve a change order in the amount of up to \$20,655,821 (exclusive of taxes) to CH2M Hill Canada Ltd., 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.

---

### EXECUTIVE SUMMARY

At its June 2, 2023 meeting, the GVS&DD Board approved the Northwest Langley Wastewater Treatment Plant (NLWWTP) Expansion Project advancing to detailed design (Stage Gate 2). The plant's design is being revised to incorporate value engineering opportunities identified in a comprehensive cost and design review and accommodate accelerated population growth in northeast Surrey.

A proposed change order in the amount of up to \$20,655,821 will allow CH2M Hill Canada Ltd. to complete the detailed design work, incorporating the construction cost saving measures and the Stage 1 plant capacity increase from 230,000 to 280,000 service population. This change order will increase the total contract value to \$65,981,187. The requested change order is below the program management consultant's internal estimate for the work and can be accommodated within the current approved budget for the Northwest Langley Wastewater Treatment Plant Program.

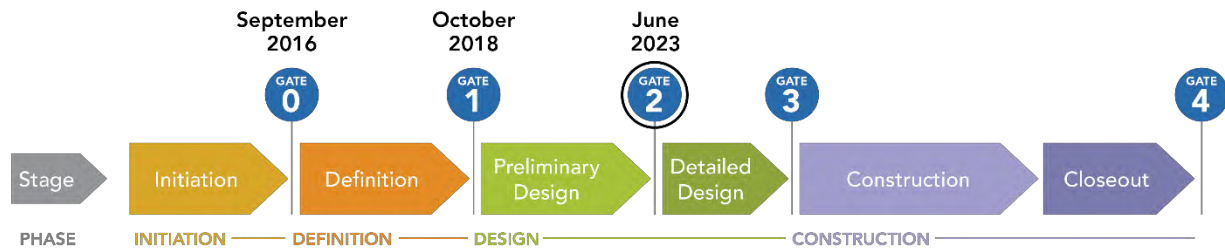
### PURPOSE

This report is to request authorization by the GVS&DD Board for a change order to the contract resulting from RFP No. 19-007 Northwest Langley Wastewater Treatment Plant – Design and Construction Services awarded to CH2M Hill Canada Ltd. (CH2M Hill) in the amount of up to \$20,655,821 (exclusive of taxes), for services to complete the detailed design and procurement of the Northwest Langley Wastewater Treatment Plant Stage 1 expansion. Construction services are not part of the existing contract and are to be awarded at a later date.

### BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts which exceed a value of \$5,000,000 require the approval of the GVS&DD Board of Directors.





*Figure 1: Stage Gate Approval Process*

**SCOPE CHANGES AND DETAILED DESIGN EXTENSION**

At its June 2, 2023 meeting, the GVS&DD Board approved the Northwest Langley Wastewater Treatment Plant Expansion Project (see Reference) advancing to detailed design (Stage Gate 2). A prior value engineering exercise identified significant cost reduction measures to be included in the design, as well as opportunities for a simplified, more modular optimized design to accommodate future expansion and reduced facility footprint (i.e., decreased concrete and site excavation). During that time, it was also determined that population growth in northeast Surrey had accelerated, and that certain areas originally scheduled for connection to the NLWWTP during a second phase of expansion should be included in the current build. This resulted in an increase in the plant’s initial design service population from 230,000 to 280,000 people. The plant is projected to have an ultimate build-out service population of 700,000 people by 2101.

Incorporation of the cost reduction measures, design adjustments, and increased service population requires significant rework of aspects of the plant detailed design, resulting in efforts beyond the scope of the existing contract. Additionally, and with the objective to minimize design rework and proactively manage the quality of output, scope, schedule, and budget, Metro Vancouver requires the implementation of more robust design and project management processes.

CH2M Hill presented a detailed proposal outlining the activities, work plan, resources, level of effort, and fees necessary to reinitiate and complete the Detailed Design and Procurement phases of the NLWWTP Expansion Project. Metro Vancouver and the Project’s Program Management Consultant conducted a detailed evaluation of CH2M Hill’s proposal for completing the detailed design work, including validation of scope, level of effort, and fees. After a series of review and negotiation meetings, staff recommend a change order in the amount of \$20,655,821 to allow detailed design and procurement work to proceed without further delay to project completion.

**ALTERNATIVES**

- 1) That the GVS&DD Board:
  - a) approve a change order in the amount of up to \$20,655,821 (exclusive of taxes) to CH2M Hill Canada Ltd. 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 GVS&DD Board receive for information the report dated June 2, 2023 titled “Change Order to the Contract Resulting from RFP No. 19-007: Northwest Langley Wastewater Treatment Plant - Design and Construction Engineering Services” and direct staff to report back to with options for an alternate course of action.

### **FINANCIAL IMPLICATIONS**

The requested change order is below the program management consultant’s internal estimate for the work and can be accommodated within the current approved budget for the NLWWTP Program.

If the GVS&DD Board approves Alternative 1, the contract with CH2M Hill will be amended by change order in the amount of up to \$20,655,821 (exclusive of taxes), to complete detailed design and procurement of the Stage 1 NLWWTP facilities. The value of this change order will increase the total contract value to \$65,981,187.

### **CONCLUSION**

At its June 2, 2023 meeting, the GVS&DD Board approved the Northwest Langley Wastewater Treatment Plant Expansion Project advancing to detailed design (Stage Gate 2). Incorporation of identified cost reduction measures and an increase in NLWWTP Stage 1 capacity require significant rework of aspects of the plant design. It is recommended that the GVS&DD Board proceed with a change order to CH2M Hill Canada Ltd.’s contract by an amount of up to \$20,655,821 to complete detailed design and procurement of the NLWWTP facilities without further delay to completion of the Project.

### **Reference**

[Stage Gate 2: Northwest Langley Wastewater Treatment Plant Expansion Project](#)

56701798

---

To: Liquid Waste Committee

From: George Kavouras, Director, Procurement and Real Estate Services  
Janelle Hunt, Program Manager, Utility Residuals Management, Liquid Waste Services

Date: June 1, 2023 Meeting Date: June 14, 2023

Subject: **Amendment to Central Aggregates Biosolids Management Contract Resulting from SRFEOI 21-018**

---

### RECOMMENDATION

That the GVS&DD Board:

- a) approve an amendment to the contract with Lafarge Canada Inc. resulting from Standing Request for Expressions of Interest No. 21-018: Biosolids Management, in the amount of up to \$4,097,000 (exclusive of taxes) for biosolids management at the Central Aggregates gravel pit, 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 amendment should proceed.
- 

### EXECUTIVE SUMMARY

The *Liquid Waste Management Plan* requires Metro Vancouver to beneficially use biosolids. Metro Vancouver biosolids have been beneficially used by Lafarge Canada Inc. (Lafarge) at their Central Aggregates gravel pit to reclaim exhausted gravel extraction areas for agricultural use. Lafarge submitted a proposal to amend their existing contract under Standing Request for Expressions of Interest (SRFEOI) No. 21-018: Biosolids Management. The amendment would increase the volume of Metro Vancouver biosolids that could be managed on the site by increasing the area to be reclaimed and extending the contract until 2026. Lafarge has demonstrated successful management of biosolids for Metro Vancouver at the site and proposed a reasonable price. It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to amend the contract with Lafarge in an amount of up to \$4,097,000 (exclusive of taxes).

### PURPOSE

The purpose of this report is to recommend that the GVS&DD Board approve the contract amendment with Lafarge Canada Inc. for the beneficial use of biosolids at their Central Aggregates gravel pit in Abbotsford, BC in order to manage additional Iona Island Wastewater Treatment Plant (WWTP) biosolids.

### BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw No. 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts that exceed a value of \$5 million require the approval of the Board of Directors.

In 2022, Metro Vancouver entered into a 2-year, \$3,300,000 contract under SRFEOI 21-018 with Lafarge to manage Iona Island WWTP land-dried biosolids at their Central Aggregates gravel pit.

This report is being brought forward to the Liquid Waste Committee to consider a recommendation to the GVS&DD Board to amend the existing contract with Lafarge, in the amount of up to \$4,097,000 (exclusive of taxes) for a total contract value of \$7,397,000, in order to manage additional Iona Island WWTP land-dried biosolids at Central Aggregates gravel pit.

### **DESCRIPTION OF SERVICES**

The scope of work includes the management and beneficial use of Class B land-dried biosolids stockpiled at the Iona Island WWTP. The biosolids will be mixed with native soils to create productive soil that will be used to reclaim land disturbed by gravel extraction. The project will beneficially use biosolids from the stockpile at Iona Island WWTP for which there are few beneficial use opportunities as they are low in nutrients. The stockpile biosolids will be used to build a sub-soil, while other soils will be used to cap and re-vegetate the site.

Since 2022, Lafarge has beneficially used 16,000 bulk tonnes of Iona Island WWTP land-dried biosolids to reclaim the Central Aggregates gravel pit. The proposed amendment would increase the volume of biosolids to be managed at the site and extend the length of the contract to 2026. The additional biosolids will allow Lafarge to expand the reclamation area as gravel extraction activities cease.

Metro Vancouver must remove the Iona Island WWTP land-dried stockpile prior to ground improvements for the Iona Island WWTP Projects. The Central Aggregates gravel pit represents a proven biosolids beneficial use project with an experienced contractor, capable of responsibly managing the land-dried biosolids. The amendment amount of \$4,097,000 is based on biosolids quantities and site applications specified in Lafarge's amendment letter, and subsequent negotiations. The rate per tonne is comparable to the cost of other Metro Vancouver biosolids beneficial use projects and is significantly less than the cost to dispose of biosolids in a landfill, which is not a beneficial use.

The cost of hauling biosolids to the site is not included in the award. Hauling services are provided under an existing contract awarded to Arrow Transportation Systems Inc. through competition No. RFP 19-112: Utility Residuals Management Hauling Services.

### **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve an amendment to the contract with Lafarge Canada Inc. resulting from Standing Request for Expressions of Interest No. 21-018: Biosolids Management, in the amount of up to \$4,097,000 (exclusive of taxes) for biosolids management at the Central Aggregates gravel pit, 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 amendment should proceed.
  
2. That the GVS&DD Board receive for information the report dated June 1, 2023, titled "Amendment to Central Aggregates Biosolids Management Contract Resulting from SRFEOI 21-018," and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

### **FINANCIAL IMPLICATIONS**

If the Board approves Alternative 1, a contract amendment will be awarded to Lafarge in the amount of up to \$4,097,000 (exclusive of taxes). This amount is within the Liquid Waste Services' budget allocated for this work.

Under Alternative 2, staff will need to seek other options for the management of Iona Island WWTP land-dried biosolids. Limited opportunities are available for beneficial use of land-dried biosolids and they must be removed prior to Iona Island WWTP Projects construction work. If an alternative beneficial use option cannot be secured, biosolids will need to be disposed in a landfill, resulting in additional costs of up to \$2,239,000 over the course of this contract.

### **CONCLUSION**

Lafarge Canada Inc. has proposed to amend their contract under SRFEI No. 21-018 for Biosolids Management at their Central Aggregates gravel pit. The proposed amendment would increase the volume of biosolids beneficially used to reclaim land at the Central Aggregates gravel pit and extend the contract until 2026. It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to amend the contract with Lafarge Canada Inc. in an amount of up to \$4,097,000 (exclusive of taxes).

59151549

---

To: Liquid Waste Committee

From: Abin Antony, Program Manager, Policy, Planning & Analysis, Liquid Waste Services

Date: June 7, 2023 Meeting Date: June 14, 2023

Subject: ***Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022***

---

### **RECOMMENDATION**

That the GVS&DD Board direct staff to:

- a) submit the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, to the Ministry of Environment and Climate Change Strategy, in accordance with the requirements of the *Integrated Liquid Waste and Resource Management Plan*; and
  - b) arrange for the Liquid Waste Committee to receive public comments on the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, at the September 13, 2023 Liquid Waste Committee meeting.
- 

### **EXECUTIVE SUMMARY**

In accordance with the 2011 *Integrated Liquid Waste and Resource Management Plan* (ILWRMP), Metro Vancouver must submit a biennial report by July 1, 2023 to the Ministry of Environment and Climate Change Strategy (MoECCS) outlining progress by Metro Vancouver and its member jurisdictions in implementing ILWRMP actions through 2021 and 2022. GVS&DD Board approval is requested to submit the attached biennial report by the required deadlines to the MoECCS, followed by an opportunity to receive comments on the report. The biennial report outlines significant progress in regional liquid waste management over the preceding two years along with continuing challenges, especially during wet weather.

Review and update of the ILWRMP is currently underway, and approval of a more streamlined and targeted progress reporting approach will be requested for the next plan. The next plan will be modernized, with more impactful actions that better serve regional needs.

### **PURPOSE**

To request that the GVS&DD Board authorize staff to forward the attached biennial report to the MoECCS, and arrange for the Liquid Waste Committee to receive public comments at its scheduled meeting of September 13, 2023.

### **BACKGROUND**

The 2011 *Integrated Liquid Waste and Resource Management Plan* outlines requirements for biennial reporting, summarizing progress by Metro Vancouver and its member jurisdictions in implementing ILWRMP actions completed over the preceding two calendar years. Under the process specified in the ILWRMP, this biennial reporting must be submitted to the MoECCS by

July 1<sup>st</sup> every second calendar year, followed by an opportunity for the Liquid Waste Committee to receive input and comments on the report. The last biennial report was approved by the GVS&DD Board on June 25, 2021.

### **BIENNIAL REPORT: 2021-2022**

The attached biennial report has been prepared in a similar format as previous years, structured into two volumes addressing progress by Metro Vancouver and its member jurisdictions, with key highlights including:

- Substantial investments being made in upgrading treatment facilities throughout the region
- Progress in completing Integrated Stormwater Management Plans (ISMPs) around the region
- Progress in separating combined sewers in many key areas, including nearly complete sewer separation in Burnaby in the Willingdon and Westridge catchment areas.

However, Metro Vancouver and its member jurisdictions continue to have challenges including: (1) managing large inflows during wet weather; (2) inconsistent regional progress in implementing ISMP actions leading to confirmed improvement in environmental health; (3) inconsistent progress towards the combined sewer overflow elimination target dates as specified in the ILWRMP.

### **REVIEW AND UPDATE OF THE *INTEGRATED LIQUID WASTE AND RESOURCE MANAGEMENT PLAN***

Metro Vancouver is developing the next *Liquid Waste Management Plan* and is currently consolidating feedback received through a range of engagement processes including three technical workshops, one-on-one meetings with local First Nations, and various public outreach efforts. An overarching vision of “Healthy Waters. For All. Forever.” has been adopted that reflects a plan focussed on inter-generational actions that enhance the health of regional water bodies - for all peoples and for all forms of life. Key areas of change for the plan include wet weather management, combined sewer overflow elimination, and source control, wastewater treatment and resource recovery.

The current biennial reporting process is an arduous process that takes significant resourcing by Metro Vancouver and its member jurisdictions to compile, in many cases reporting on progress for actions that may no longer be meaningful. Provincial approval of a more streamlined and targeted progress reporting process will be requested for the next plan, with a focus on developing key performance indicators that transparently track progress.

Some key areas of focused improvement noted for the next plan include:

- Integration of Indigenous priorities
- Strengthening climate resilience
- Enabling multi-jurisdictional collaboration for improved quality of local waters
- Accelerated action on wet weather sewage overflows
- Increased accountability for improved stormwater management.

Some actions, such as wet weather pricing that incentivizes action to address high levels of inflow and infiltration that cause wet weather sewage overflows, are already being implemented. Other actions are being developed and will be presented in a draft plan for Board approval in 2024.

### **ALTERNATIVES**

1. That the GVS&DD Board direct staff to:
  - a) submit the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, to the Ministry of Environment and Climate Change Strategy, in accordance with the requirements of the *Integrated Liquid Waste and Resource Management Plan*; and
  - b) arrange for the Liquid Waste Committee to receive public comments on the “Biennial Report: 2021-2022”, attached to the report titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*”, dated June 7, 2023, at the September 13, 2023 Liquid Waste Committee meeting.
2. That the GVS&DD Board receive for information the report dated June 7, 2023 titled “*Integrated Liquid Waste and Resource Management Plan: Biennial Report for 2021-2022*” and provide alternate direction to staff.

Alternative 1 is recommended. Alternative 2 will not result in submission of the biennial report to MoECCS by July 1, 2023 as required by regulation.

### **FINANCIAL IMPLICATIONS**

This is a request to meet a regulatory requirement to submit a biennial report and arrange to receive comment by required timelines, and there are no financial implications.

### **CONCLUSION**

Although Metro Vancouver is currently completing the review and update of the ILWRMP, there is still a requirement to submit a biennial report (Attachments 1 and 2) to MoECCS by July 1, 2023 that outlines progress by Metro Vancouver and its member jurisdictions in implementing the actions identified in the 2011 ILWRMP. Subject to GVS&DD Board approval, the report will be submitted to MoECCS by the required deadline and, as per the process identified in the ILWRMP, an opportunity for the Liquid Waste Committee to receive public comments on the biennial report will follow.

While the biennial report does indicate progress by Metro Vancouver and its members through 2021 and 2022, there are a number of challenges for regional liquid waste services. The next plan will incorporate a range of actions to better meet these challenges including reducing the potential for wet weather sewer overflows, ensuring continued progress on combined sewer overflow elimination, along with improved source control, wastewater treatment and resource recovery initiatives. A transparent, more streamlined and targeted progress reporting process focusing on key performance metrics will be requested to the MoECCS for the next plan.

### **Attachments**

1. “Biennial Report: 2021-2022”, Volume 1: Metro Vancouver Report (60160742)
2. “Biennial Report: 2021-2022”, Volume 2: Municipal Reports (60160332)



**Attachments to 5.4: Biennial Report – *Integrated Liquid Waste and Resource Management Plan***

1. “Biennial Report: 2021-2022”, Volume 1: Metro Vancouver Report  
[DOWNLOAD REPORT](#)
2. “Biennial Report: 2021-2022”, Volume 2: Municipal Reports  
[DOWNLOAD REPORT](#)

To: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: May 31, 2023 Meeting Date: June 14, 2023

Subject: **Manager's Report**

---

## **RECOMMENDATION**

That the Liquid Waste Committee receive for information the report dated May 31, 2023 titled "Manager's Report".

---

### **1. Canadian Water and Wastewater Association's Position Statement on Flushability**

Currently, there are no standards, regulations, or definitions officially recognized in Canada for the use of the term 'flushable.' In March, the Canadian Water and Wastewater Association (CWWA), a non-profit national body representing the municipal water and wastewater utility sector, adopted a position statement (Reference 1) that endorses integration of a flushability specification into national standards and product labeling regulations. The specification is developed by the International Water Services Flushability Group, a coalition of national and regional wastewater services, including the CWWA. The statement also encourages all Canadian wastewater utilities to adapt sewer use bylaws and education campaigns to accept products conforming to the specification, and to promote the recognition of a new logo intended to identify conforming products.

Staff have been working with the CWWA for several years, supporting their efforts to improve awareness that single-use wipe products and the like can cause issues, such as clogging of sewer pipes, and to take actions that can help restrict or prohibit the flushing of such products. Metro Vancouver's "Unflushables" campaign has achieved high levels of public awareness throughout the region, and the campaign's materials have been used by numerous municipalities across Canada. Staff will review opportunities to incorporate aspects of the CWWA's messaging over time into our campaign materials while being mindful of the potential for confusion by the public, many of whom are already familiar with the current "Unflushables" campaign that encourages only pee, poo and paper (3Ps) be flushed down the toilet.

### **2. 2023 Communications Initiative to Reduce Surfactants in Wastewater**

This communications initiative educates residents about how they can reduce the impacts of surfactants on our aquatic environment. Surfactants are found in soaps, laundry detergents, and personal care products and can be difficult to fully remove at wastewater treatment plants. Once in the environment, they can be harmful to fish and other aquatic life.

Now in its third year, the initiative asks residents to use less soap, while letting them know that they can still get the same cleaning results. Cleaning products are designed for hard water and

work exceptionally well in our region's soft water. Extra focus will be placed on laundry detergent, which makes up the largest volume of surfactants in wastewater.

This year's initiative, which will run from June 19 to September 17, will again focus on North Shore residents due to the higher surfactant levels that often occur at the Lions Gate Wastewater Treatment Plant during the dry summer months. The initiative will also include some region-wide promotion through organic social media channels. The paid digital media buy includes YouTube, Facebook, Instagram, online banners and a digital billboard. A postcard (Attachment 1) explaining how to reduce surfactants will also be mailed to all North Shore residences. Residents can visit the website (Reference 2), which includes videos on the issue (Reference 3), to learn more.

### **3. Liquid Waste Committee 2023 Work Plan**

The updated 2023 Work Plan (Attachment 2) shows the status of the Committee's key priorities for the year.

#### **Attachments**

1. Surfactants Initiative Postcard
2. Liquid Waste Committee 2023 Work Plan

#### **References**

1. [CWWA Position Paper and Statement](#)
2. ["Managing Soaps and Detergents"](#) website
3. ["Surfactants: Why You Can Use Less Soap"](#) video

59869790

Surfactants Direct Mail Postcard



**metro**vancouver

## Protect Our Ocean by Using Less Detergent

Soaps, detergents, and cleaning products can't always be removed when wastewater is treated.

They can end up in our ocean, where they can harm fish and aquatic plants.

Scan this QR code to learn more:



## Get Just as Clean With Less



### Use half the manufacturer's recommended amount.

Soaps and detergents are designed for hard water. They work really well in Metro Vancouver's soft water, which means you can use less and still get good results.

Use less, save money and help the environment.

More low-soap tips: [metrovancover.org](http://metrovancover.org) (search 'managing soaps')

**metro**vancouver  
Together we make our region strong



## Liquid Waste Committee 2023 Work Plan

Report Date: June 14, 2023

<b>Priorities</b>	
<b>1st Quarter</b>	<b>Status</b>
2023 Liquid Waste Capital Projects	Complete
2022 Wipe It, Green Bin It Campaign Results	Complete
2022 Microfibres Reduction Campaign Results	Complete
North Shore Wastewater Treatment Plant Project Update	Complete
Wet Weather Pricing - Proposed Amendments to GVS&DD Cost Apportionment Bylaw	Complete
2023 Liquid Waste Sustainability Innovation Fund Applications	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Utility Policies (as applicable)	Complete
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	Complete
<b>2<sup>nd</sup> Quarter</b>	
Annacis Island Wastewater Treatment Plant Project Update	Complete
Northwest Langley Wastewater Treatment Plant Project Update	Complete
North Shore Wastewater Treatment Plant Project Update	Complete
Liquid Waste Services Capital Expenditure Summary Update as at December 31, 2022	Complete
GVS&DD Sewer Use Bylaw and Fees Update	In Progress
2023 Update on Liquid Waste Sustainability Innovation Fund Projects	Complete
Reclaimed Water Policy	In Progress
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	In Progress
Utility Policies (as applicable)	In Progress
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	In Progress
<b>3rd Quarter</b>	
GVS&DD Food Sector Grease Interceptor Bylaw Amendment	In Progress
2023 Unflushables Campaign Results	In Progress
2022 GVS&DD Environmental Management and Quality Control Annual Report	In Progress
Liquid Waste Services Capital Expenditure Summary Update as at April 30, 2023	In Progress
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	In Progress
Utility Policies (as applicable)	In Progress
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	In Progress
<b>4th Quarter</b>	
2024 Annual Budget & 5 Year Financial Plan - Liquid Waste	Pending
Environmental Management System Update	Pending
LWMP Review and Update, Report on Phase 2	Pending
Lower Mainland Estuary Management Program	Pending
Liquid Waste Services Capital Expenditure Summary Update as at August 31, 2023	Pending
Drainage Areas Policy	Pending
Sewage Catchment Area (Rawn) Amendment - Langley Servicing Plan	Pending
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Pending
Utility Policies (as applicable)	Pending
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	Pending