

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT (GVS&DD)
BOARD OF DIRECTORS****REGULAR BOARD MEETING****Friday, January 25, 2019****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. January 25, 2019 Regular Meeting Agenda**

That the GVS&DD Board adopt the agenda for its regular meeting scheduled for January 25, 2019 as circulated.

B. ADOPTION OF THE MINUTES**1. October 26, 2018 Regular Meeting Minutes**

That the GVS&DD Board adopt the minutes for its regular meeting held October 26, 2018 as circulated.

2. November 30, 2018 Special Joint Meeting Minutes

That the GVS&DD Board adopt the minutes for its special joint meeting held November 30, 2018 as circulated.

3. December 7, 2018 Special Joint Meeting Minutes

That the GVS&DD Board adopt the minutes for its special joint meeting held December 7, 2018 as circulated.

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

1. ZERO WASTE COMMITTEE REPORTS

1.1 2017 Annual Recycling and Solid Waste Management Summary

That the GVS&DD Board receive for information the report dated January 4, 2019, titled "2017 Annual Recycling and Solid Waste Management Summary".

1.2 2018 Regional Food Scraps Recycling Campaign Results

That the GVS&DD Board receive for information the report dated January 3, 2019, titled "2018 Regional Food Scraps Recycling Campaign Results".

2. LIQUID WASTE COMMITTEE REPORTS

2.1 North Shore Wastewater Treatment Plant Project Status Update

That the GVS&DD Board receive for information the report dated January 14, 2019 titled "North Shore Wastewater Treatment Plant Project Status Update".

2.2 Iona Island Wastewater Treatment Plant – Project Definition Update

That the GVS&DD Board receive for information the report dated January 10, 2019 titled "Iona Island Wastewater Treatment Plant – Project Definition Update".

2.3 2019 Liquid Waste Capital Projects

That the GVS&DD Board receive for information the report dated January 7, 2019, titled "2019 Liquid Waste Capital Projects".

3. CHIEF ADMINISTRATIVE OFFICER REPORTS

3.1 Delegations Received at Committee – January 2019

That the GVS&DD Board receive for information the report, dated January 15, 2019, titled "Delegations Received at Committee - January 2019" containing submissions received from the following delegates:

- a) Josh JansenVandoorn, Waste Management Association of British Columbia

F. ITEMS REMOVED FROM THE CONSENT AGENDA

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

I. OTHER BUSINESS

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.

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

M. ADJOURNMENT/CONCLUSION

That the GVS&DD Board adjourn/conclude its regular meeting of January 25, 2019.

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BOARD OF DIRECTORS**

Minutes of the Regular Meeting of the Greater Vancouver Sewerage and Drainage District (GVS&DD) Board of Directors held at 9:13 a.m. on Friday, October 26, 2018 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

Port Coquitlam, Chair, Director Greg Moore	Richmond, Director Harold Steves
Vancouver, Vice Chair, Director Raymond Louie	Surrey, Director Linda Hepner
Burnaby, Director Derek Corrigan	Surrey, Alternate Director Vera LeFranc for Tom Gill
Burnaby, Director Sav Dhaliwal	Surrey, Alternate Director Mary Martin for Bruce Hayne
Burnaby, Director Colleen Jordan	Surrey, Alternate Director Mike Starchuk for Barbara Steele
Coquitlam, Director Craig Hodge	Surrey, Director Judy Villeneuve
Coquitlam, Director Richard Stewart	Surrey, Director Dave Woods
Delta, Director Bruce McDonald	Vancouver, Director Adriane Carr
Electoral Area A, Director Maria Harris	Vancouver, Director Heather Deal
Langley City, Director Rudy Storteboom	Vancouver, Director Kerry Jang
Langley Township, Director Charlie Fox	Vancouver, Director Andrea Reimer
Langley Township, Alternate Director Jack Froese for Bob Long	Vancouver, Director Gregor Robertson
New Westminster, Director Jonathan Coté	Vancouver, Director Tim Stevenson
North Vancouver City, Director Darrell Mussatto	West Vancouver, Director Michael Smith
North Vancouver District, Director Richard Walton	White Rock, Director Wayne Baldwin
Pitt Meadows, Director John Becker	Commissioner Carol Mason (Non-voting member)
Port Moody, Director Mike Clay	
Richmond, Director Malcolm Brodie	

MEMBERS ABSENT:

Delta, Director Lois Jackson	Maple Ridge, Director Nicole Read
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STAFF PRESENT:

Janis Knaupp, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer

A. ADOPTION OF THE AGENDA

1. October 26, 2018 Regular Meeting Agenda

It was MOVED and SECONDED

That the GVS&DD Board:

- a) amend the agenda for its regular meeting scheduled for October 26, 2018, by varying the order of the agenda to consider Section K. Resolution to Close Meeting, prior to Section E. Consent Agenda; and
- b) adopt the agenda as amended.

CARRIED

B. ADOPTION OF THE MINUTES

1. September 28, 2018 Regular Meeting Minutes

2. October 17, 2018 Metro Vancouver Board Budget Meeting Minutes

It was MOVED and SECONDED

That the GVS&DD Board adopt the minutes for its regular meeting held September 28, 2018, and the minutes for the joint meeting of the MVRD, MVHC, GVWD and GVS&DD Boards held October 17, 2018, as circulated.

CARRIED

C. DELEGATIONS

No items presented.

D. INVITED PRESENTATIONS

No items presented.

Agenda Varied

Pursuant to Item A.1, the order of the agenda was varied to consider Section K. Resolution to Close Meeting at this point.

K. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

That the GVS&DD Board close its regular meeting scheduled for October 26, 2018 pursuant to the *Community Charter* provisions, Section 90 (1) (e) 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.”

CARRIED

ADJOURNMENT

The GVS&DD Board adjourned its regular meeting of October 26, 2018 at 9:14 a.m. to convene a closed meeting.

RECONVENE

The GVS&DD Board reconvened at 9:16 a.m. with the same members being in attendance.

Agenda Order Resumed

The order of the agenda resumed with Section E. Consent Agenda being before the Board.

E. CONSENT AGENDA

It was MOVED and SECONDED

That the GVS&DD Board adopt the recommendations contained in the following items presented in the October 26, 2018 GVS&DD Board Consent Agenda:

- 1.1 Sustainable Infrastructure and Buildings Policy
- 2.1 Award of a Contract for Part A Resulting from Tender No. 18-090: Installation of Two South Surrey Interceptor Odour Control Facilities (King George and Highway 91)
- 2.2 Northwest Langley Wastewater Treatment Plant Indicative Design
- 2.3 Award of a Contract Resulting from Tender No. 18-297: Construction – Replacement of Existing 25kV Substation at Northwest Langley Wastewater Treatment Plant
- 2.4 Energy and Greenhouse Gas Emissions Management in Liquid Waste and Water Utilities
- 3.1 Award of Contract Resulting from RFP No. 18-240: General Construction – Coquitlam Transfer Station Replacement
- 3.2 Award of Phase D Part 2 – Construction Administration: Coquitlam Transfer Station Replacement Engineering Services
- 3.3 Regional Dog Waste Diversion Update
- 3.4 Update on Illegal Dumping Statistics and Programs
- 4.1 Financial Management Policy

CARRIED

The items and recommendations referred to above are as follows:

1.1 Sustainable Infrastructure and Buildings Policy

Report dated September 20, 2018 from the Utilities Committee, recommending that the GVS&DD Board approve the proposed *Sustainable Infrastructure and Buildings Policy*.

Recommendation:

That the GVS&DD Board approve the *Sustainable Infrastructure and Buildings Policy* as presented in the report dated September 20, 2018, titled “Sustainable Infrastructure and Buildings Policy”.

Adopted on Consent

2.1 Award of a Contract for Part A Resulting from Tender No. 18-090: Installation of Two South Surrey Interceptor Odour Control Facilities (King George and Highway 91)

Report dated September 21, 2018 from Roy Moulder, Purchasing and Risk Management Director, Financial Services, and Colin Meldrum, Collection Systems, Project Delivery Division Manager, Liquid Waste Services, advising the GVS&DD of the result of Tender No. 18-090: Installation of Two South Surrey Interceptor Odour Control Facilities (King George and Highway 91), and seeking Board award of the contract, in the amount up to \$5,436,412.11 (exclusive of taxes), to Trittech Group Ltd., for Part A of the tender.

Recommendation:

That the GVS&DD Board authorize:

- a) award of a contract in the amount of \$5,436,412.11 (exclusive of taxes) to Trittech Group Ltd. resulting from Part A of Tender No. 18-090: Installation of Two South Surrey Interceptor Odour Control Facilities (King George and Highway 91); and
- b) the Commissioner and the Corporate Officer to execute the contract.

Adopted on Consent

2.2 Northwest Langley Wastewater Treatment Plant Indicative Design

Report dated September 28, 2018 from Paul Wilting, Northwest Langley Wastewater Treatment Projects Project Manager, Liquid Waste Services, seeking GVS&DD Board endorsement of the Indicative Design for the Northwest Langley Wastewater Treatment Project.

Recommendation:

That the GVS&DD Board endorse the Indicative Design for the Northwest Langley Wastewater Treatment Plant as developed through the Project Definition Phase and as summarized in the report dated September 28, 2018, titled "Northwest Langley Wastewater Treatment Plant Indicative Design".

Adopted on Consent

2.3 Award of a Contract Resulting from Tender No. 18-297: Construction – Replacement of Existing 25kV Substation at Northwest Langley Wastewater Treatment Plant

Report dated October 3, 2018 from Roy Moulder, Purchasing and Risk Management Director, Financial Services, and Jeff Chan, Project Delivery - Treatment Plants Division Manager, Liquid Waste Services, advising the GVS&DD Board of the results of Tender No. 18-297, Construction – Replacement of Existing 25kV Substation at Northwest Langley Wastewater Treatment Plant, and seeking Board authorization to award the contract, in the amount up to \$5,957,000.00 (exclusive of taxes), to Westpro, a Division of Pomerleau Inc.

Recommendation:

That the GVS&DD Board authorize:

- a) award of a contract in the amount up to \$5,957,000.00 (exclusive of taxes) to Westpro, a Division of Pomerleau Inc., resulting from Tender No. 18-297: Construction – Replacement of Existing 25kV Substation at Northwest Langley Wastewater Treatment Plant; and
- b) the Commissioner and the Corporate Officer to execute the contract.

Adopted on Consent

2.4 Energy and Greenhouse Gas Emissions Management in Liquid Waste and Water Utilities

Report dated October 1, 2018 from George Friedrich, Energy Management Engineer, Liquid Waste Services, and Amy Thai, Environmental Technician II, Parks, Planning and Environment, providing information on trends in Metro Vancouver’s energy use, costs, and greenhouse gas emissions for the Liquid Waste and Water utilities from 2013 through 2017, and providing highlights of Metro Vancouver energy- and climate-related projects and initiatives completed in recent years.

Recommendation:

That the GVS&DD Board receive for information the report dated October 1, 2018, titled “Energy and Greenhouse Gas Emissions Management in Liquid Waste and Water Utilities”.

Adopted on Consent

3.1 Award of Contract Resulting from RFP No. 18-240: General Construction – Coquitlam Transfer Station Replacement

Report dated October 4, 2018 from Paul Henderson, General Manager, Solid Waste Services, and Roy Moulder, Purchasing and Risk Management Director, Financial Services, advising the GVS&DD Board of the results of Request for Proposal (RFP) No. 18-240: General Construction – Coquitlam Transfer Station, and seeking Board award of the contract, in the amount of up to \$62,438,735.05 (exclusive of taxes), to Stuart Olson Construction Limited.

Recommendation:

That the GVS&DD Board:

- a) approve the award of a contract in the amount of up to \$62,438,735.05 (exclusive of taxes) to Stuart Olson Construction Limited for the general construction of the replacement *Coquitlam Transfer Station* resulting from RFP No. 18-240; and
- b) authorize the Commissioner and Corporate Officer to execute the contract.

Adopted on Consent

3.2 Award of Phase D Part 2 – Construction Administration: Coquitlam Transfer Station Replacement Engineering Services

Report dated October 5, 2018 from Paul Henderson, General Manager, Solid Waste Services, and Roy Moulder, Purchasing and Risk Management Director, Financial Services, seeking GVS&DD Board award of Phase D Part 2 Construction Administration Services, in the amount of up to \$3,327,804.80 (exclusive of taxes), to the Phases A, B, C and D Part 1 consultant, Morrison Hershfield, for the Coquitlam Transfer Station Replacement Project.

Recommendation:

That the GVS&DD Board:

- a) approve the award Phase D Part 2: Construction Administration Services in the amount of up to \$3,327,804.80 (exclusive of taxes) to the consultant, Morrison Hershfield Limited for the *Coquitlam Transfer Station* Replacement Project; and
- b) authorize the Commissioner and Corporate Officer to execute the required documentation.

Adopted on Consent

3.3 Regional Dog Waste Diversion Update

Report dated October 3, 2018 from Karen Storry, Senior Project Engineer, Solid Waste Services, providing an update on dog waste diversion in the region.

Recommendation:

That the GVS&DD Board receive for information the report dated October 3, 2018, titled “Regional Dog Waste Diversion Update”.

Adopted on Consent

3.4 Update on Illegal Dumping Statistics and Programs

Report dated October 3, 2018 from Marian Kim, Lead Senior Engineer, Solid Waste Services, providing an update on regional illegal dumping statistics, and summarizing prevention strategies and enforcement tools adopted by member municipalities to reduce illegal dumping.

Recommendation:

That the GVS&DD Board receive for information the report dated October 3, 2018, titled “Update on Illegal Dumping Statistics and Programs”.

Adopted on Consent

4.1 Financial Management Policy

Report dated October 4, 2018 from Performance and Audit Committee, recommending GVS&DD Board approval of the proposed Metro Vancouver *Financial Management Policy*.

Recommendation:

That the GVS&DD Board approve the *Financial Management Policy* as presented in the attached report dated September 26, 2018, titled “Financial Management Policy”.

Adopted on Consent

F. ITEMS REMOVED FROM THE CONSENT AGENDA

No items presented.

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

1.1 Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018

Report dated September 26, 2018 from Phil Trotzuk, Chief Financial Officer, seeking GVS&DD Board approval of *Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018*, authorizing anticipated borrowing requirements of capital infrastructure activities within the GVS&DD, and seeking direction to forward the Bylaw to the Inspector of Municipalities for statutory approval.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) approve an additional \$2,100,000,000 borrowing limit to fund capital infrastructure activities within the Greater Vancouver Sewerage and Drainage District; and
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018* and forward to the Inspector of Municipalities for statutory approval.

CARRIED

2.1 GVS&DD Hospital Pollution Prevention Bylaw No. 319, 2018 and Sewer Use Amendment Bylaw No. 320, 2018

Report dated September 28, 2018 from Linda Parkinson, Source Control Program Manager, Liquid Waste Services, seeking GVS&DD Board adoption of *Greater Vancouver Sewerage and Drainage District (GVS&DD) Hospital Pollution Prevention Bylaw No. 319, 2018*, and consequential amendments to *GVS&DD Sewer Use Bylaw No. 299, 2007 (GVS&DD Sewer Use Amendment Bylaw No. 320, 2018)*, to better regulate the discharge of wastewater from hospitals in the region, which currently are not regulated through a waste discharge permit.

It was MOVED and SECONDED

That the GVS&DD Board give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Bylaw No. 319, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass and finally adopt *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Bylaw No. 319, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board give, first, second and third reading to *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 320, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass and finally adopt *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 320, 2018*.

CARRIED

3.1 GVS&DD Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 323, 2018

Report dated October 5, 2018 from Allen Jensen, Assistant Project Engineer, Solid Waste Services, seeking GVS&DD Board adoption of *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017* (Tipping Fee Bylaw) for Garbage Tipping Fees, the Generator Levy and minor recycling requirements.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) approve the following amendments to the Tipping Fee Bylaw effective January 1, 2019:
 - I. Tipping Fees to change as follows:
 - i. Tipping Fees for Garbage (per tonne):

Municipal Garbage	\$108
Up to 1 tonne	\$142
1 tonne to 9 tonnes	\$120
9 tonnes and over	\$90
 - ii. Generator Levy at \$42 per tonne (included in Tipping Fee)
 - II. Clarify that Noxious Weeds can be disposed of as Garbage or as Green Waste;
 - III. Include paint containers with Paint under Product Stewardship Materials; and
 - IV. Include rigid packaging (boxes and cartons) made from composite materials in the disposal ban program; and
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 323, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass and finally adopt *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 323, 2018*.

CARRIED

4.1 Consideration of Reducing GVS&DD Development Cost Charges for Student Housing

Report dated September 27, 2018 from Heather McNell, Regional Planning and Electoral Area Services Director, Parks, Planning and Environment, seeking GVS&DD Board adoption of *Greater Vancouver Sewerage and Drainage District Development Cost Charge Waiver for Affordable Housing Amending Bylaw, No. 322, 2018* (amending *GVS&DD Development Cost Charge Waiver for Affordable Housing Bylaw, No. 314, 2018*) to implement changes necessary to reduce GVS&DD development cost charges by 50% for student housing.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) approve the reduction of GVS&DD Development Cost Charges for student housing by 50%; and
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Development Cost Charge Waiver for Affordable Housing Amending Bylaw, No. 322, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass and finally adopt bylaw *Greater Vancouver Sewerage and Drainage District Development Cost Charge Waiver for Affordable Housing Amending Bylaw, No. 322, 2018*.

CARRIED

5.1 Rawn Report Amendment 22, Bylaw No. 318, 2018

Report dated October 10, 2018 from Fred Nenninger, Policy Planning and Analysis Director, Liquid Waste Services, seeking GVS&DD Board approval to amend the *Rawn Report Plan F – Fraser Sewerage Area*, through *Rawn Report Amendment 22, Bylaw No. 318, 2018*, given the transfer of the GVS&DD facility known as Newton Sanitary Trunk Sewer No. 1 to the City of Delta.

It was MOVED and SECONDED

That the GVS&DD Board give first, second and third reading to the *Rawn Report Amendment 22, Bylaw No. 318, 2018*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass, and finally adopt the *Rawn Report Amendment 22, Bylaw No. 318, 2018.*

CARRIED

6.1 GVS&DD 2019 Budget and 2019 – 2023 Financial Plan

Report dated October 17, 2018 from Phil Trotsuk, Chief Financial Officer, seeking GVS&DD Board approval of the 2019 budgets for Liquid Waste Services and Solid Waste Services and endorsement of the GVS&DD 2019 – 2023 Financial Plan.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) approve the 2019 Annual Budget and endorse the 2019 - 2023 Financial Plan as shown in Attachment 1 of the report dated October 17, 2018, titled “GVS&DD 2019 Budget and 2019 – 2023 Financial Plan”, in the following schedules:
 - Revenue and Expenditure Summary
 - Liquid Waste Services
 - Capital Programs Project Totals – Liquid Waste Services
 - Solid Waste Services
 - Capital Programs Project Details – Solid Waste Services; and
- b) approve the 2019 Reserve Applications as shown in Attachment 2 of the report dated October 17, 2018, titled “GVS&DD 2019 Budget and 2019 – 2023 Financial Plan”.

CARRIED

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

No items presented.

I. OTHER BUSINESS

No items presented.

J. BUSINESS ARISING FROM DELEGATIONS

No items presented.

K. RESOLUTION TO CLOSE MEETING

This item was previously considered.

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

No items presented.

M. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the GVS&DD Board conclude its regular meeting of October 26, 2018.

CARRIED

(Time: 9:19 a.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Greg Moore, Chair

METRO VANCOUVER JOINT BOARDS SPECIAL MEETING

Minutes of the Special Joint Meeting of the Metro Vancouver Regional District (MVRD), the Greater Vancouver Water District (GVWD), the Greater Vancouver Sewerage and Drainage District (GVS&DD), and the Metro Vancouver Housing Corporation (MVHC) Board of Directors held at 10:03 a.m. on Friday, November 30, 2018 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia, to present for information the 2019 – 2023 Financial Plan.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal	North Vancouver District, Director Mike Little
North Vancouver City, Vice Chair Director Linda Buchanan (arrived at 10:04 a.m.)	Pitt Meadows, Director Bill Dingwall
Anmore, Alternate Director Paul Weverink for John McEwen	Port Coquitlam, Director Brad West
Belcarra, Director Neil Belenkie	Port Moody, Director Rob Vagramov
Bowen Island, Alternate Director Rob Wynen for David Hocking	Richmond, Director Malcolm Brodie
Burnaby, Director Pietro Calendino	Richmond, Director Harold Steves (arrived at 10:04 a.m.; departed at 12:18 p.m.)
Burnaby, Director Mike Hurley (departed at 1:01 p.m.)	Surrey, Director Doug Elford
Coquitlam, Director Craig Hodge	Surrey, Director Laurie Guerra (departed at 12:28 p.m.)
Coquitlam, Director Richard Stewart	Surrey, Director Jack Singh Hundial
Delta, Director George Harvie (departed at 1:08 p.m.)	Surrey, Director Brenda Locke
Delta, Director Lois Jackson	Surrey, Director Doug McCallum
Electoral Area A, Director Justin LeBlanc	Surrey, Director Steven Pettigrew
Langley City, Alternate Director Gayle Martin for Val van den Broek	Vancouver, Director Christine Boyle (departed at 12:20 p.m.)
Langley Township, Director Jack Froese (arrived at 10:04 a.m.)	Vancouver, Director Adriane Carr
Langley Township, Director Kim Richter	Vancouver, Director Melissa De Genova
Lions Bay, Director Ron McLaughlin	Vancouver, Director Lisa Dominato
Maple Ridge, Director Mike Morden	Vancouver, Director Colleen Hardwick
New Westminster, Director Jonathan Coté	Vancouver, Alternate Director Pete Fry for Kennedy Stewart
	Vancouver, Director Michael Wiebe
	West Vancouver, Director Mary-Ann Booth
	White Rock, Director Darryl Walker

MEMBERS ABSENT:

Tsawwassen, Director Bryce Williams

STAFF PRESENT:

Carol Mason, Chief Administrative Officer
Genevieve Lanz, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer

1. PRESENTATION

10:04 a.m. Vice Chair Buchanan and Directors Froese and Steves arrived at the meeting.

1.1 2019 Budget and Annual Work Plans and 2019-2023 Financial Plan – Metro Vancouver Districts and Housing Corporation

Carol Mason, Chief Administrative Officer/Commissioner introduced the 2019 Metro Vancouver Districts and Housing Corporation Budget and 2019 – 2023 Financial Plan, highlighting the distinct legal entities of Metro Vancouver, the consistency with the 2015 - 2018 Board Strategic Plan, the financial planning process, the development of a thirty-year financial plan, and the guiding financial policies.

Phil Trotzuk, Chief Financial Officer, provided members with an overview of the 2019 Metro Vancouver Districts and Housing Corporation budget and the 2019 – 2023 Financial Plan expenditures, revenues, household impact, and capital expenditure funding models.

Members commented on:

- increases to the total household impact
- population growth projection methodology
- completed and upcoming capital infrastructure projects
- previous financial planning and budgets

In response to questions, members were informed of the potential for a GVWD development cost charge program, the budget review process, and the organization's employee composition.

Request of Staff

Staff was requested to provide the following information to a future meeting of the board or appropriate committee:

- process and methodology of determining population numbers and projected growth
- annual budgets for the previous ten years
- exempt employee list and roles within Metro Vancouver
- list of budgeted and actual costs associated with completed regional capital projects over the last four years
- communication materials to assist member municipalities in explaining the increase in fees and taxes in the context of capital projects, aging infrastructure, upgrades to accommodate climate change initiatives, regulatory requirements, utility system demands, and grants received from senior levels of government
- optimal amortization period versus pay-as-you-go financial approach
- details in the 5-year capital plan for MVHC

- options for pursuing GVWD development cost charges to offset household impact of increasing water rates

Greater Vancouver Water Services

Tim Jervis, General Manager, Water Services, provided members with a presentation on the 2019 Water Services budget and 2019 – 2023 Financial Plan highlighting Water Services major capital projects from 2019 - 2023, key 2019 expenditures, and wholesale water rate comparison with other jurisdictions.

In response to questions, members were informed of the difference between the Growth and Resilience capital projects.

Liquid Waste Services – Greater Vancouver Sewerage and Drainage District

Peter Navratil, General Manager, Liquid Waste Services, provided members with an overview of the 2019 Liquid Waste Services Budget, and 2019 – 2023 Liquid Waste Financial Plans based on sewerage area, debt servicing, and short-term impact in comparison with other jurisdictions.

12:18 p.m. Director Steves departed the meeting.

12:20 p.m. Director Boyle departed the meeting.

In response to questions, members were informed of the potential sale of biomethane to FortisBC and other cost recovery opportunities.

Solid Waste Services – Greater Vancouver Sewerage and Drainage District

Paul Henderson, General Manager, Solid Waste Services, provided members with an overview of the 2019 Solid Waste Services Budget and 2019 – 2023 Solid Waste Financial Plan, highlighting 2019 tipping fees, planned 2020-2023 tipping fees, and operational and capital budget drivers.

12:28 p.m. Director Guerra departed the meeting.

Members commented on population growth and predicted organics processing needs.

Request of Staff

Staff was requested to provide information to a future board meeting or appropriate committee regarding:

- increasing volume of organics in the region versus declining number of processing facilities to handle organics
- comparison of volume of waste diverted relative to population growth

Metro Vancouver Housing Corporation

Ravi Chhina, General Manager, Parks and Housing Services, provided members with an overview of the 2019 MVHC Budget and 2019 – 2023 Financial Plan,

highlighting the development of a MVHC ten-year strategic plan, capital replacement projects, and MVHC tenant rental increases.

12:35 p.m. Chair Dhaliwal left the meeting, Vice Chair Buchanan assumed the Chair.

12:38 p.m. Chair Dhaliwal reassumed the Chair.

Members commented on opportunities to expand Metro Vancouver Housing Corporation's portfolio and to increase rental revenue.

Request of Staff

Staff was requested to provide information to a future board meeting or appropriate committee regarding opportunities to increase Metro Vancouver Housing Corporation revenue.

Metro Vancouver Regional District – Regional Parks

Ravi Chhina, General Manager, and Mike Redpath, Director, Regional Parks, Parks and Housing Services, provided members with an overview of the 2019 Regional Parks Budget and 2019 – 2023 Regional Parks Capital program.

Metro Vancouver Regional District – Air Quality and Regional Planning

Neal Carley, General Manager, Planning and Environment, provided members with an overview of the Parks, Planning and Environment 2019 Budget and 2019 – 2023 Financial Plan, highlighting the implementation of *Climate 2050*, and the update of regional air quality management plan and the odour management framework.

1:01 p.m. Director Hurley departed the meeting.

Members commented on the *Climate 2050* revision process and the costs associated with the odour management framework.

Request of Staff

Staff was requested provide information to a future board meeting or appropriate committee on:

- the total cost associated with developing the odour management framework and measurement of odour units
- particulate and pollutant data collected at the Vancouver Portside Air Mapping location

Other Regional Services

Phil Trotsuk, General Manager, Financial Services/Chief Financial Officer, concluded the budget presentations.

1:08 p.m. Director Harvie departed the meeting.

Presentation material titled “2019 – 2023 Financial Plan: Special Board Meeting – November 30, 2018” is retained with the November 30, 2018 Metro Vancouver Joint Board Special Meeting agenda.

The meeting had been in session for four hours and pursuant to the *Procedure Bylaw*, members did not extend the meeting to continue the budget discussion, but rather suggested the joint meeting be reconvened during the December 7, 2018 session to consider the remaining business on the agenda.

It was MOVED and SECONDED

That the MVRD, GVWD, GVS&DD, and MVHC Boards adjourn its joint meeting of November 30 2018.

CARRIED

(Time: 1:16 p.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Sav Dhaliwal, Chair

METRO VANCOUVER JOINT BOARDS SPECIAL MEETING

Minutes of the adjourned Special Joint Meeting of the Metro Vancouver Regional District (MVRD), Greater Vancouver Water District (GVWD), the Greater Vancouver Sewerage and Drainage District (GVS&DD), and the Metro Vancouver Housing Corporation (MVHC) Board of Directors held at 9:10 a.m. on Friday, December 7, 2018 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia, to reconvene the November 30, 2018 Special Joint Board meeting to complete the unfinished business still pending from the previous meeting.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal	Pitt Meadows, Director Bill Dingwall
North Vancouver City, Vice Chair Director Linda Buchanan	Port Coquitlam, Director Brad West
Anmore, Director John McEwen	Port Moody, Alternate Director Hunter Madsen for Rob Vagramov
Belcarra, Director Neil Belenkie	Richmond, Director Malcolm Brodie
Bowen Island, Director David Hocking	Richmond, Director Harold Steves
Burnaby, Director Pietro Calendino	Surrey, Director Doug Elford
Burnaby, Director Mike Hurley	Surrey, Director Laurie Guerra
Coquitlam, Director Craig Hodge	Surrey, Director Jack Singh Hundial
Coquitlam, Director Richard Stewart (arrived at 9:10 a.m.)	Surrey, Director Brenda Locke
Delta, Director George Harvie	Surrey, Director Doug McCallum
Delta, Director Lois Jackson	Surrey, Director Steven Pettigrew
Electoral Area A, Director Justin LeBlanc	Vancouver, Director Christine Boyle
Langley City, Director Val van den Broek	Vancouver, Director Adriane Carr
Langley Township, Director Jack Froese	Vancouver, Director Melissa De Genova
Langley Township, Director Kim Richter	Vancouver, Director Lisa Dominato
Lions Bay, Director Ron McLaughlin	Vancouver, Director Colleen Hardwick
Maple Ridge, Director Mike Morden	Vancouver, Director Kennedy Stewart
New Westminster, Director Jonathan Coté	Vancouver, Director Michael Wiebe (arrived at 9:16 a.m.)
North Vancouver District, Alternate Director Lisa Muri for Mike Little	West Vancouver, Director Mary-Ann Booth
	White Rock, Director Darryl Walker

MEMBERS ABSENT:

Tsawwassen, Director Bryce Williams

STAFF PRESENT:

Carol Mason, Chief Administrative Officer
Genevieve Lanz, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer

Reconvene

The Boards reconvened the Special Joint meeting to complete the unfinished business still pending from the previous meeting of November 30, 2018.

9:10 a.m. Director R. Stewart arrived at the meeting.

1. PRESENTATION

1.1 2019 Budget and Annual Work Plans and 2019 – 2023 Financial Plan – Metro Vancouver Districts and Housing Corporation

2. REPORTS

2.1 2019-2023 Financial Plan – Metro Vancouver Districts and Housing Corporation

3. REFERENCE MATERIAL

3.1 2019-2023 Financial Plan – Standing Committee Reports

9:16 a.m. Director Wiebe arrived at the meeting.

Members were provided with an on-table memorandum enumerating requests for information from the November 30, 2018 meeting.

Arising out of further discussion on the 2019-2023 Financial Plan, members requested additional information on the following items: Regional Prosperity Initiative, labour relations function, timing of capital projects, and debt-service ratio.

Request of Staff

Staff was requested to provide information to all directors, through a future board meeting or appropriate committee regarding:

- background on the Regional Prosperity Initiative
- how costs are allocated to members in the Labour Relations function
- list of mandated federal and provincial capital projects, and projects that can be delayed
- background on debt-service ratio scenarios and reserves

On-table memorandum dated December 6, 2018, titled “2019 Budgets and the 2019-2023 Financial Plans – Requests for Information” is retained with the December 7, 2018 Special Joint Meeting agenda.

4. NOTICE OF MOTION

4.1 2019 Budget

Director Hurley withdrew the following notice of motion which had been provided in the December 7, 2018 meeting agenda:

That the recently approved 2019 budget for all of Metro Vancouver operations and entities be considered interim until a complete review is conducted by this board and approved changes are incorporated.

In an ensuing discussion, Director Booth provided a written submission of the following notice of motion to be added to the agenda of the next regular Board meeting:

Review the Aboriginal Relations 2019 – 2023 Financial Plan dated September 19, 2018 regarding an increase of \$193,035 that includes a new staff position of Program Manager.

Further, Director Jackson provided a written submission of the following notices of motion for consideration at the next regular Board meeting:

That the MVRD Board abandon the Regional Prosperity Initiative included in the 2019 budget.

Request staff to bring back a budget that reflects an overall increase of under 3%.

5. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the MVRD, GVWD, GVS&DD, and MVHC Boards conclude its adjourned joint meeting of December 7, 2018.

CARRIED

(Time: 9:47 a.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Sav Dhaliwal, Chair

To: Zero Waste Committee

From: Andrew Marr, Director of Solid Waste Planning, Solid Waste Services Department

Date: January 4, 2019 Meeting Date: January 10, 2019

Subject: **2017 Annual Recycling and Solid Waste Management Summary**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated January 4, 2019, titled “2017 Annual Recycling and Solid Waste Management Summary”.

PURPOSE

The purpose of this report is to provide the Board with the annual update on the reduction, recycling and disposal of solid waste from the Metro Vancouver region.

BACKGROUND

Under the provincial *Environment Management Act*, regional districts must prepare solid waste plans outlining the facilities, regulations, programs and other initiatives that will be used to reduce, reuse, recycle and dispose of municipal solid waste (from single and multi-family homes, commercial and institutional sources, and construction and demolition). Metro Vancouver’s current *Integrated Solid Waste and Resource Management Plan (ISWRMP)* was approved by the Minister of Environment on July 22, 2011. Metro Vancouver provides an annual summary of the region’s solid waste reduction, recycling and disposal metrics. Reporting out from the previous year is typically done in November of each year once data for the previous year has been collected and verified. No November meeting of the Zero Waste Committee was held in 2018, and as such the 2017 report is being provided to the Zero Waste Committee and Board at this time.

WASTE DIVERSION AND DISPOSAL QUANTITIES**Waste Diversion**

Waste Diversion is the combined effect of reduction, reuse and recycling to decrease the amount of solid waste disposed. Waste diversion is typically calculated based on recycled and disposed quantities because of the challenges estimating reduction and reuse. Waste diversion is the main metric by which Metro Vancouver measures progress in implementing the ISWRMP. The ISWRMP has an ambitious goal of achieving an 80% waste diversion rate by 2020. In calendar 2017, the region diverted 63% of all the municipal solid waste generated (a slight improvement from 62% in calendar 2016).

While the regional diversion rate was 63% overall in 2017, it should be noted that this was an average for all sectors. The construction and demolition sector had the highest diversion rate of 77%, whereas the single-family residential sector diverted 62%, the multi-family residential sector diverted 31%, and the commercial and institutional sector diverted 48%.

Waste Reduction and Reuse

Preventing waste from being produced in the first place is reduction and while it is the most preferred of the “5Rs”, it is by its nature difficult to quantify waste that is neither recycled nor disposed. Similarly, reusing materials and items (largely in their original form and with minimal processing) has not historically been estimated. For calendar 2017, Metro Vancouver has made its first attempt at quantifying the amount of reused materials, and estimates that in 2017 about 82,000 tonnes of materials from this region were reused in the region instead of recycled or disposed. This quantity is not included in the 63% diversion calculation to allow comparison with previous reports, and given this is the first year the metric is being used in the report.

Recycling

Estimating the amount of recycling occurring in the region in a given year is a combination of reporting from local private and public collectors, processors and brokers (of dry recyclable materials, construction and demolition materials and organic materials such as food and yard wastes etc.) and Extended Producer Responsibility programs (of packaging and papers, household hazardous materials, beverage containers, electronics, pharmaceuticals, tires, batteries, etc.). For calendar 2017, it is estimated that 2.23 million tonnes of materials were recycled rather than disposed compared to 2.04 million tonnes recycled in 2016.

Waste Disposal

In 2017, municipal solid waste from residential commercial and institutional sources was disposed at the Vancouver Landfill, the Metro Vancouver *Waste-to-Energy Facility*, and two remote landfills under contract to Metro Vancouver. Construction and demolition waste was disposed at the Vancouver Landfill and private commercial facilities. For calendar 2017, it is estimated 1.31 million tonnes of municipal solid waste from this region were disposed.

Per capita waste disposal in 2017 was 0.51 tonnes per person, up from 0.49 tonnes in 2016. Other communities both in British Columbia and around North America are seeing flattening out of reductions in per capita waste disposal. Per capita disposal in Metro Vancouver continues to be well below the national average of 0.71 tonnes per person per year.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Metro Vancouver’s activities in the ISWRMP are implemented within the annual budgets for the Solid Waste Services department.

SUMMARY / CONCLUSION

This report provides the annual summary of solid waste diversion and disposal in the Metro Vancouver region for the calendar year 2017. In 2017, the waste diversion rate for the region was estimated to be 63%, up slightly from 62% in 2016. Metro Vancouver’s per capita waste disposal in 2017 was 0.51 tonnes per person, up from 0.49 tonnes in 2016.

Attachment: *Metro Vancouver Solid Waste Recycling and Solid Waste Management – 2017 Report*
(Orbit #27890444)

Metro Vancouver Recycling and Solid Waste Management

2017 Report



metrovancouver

SERVICES AND SOLUTIONS FOR **A LIVABLE REGION**

Greater Vancouver Sewerage & Drainage District



Metro Vancouver is responsible for the planning and management of recycling and solid waste services for the region. This document provides a summary of recycling and solid waste management activities that took place in the calendar year 2017. These activities are guided by the Metro Vancouver *Integrated Solid Waste and Resource Management Plan (ISWRMP)*.

2017 PROGRAM HIGHLIGHTS

For more details on Metro Vancouver Solid Waste programs and campaigns, visit www.metrovancouver.org and type “solid waste” in the search bar.

POLICY & PLANNING

Metro Vancouver’s *Integrated Solid Waste and Resource Management Plan (ISWRMP)* was approved by the province in July 2011. The ISWRMP:

- outlined initiatives to achieve diversion rates of 70% by 2015 and 80% by 2020.
- set the framework for solid waste management in Metro Vancouver.

Continuing implementation of the ISWRMP’s material disposal bans:

- Consultation for, and approval of a disposal ban on large quantities of expanded polystyrene disposal in 2018.
- Reduction of the clean wood disposal ban threshold to 5%.

GVS&DD Board approved implementation of a Generator Levy, and of a Commercial Waste Hauler Licensing program (currently under consideration by the Minister of Environment and Climate Change Strategy).

Completed conceptual design and began detailed design of Coquitlam Transfer Station replacement. Selected site and began conceptual design of a Surrey recycling and waste drop-off facility.

EVENTS & CONFERENCES

The 2017 Zero Waste Conference focused on escalating progress toward a circular economy – particularly understanding of the concept, and changes in business practices, and local government policies and practices, with over 500 participants, including a satellite event in Toronto.

The National Zero Waste Council released the National Food Waste Reduction Strategy, a discussion document for extensive multi-stakeholder consultation as part of an ongoing process to drive the federal government’s development of a food policy for Canada.

Metro Vancouver staff attended and presented at a number of conferences including those hosted by:

- the Recycling Council of BC
- Biocycle
- the Solid Waste Association of North America

PROGRAMS & RESEARCH

Efforts to reduce abandoned waste included regional campaigns, municipal large items pick-up programs and community collection events.

In calendar 2017 activities for waste reduction and recycling programs and research included:

- Support for waste exchanges through National Industrial Symbiosis Program.
- Testing of recycling systems for public spaces with the packaging and paper EPR organization RecycleBC.
- Starting feasibility assessment of new regional construction & demolition waste processing capacity.

Researched and documented best practices for composting facility design and operation. Began regional consultation supporting City of Vancouver’s single use item reduction strategy.

Reconfigured North Shore Transfer Station to integrate the recycling depot into the facility, develop scale plaza and queuing area. Changes resulted in improved service and overall savings of more than \$500,000 per year through eliminating the need for traffic control and reduced recycling depot costs.

CAMPAIGNS & COMMUNICATION

Third year of Food scraps recycling education and awareness campaign: “Food Isn’t Garbage”.

National Zero Waste Council cross-sectoral collaboration with stakeholders across Canada.

Second year of Love Food Hate Waste campaign - bringing awareness to the issue of household food waste prevention.

Seventh year of Create Memories Not Garbage campaign – new theme of ‘do one thing differently’ this holiday season to reduce waste before, during and after Christmas.

Launched ‘Waste in its Place’, providing options for legal dumping, with a focus on creative development based on Member Municipalities’ feedback.

Second year of ‘More than Meets the Eye’ promotion during Waste Reduction Week, providing options for E-waste.

EXTENDED PRODUCER RESPONSIBILITY PROGRAMS

Extended Producer Responsibility (EPR) programs, also called product stewardship programs, are industry-managed programs designed to make producers and consumers responsible for the management of goods throughout their life cycles.

- EPR holds producers and consumers accountable for the costs and management of regulated products at end of life.
- Most items managed through EPR programs are banned from Metro Vancouver disposal facilities and are diverted before they enter the region’s solid waste management system.

2017 HIGHLIGHTS

- Recycle BC hosted a Consultation Conference with collectors to propose and discuss potential changes to collection strategies.
- News Media Canada Stewardship Plan for newspapers was approved by the Ministry of Environment.
- Metro Vancouver completed a study to assess the economic and environmental impacts of mattress and bulky furniture recycling and Extended Producer Responsibility.

2017 RECYCLING AND SOLID WASTE SUMMARY

Metro Vancouver collects data on municipal solid waste recycling and disposal in four categories: single family residential, multi-family residential, commercial and institutional, and construction and demolition.

In 2017, 2,234,055 tonnes of material were recycled and diverted from disposal in Metro Vancouver. This amounts to 63% of the waste material generated in the region. A remaining 1,307,315 tonnes of solid waste were disposed of.

Reuse

The estimation of the waste diversion rate is a measurement of materials from this region which were recycled (i.e. processed to alter their structure, and allow them to be remanufactured into new products). For calendar 2017 however, in addition to recycling, Metro Vancouver has made its first attempt to quantify the amount of materials that were reused (i.e. materials which were reused mostly in their original form without processing that significantly changed their structure). However, this reused material has not been included in the waste diversion calculation because (a) this first estimate of reuse has a substantial degree of uncertainty though its accuracy will improve in future, and (b) historical estimates of waste diversion did not include reuse as it had never been estimated before, and including it now would preclude comparisons with prior years.

Examples of reused materials include: clothing which has been donated and/or resold, certain minimally-processed EPR materials, donated foods, reused furniture and office equipment, salvaged building materials, and other items bought and sold which prevented the need to purchase new items. It is estimated that about **82,000 tonnes** of materials were reused in the Metro Vancouver region in 2017. The methodology used to make this estimate will be refined in future years.

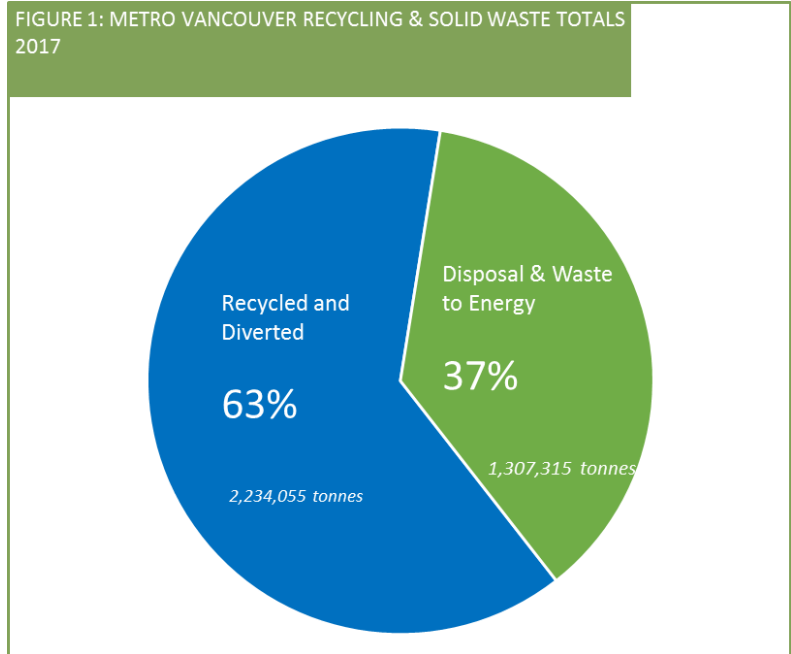


Table 1: Estimate of Reuse in Metro Vancouver in 2017

MATERIAL CATEGORY	ANNUAL REUSE (tonnes) ROUNDED VALUE (to nearest 100 tonnes)
Textiles and Accessories - Sold	22,000
Textiles and Accessories - Industrial Wipes	6,700
EPR Programs	24,500
Food	1,300
Hotels and Hospitality Sector	900
Office Furniture	1,200
IT Equipment	1,300
Construction/ Demolition Materials	5,400
On-Line for Selected Materials	19,100
TOTAL	82,400

The following table presents recycling and solid waste disposal quantities for each sector. In 2017, Metro Vancouver has estimated the distribution of EPR recycling tonnages to the single family, multi-family, and commercial and institutional sectors (see note 3 in **Table 2**). Appendix 1 includes a similar table with a comparison to the previous year.

Table 2: 2017 Metro Vancouver Recycling and Solid Waste Quantities

WASTE SECTOR	DISPOSED (tonnes)	RECYCLED (tonnes)	RECYCLING RATE ³ (%)	DISPOSED (tonnes/capita)	DISPOSED (tonnes/household)
Residential	522,248	581,081	53%	0.20	0.55
Single Family ¹	290,510	477,832	62%	0.20	0.63
Population ⁴ = 1,464,123					
Multi-Family ²	231,738	103,249	31%	0.21	0.48
Population ⁴ = 817,686					
Commercial/ Institutional²	413,547	385,553	48%	0.16	0.44
Employees ⁴ = 1,323,000					
Construction/ Demolition⁵	371,521	1,267,420	77%	0.15	0.39
TOTAL	1,307,315	2,234,055	63%	0.51	1.38

Notes:

¹ Reported tonnes of disposed and recycled waste are obtained from municipal reports, private recycling and processing facility records, landfill records, or product stewardship association records. This includes residential drop-off tonnages.

² Estimated tonnes of disposed waste are based on per capita multi-family disposal rates and the total transfer station weigh scale reports for commercial waste, which includes multi-family and commercial/institutional tonnages. A calculated portion of that total is then attributed to each sector. Multi-family recycling is reported by municipalities and combined with estimated residential drop-off tonnages.

³ The total recycling rate includes the EPR tonnages. The recycling rates for individual sectors also include EPR tonnages, based on estimates of the relative contributions to EPR tonnages from single family homes (54%), multi-family homes

(36%), and businesses (10%) with the exception of Recycle BC tonnages that are allocated 85% to the single family sector and 15% to the multi-family sector.

⁴ Population, employment and housing figures are based on 2017 projections provided by Metro Vancouver’s Regional Planning Department and are based on 2016 census data.

⁶ Reported tonnes of recyclable materials and disposed waste are obtained from private licensed brokers, composters and transfer stations, and from unlicensed recycling facilities.

METRO VANCOUVER’S RECYCLING AND SOLID WASTE MANAGEMENT SYSTEM

Metro Vancouver’s integrated recycling and solid waste management system provides service to the residents and businesses of 21 municipalities, one Electoral Area and one Treaty First Nation.

Recycling

Municipalities historically provided recycling services for the single family residential sector, and some parts of the multi-family residential, and commercial and institutional sectors. In 2014, a private sector industry stewardship organization, Multi-Materials BC (now Recycle BC), assumed responsibility for recycling Packaging and Printed Papers from single family and multi-family homes. Most commercial and institutional, and construction and demolition recyclables are managed by the private sector.

The following table presents the quantities and types of recyclables collected in 2017.

Table 3: Quantities of Materials Recycled in Metro Vancouver in 2017

MATERIAL TYPE	TOTAL (tonnes)
Asphalt	165,000
Batteries	12,526
Concrete	732,099
Electronic & Electrical Equipment	23,105
Fibre	322,655
Glass	63,873
Gypsum	57,060
HHW	21,361
Metal	83,752
Other	25,006
Plastic	31,245
Textiles	156
Tires	17,724
Wood	241,111
Yard & Food	437,381
TOTAL	2,234,055

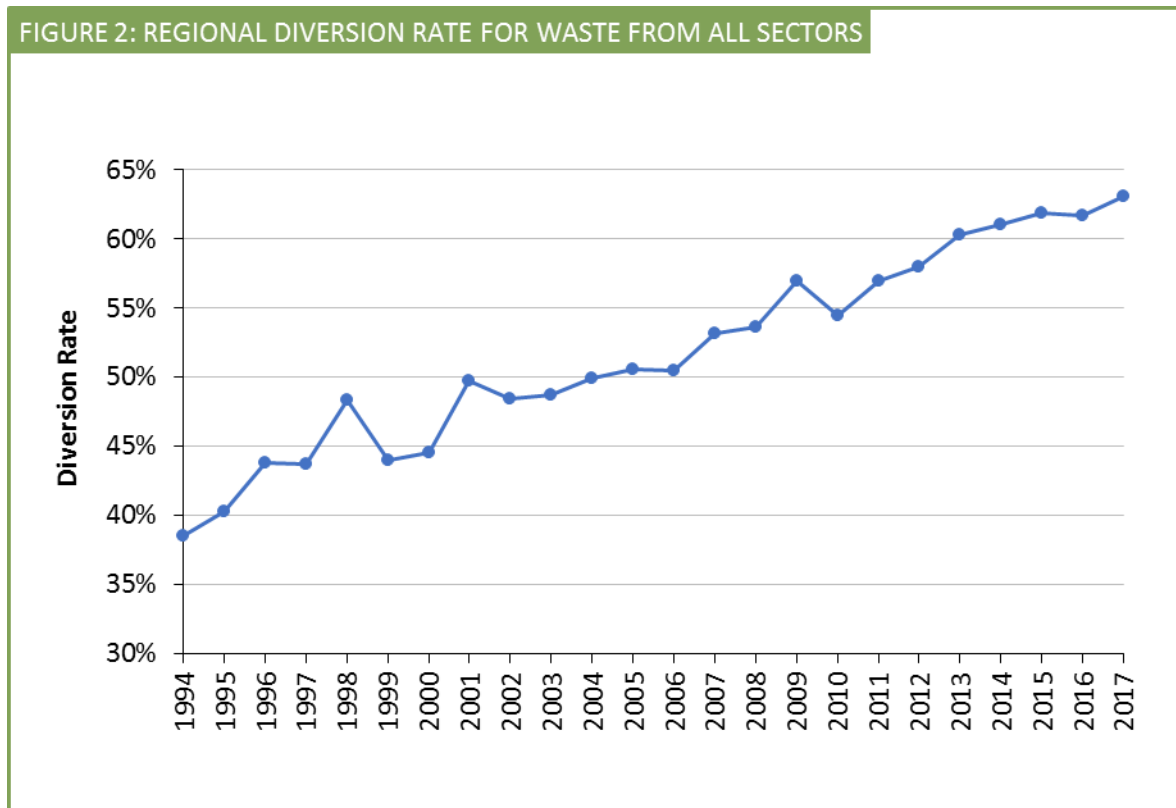
Disposed Waste

Residential and institutional waste disposal is handled through the regional solid waste management system. In 2017, the Regional Facilities consisted of:

- six transfer stations
- Vancouver Landfill
- Waste-to-Energy Facility in Burnaby
- Contracted contingency disposal at remote landfills (as of mid-2017)

The use of the Cache Creek Landfill by Metro Vancouver ceased in 2016. All municipal solid waste delivered to the regional disposal facilities (landfills and waste-to-energy) is accounted in Metro Vancouver’s disposal calculations. Construction and demolition waste is primarily handled separately from the regional solid waste management system and is disposed at either private landfills or the Vancouver Landfill. In 2017, the residential, commercial and institutional, and construction and demolition sectors in Metro Vancouver disposed of a total 1,307,315 tonnes of waste to the regional system and private disposal facilities. The current per capita disposal rate in the region is 0.51 tonnes per person.

In 2017, Metro Vancouver residents, businesses and institutions achieved an overall recycling or diversion rate of 63%. **Figures 2 and 3**, below, show changes in the regional diversion rate from all waste sectors, and the total per capita generation, disposal and recycling rates for the region since 1994, respectively. **Table 4** shows Metro Vancouver’s regional waste and recycling figures. **Table 5** highlights the single family residential recycling and solid waste figures.



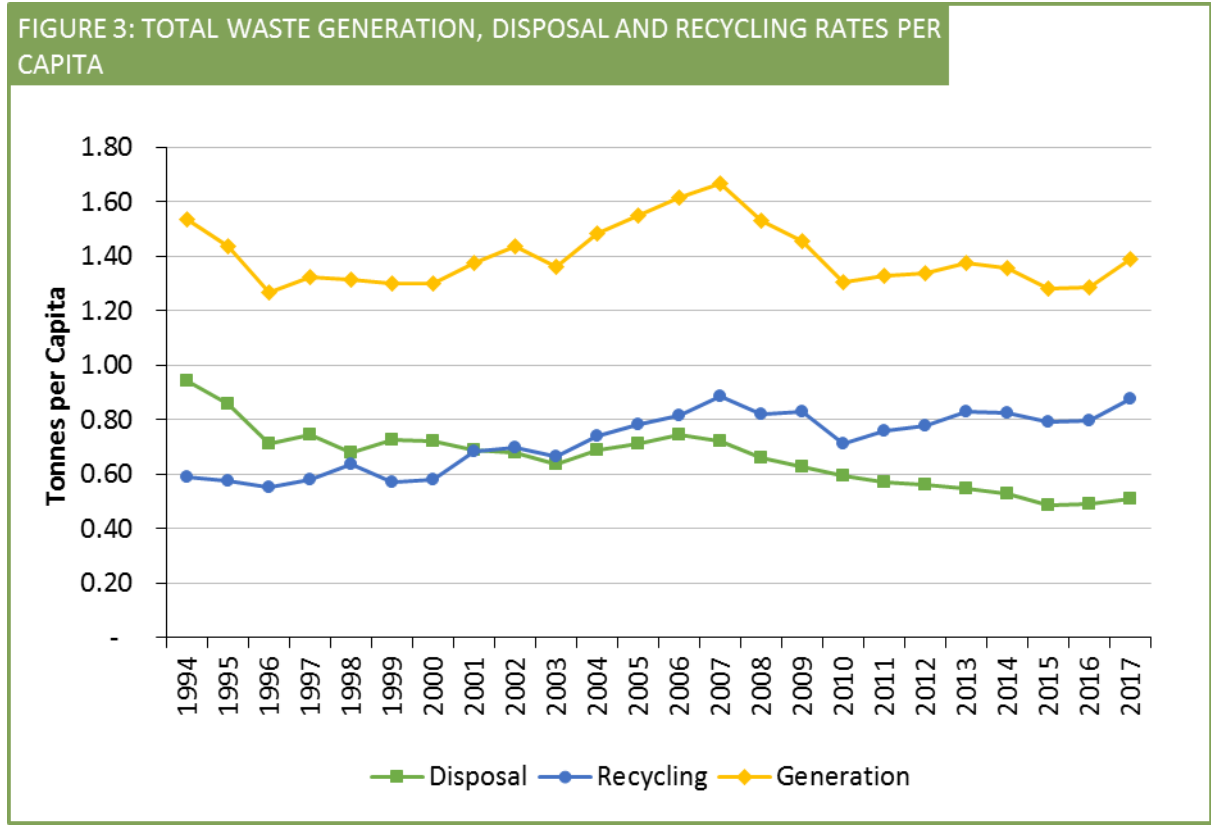


Table 4: Metro Vancouver Regional Solid Waste and Recycling Figures

YEAR	REGIONAL POPULATION	REGIONAL HOUSEHOLDS	TOTAL GENERATED (tonnes)	TOTAL RECYCLED (tonnes)	TOTAL DISPOSED (tonnes)	RECYCLING RATE (%)	GENERATION RATE (tonnes/capita)	DISPOSAL RATE (tonnes/capita)	DISPOSAL RATE (tonnes/household)
1994	1,732,567		2,663,581	1,025,921	1,680,750	39%	1.54	0.97	
1995	1,784,656		2,561,858	1,032,095	1,529,763	40%	1.44	0.86	
1996	1,906,492		2,419,323	1,058,441	1,360,882	44%	1.27	0.71	
1997	1,954,523		2,589,044	1,131,958	1,457,086	44%	1.32	0.75	
1998	1,984,743		2,609,913	1,261,680	1,348,233	48%	1.31	0.68	
1999	2,013,201		2,618,538	1,151,130	1,467,408	44%	1.30	0.73	
2000	2,041,399		2,657,076	1,183,611	1,473,465	45%	1.30	0.72	
2001	2,073,662		2,851,208	1,418,489	1,432,719	50%	1.37	0.69	
2002	2,102,244		2,903,894	1,470,445	1,433,449	51%	1.38	0.68	
2003	2,128,965		2,775,455	1,414,390	1,361,065	51%	1.30	0.64	
2004	2,153,998		3,072,702	1,595,999	1,476,703	52%	1.43	0.69	
2005	2,188,573		3,245,796	1,701,414	1,544,382	52%	1.48	0.71	
2006	2,218,026	817,040	3,434,617	1,794,613	1,640,004	52%	1.55	0.74	2.01
2007	2,251,887	831,909	3,598,142	1,980,751	1,617,391	55%	1.60	0.72	1.94
2008	2,273,095	836,304	3,366,123	1,866,892	1,499,231	55%	1.48	0.66	1.79
2009	2,314,163	865,017	3,374,840	1,922,840	1,452,001	57%	1.46	0.63	1.68
2010	2,351,496	879,874	3,075,392	1,676,117	1,399,275	55%	1.31	0.60	1.59
2011	2,395,520	898,273	3,188,348	1,817,446	1,370,902	57%	1.33	0.57	1.53
2012	2,408,559	909,994	3,228,305	1,871,339	1,356,966	58%	1.34	0.56	1.49
2013	2,430,305	920,375	3,348,498	2,020,114	1,328,384	60%	1.38	0.55	1.44
2014	2,465,031	939,212	3,343,471	2,040,280	1,303,191	61%	1.36	0.53	1.39
2015	2,497,052	943,072	3,202,979	1,982,137	1,220,842	62%	1.28	0.49	1.29
2016	2,546,595	943,072	3,295,830	2,039,569	1,256,261	62%	1.29	0.49	1.33
2017	2,550,047	933,605	3,541,370	2,234,055	1,307,315	63%	1.39	0.51	1.40

Table 5: Single Family Residential Solid Waste and Recycling Figures

YEAR	SINGLE FAMILY RESIDENTIAL POPULATION	SINGLE FAMILY RESIDENTIAL HOUSEHOLDS	SECTOR GENERATED (tonnes)	SECTOR RECYCLED (tonnes) ¹	SECTOR DISPOSED (tonnes)	SECTOR RECYCLING RATE (%)	SECTOR GENERATION RATE (tonnes/capita)	SECTOR DISPOSAL RATE (tonnes/capita)	SECTOR DISPOSAL RATE (tonnes/household)
2006	1,389,809	428,045	778,629	336,577	442,052	43%	0.56	0.32	1.03
2007	1,399,185	434,163	783,878	352,455	431,423	45%	0.56	0.31	0.99
2008	1,409,040	428,045	741,783	324,093	417,690	44%	0.53	0.30	0.98
2009	1,419,442	443,894	749,536	330,294	419,242	44%	0.53	0.30	0.94
2010	1,429,495	447,932	721,746	344,450	377,296	48%	0.50	0.26	0.84
2011	1,440,334	454,662	732,112	363,594	368,518	50%	0.51	0.26	0.81
2012	1,476,411	456,259	784,196	439,077	345,118	56%	0.53	0.23	0.76
2013	1,484,766	462,170	761,169	456,822	304,347	60%	0.51	0.20	0.66
2014	1,494,336	464,955	774,877	482,090	292,787	62%	0.52	0.20	0.63
2015	1,511,428	471,157	809,500	533,861	275,639	66%	0.54	0.18	0.59
2016	1,533,062	476,559	828,151	554,194	273,957	67%	0.54	0.18	0.57
2017	1,464,123	461,092	768,342	477,832	290,510	62%	0.52	0.20	0.63

¹ Includes distributed EPR Recyclables from 2012 onward.

Acknowledgements

Metro Vancouver acknowledges the contributions of its member municipalities, EPR Product Stewardship Associations, and the many private recycling and processing facilities for the data used to complete this report.

APPENDIX 1 – METRO VANCOUVER RECYCLING AND SOLID WASTE QUANTITIES 2016 AND 2017

WASTE SECTOR		DISPOSED (tonnes)			RECYCLED (tonnes)			DIVERSION RATE (%) ¹		
		2016	2017	% change	2016	2017	% change	2016	2017	% change
Residential	tonnes	489,256	522,248	7%	365,957	339,136	-7%	43%	39%	-3%
	tonnes/capita	0.19	0.20	7%	0.14	0.13	-7%			
Single Family	tonnes	273,957	290,510	6%	323,759	305,043	-6%	54%	51%	-3%
Multi Family	tonnes	215,300	231,738	8%	42,198	34,092	-19%	16%	13%	-4%
Commercial/ Institutional	tonnes	350,724	413,547	18%	377,549	370,947	-2%	52%	47%	-5%
	tonnes/capita	0.14	0.16	18%	0.15	0.15	-2%			
Residential + Commercial/ Institutional	tonnes/ household	0.88	0.99	13%	0.78	0.75	-3%			
Construction/ Demolition	tonnes	416,280	371,521	-11%	1,037,146	1,267,420	22%	71%	77%	6%
Product Stewardship	tonnes				246,131	256,552	4%			
Total	tonnes	1,256,261	1,307,315	4%	2,026,783	2,234,055	10%	62%	63%	1%
	tonnes/capita	0.49	0.51	4%	0.80	0.88	10%			
	tonnes/ household	1.31	1.38	6%	2.11	2.36	12%			

¹ Excluding EPR recyclables allocation.

Year	Single Family		Multi Family		Total	
	Population	Households	Population	Households	Population	Households
2016	1,533,062	471,157	1,013,532	487,896	2,546,595	959,053
2017	1,464,123	461,092	1,085,924	484,360	2,550,047	945,452

To: Zero Waste Committee

From: Larina Lopez, Corporate Communications Division Manager, External Relations

Date: January 3, 2019 Meeting Date: January 10, 2019

Subject: **2018 Regional Food Scraps Recycling Campaign Results**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated January 3, 2019, titled “2018 Regional Food Scraps Recycling Campaign Results”.

PURPOSE

To update the Committee on the results of the 2018 regional “Food Scraps Recycling” campaign.

BACKGROUND

The 2018 Regional “Food Scraps Recycling” campaign supports the organics disposal ban and objectives established in the *Integrated Solid Waste Resource Management Plan*. This report provides an update on the results of the 2018 food scraps recycling campaign.

2018 REGIONAL FOOD SCRAPS RECYCLING CAMPAIGN RESULTS

Campaign Approach

2018 was the fifth year of a regional food scraps recycling campaign. The campaign was in market from September 24 to November 18, 2018. The objectives were to primarily increase the amount of food-soiled paper items entering the organics waste stream and secondarily, decrease the amount of plastic bags entering the same stream.

Similar to 2017, the target audience was apartment and condo residents. As in 2017, townhouse residents were not included in the audience as their food scraps recycling process tends to be more like that of detached homes.

Building on the success of the friendly and humorous food scraps characters, the primary campaign featured the food-soiled paper characters with the multi-family backgrounds from 2017. However, the primary message switched from “Food isn’t garbage.” to “I’m not garbage.” Supporting messages elaborated by specifying the individual food-soiled paper object. The call to action asked readers to learn what goes in their green bins by visiting the website.

The secondary element of the campaign discouraged the disposal of plastic bags in the green bin. The friendly food scraps characters were not used – instead the primary message was positioned as a rhetorical question, asking residents if they can tell which plastic bags are biodegradable. The supporting message confirmed that you can’t tell, followed by a final message that all plastic bags need to be kept out of green bins. The call to action invited users to find alternatives.

Media Strategy

The integrated media strategy focused on residents in multi-family dwellings throughout the region. Similar to 2017, it used online targeting to serve ads based on resident location, interest, and search activity while also reaching a broader audience using traditional tactics. Media placements included:

- Digital: social media (Instagram, Facebook); search re-marketing; search engine marketing; banner ads.
- Out of Home: billboards and street-level transit shelter ads; elevator screens in condo buildings; grocery/retail stores, and video and lobby ads in movie theatres.

Engagement of Metro Vancouver Members

Several members posted campaign materials in their facilities and shared social media posts using content and images provided by Metro Vancouver.

Metro Vancouver's School & Youth Leadership Programs continued to leverage the food scraps campaign through field trips, facility tours, teacher professional development and the Youth4Action leadership program. Student leaders and K-12 teachers have benefited from and/or used these campaign materials to support waste reduction at school and beyond.

Evaluation

The campaign was evaluated via a post-campaign survey. Media and website performance were also evaluated.

- **Recall**
23% of residents recalled the campaign in 2018 (22% in 2017). Recall of the campaign is still strengthened by the use of recognizable characters. As was the case for the past two campaigns, awareness is highest among younger residents. Those who recall the campaign are most likely to have seen the ads at bus stops and transit shelters. The advertisements and food scraps characters retain their clarity and effectiveness.
- **Reported Behaviour**
Among residents who buy and use coffee filters, paper towels, napkins, and paper plates, the majority dispose of them into the food scraps bin "sometimes" or more frequently.
- **Behaviour Change**
Just under six-in-ten (58%) residents who recall the ads say they are now more likely to use the food scraps bin to dispose of food soiled paper. The remaining four-in-ten (41%) say they are about as likely.

Overall, just over eight-in-ten (83%) residents typically use the food scraps bin or compost for one or more of the types of waste presented in the survey, an increase of six percentage points from 2017.

Women are more likely than men to dispose of one or more types of waste into the organics bin (86% vs 80%).

- **Media Performance**

The online portion of the campaign served over 6.5 million impressions across social media, display ads and search targeting.

- Instagram achieved higher reach than Facebook due to the slightly younger audience.
- There were 629 post reactions, 25 comments and 68 post shares across both Facebook and Instagram platforms.
- The top search re-marketing keywords were food waste, condo, composting, apartment and leftovers.
- Google Search delivered an above industry average click-through rate of 9.44% with the keyword “green bin” achieving the highest rate of nearly 18%.

Fifty-five per cent (1,819) of website traffic came from organic search – which speaks to the influence of the traditional media elements in market. The video scheduled in theatres reached over 466,000 people, and billboards and transit shelters were the most recalled medium from all campaign elements.

The plastic bag creative was only available online to residents searching for information related to plastic/biodegradable bags and composting. When users searched for related topics online, the search ads achieved a click-through rate of 6.9%.

- **Website Performance**

There were 3,287 sessions during the 2018 campaign – an increase of 56.45% when compared to 2017. Engagement increased as well to nearly a minute with users visiting an average of 1.4 pages per session.

2019 Regional Campaign

Going forward, the results of the 2018 campaign will inform the 2019 campaign. It is anticipated that there will be a continued focus on food-soiled paper and education around plastics bag contamination in the green bin.

The campaign will continue to leverage the friendly, humorous food characters supporting the organics ban and building on the objective to increase the diversion of food scraps from the garbage.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The 2018 regional food scraps recycling campaign budget was \$100,000, supported under the Zero Waste Communications Program of the 2018 General Government budget and managed by the External Relations Department.

The budget for the 2019 regional campaign is \$100,000. These costs are included in the Zero Waste Communications Program of the 2019 General Government budget.

SUMMARY / CONCLUSION

The regional “Food Scraps Recycling” campaign supports the organics disposal ban and objectives established in the *Integrated Solid Waste Resource Management Plan*. The main objective of the 2018 campaign was to increase the amount of food-soiled paper items entering the organic waste stream. The target audience was apartment and condo residents.

The food face characters were again used in 2018 with a focus on food-soiled paper items: paper plate, napkin and coffee filter. The messaging informed residents that food-soiled paper items are accepted in their green bin.

Online and traditional media placements were used in dense neighbourhoods to reach residents of multi-family dwellings.

Metro Vancouver members engaged with the campaign both through social sharing and the use of collateral in facilities and events.

Overall, just over eight-in-ten (83%) residents typically use the food scraps bin or compost for one or more of the types of waste presented in the survey, an increase of six percentage points from 2017.

Fifty-eight per cent of residents who recalled the ads said they are now more likely to use the food scraps bin to dispose of food soiled paper. The remaining four-in-ten (41%) say they are about as likely.

Attachment: “Food Scraps Recycling Campaign, Sample Creative,” dated December 21, 2018

Reference: [Food Scraps Campaign Website: Tips For Green-Binning In Apartments And Condos](#)

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Food Scraps Recycling Campaign, Sample Creative

Posters (indoor)

"Coffee filter"



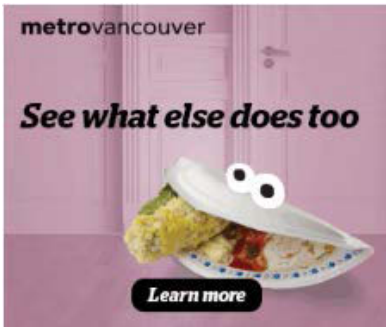
"Napkin"



"Paper plate"



Online banner ads, desktop (animated and static)



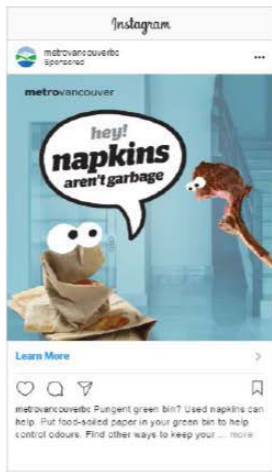
Online banner ad, plastic bag (animated)



Online banner ads, mobile (animated and static)



Social media, Facebook and Instagram



Grocery store advertising, Grocery Bars and AdCaps



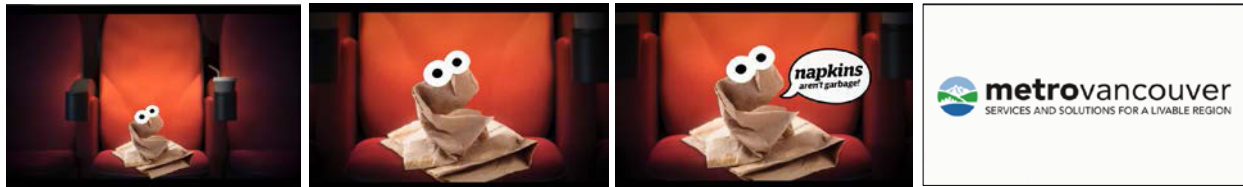
Billboards, digital and paper



Transit shelters



Cinema, lobby (:15 sec) and pre-show (:15 sec)



<https://vimeo.com/290999455/5dd5a63318>

Voiceover:

Hi, how's your popcorn?
You probably grabbed a few napkins too, right?
When the movie's over, put those napkins in the green bin.
Because napkins aren't garbage.

Member Municipality engagement, co-branded posters and social media



To: Liquid Waste Committee

From: Paul Dufault, Project Manager, North Shore Wastewater Treatment Plant Project,
Liquid Waste Services

Date: January 14, 2019 Meeting Date: January 17, 2019

Subject: **North Shore Wastewater Treatment Plant Project Status Update**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated January 14, 2019 titled “North Shore Wastewater Treatment Plant Project Status Update”.

PURPOSE

To update the GVS&DD Board on the current status of the North Shore Wastewater Treatment Plant Project.

BACKGROUND

As identified in Metro Vancouver’s *Integrated Liquid Waste and Resource Management Plan* (ILWRMP) approved by the BC Ministry of Environment in May 2011, and consistent with the federally mandated Wastewater Systems Effluent Regulations, the Lions Gate Wastewater Treatment Plant is to be upgraded to secondary treatment no later than December 31, 2020.

In 2011, the Board approved a budget of \$20 Million to initiate the planning for the secondary upgrades of the Lions Gate and Iona Wastewater Treatment Plants. At the November 15, 2013 meeting, the Board endorsed the Lions Gate Secondary Wastewater Treatment Plant Indicative Design Summary Report as well as amendments to the GVS&DD cost allocation formula. At the February 14, 2014 meeting, the Board directed staff to proceed with the Design-Build-Finance approach for implementing the Lions Gate Secondary Treatment Plant and apply for grant funding under the New Building Canada Fund as the top priority infrastructure project for Metro Vancouver.

PROJECT DESCRIPTION

The North Shore Wastewater Treatment Plant Project (NSWWTP Project), previously known as the Lions Gate Secondary Wastewater Treatment Plant Project, consists of the following three components:

- The North Shore Wastewater Treatment Plant (NSWWTP), consisting of a new secondary wastewater treatment plant located at West 1st Street, between Pemberton Avenue and Philip Avenue in the District of North Vancouver. On April 5, 2017, the GVS&DD approved entering into a project agreement with Acciona Wastewater Solutions LP (Acciona) for the design, construction and construction financing of the NSWWTP for \$525 million. On October 5, 2017, the GVS&DD exercised its option for including the District Energy System into the NSWWTP for \$16.9 million as provided for in Acciona’s original proposal.

- The NSWWTP Conveyance Project (Conveyance Project), that will convey the District of West Vancouver's, Squamish Nation's, and a portion of the District of North Vancouver's wastewater from the existing LGWWTP to the NSWWTP. This includes new gravity trunk sewers, a new pump station located under the Lions Gate Bridge, and a new forcemain from the First Narrows pump station to the NSWWTP. After treatment, the treated secondary effluent will be conveyed by a new pipe between the NSWWTP and the existing LGWWTP outfall. On July 19, 2018, the GVS&DD approved entering into a project agreement with North Shore Conveyance Partners for the design, construction and construction financing of the Conveyance Project for \$141 million.
- Decommissioning of the existing Lions Gate Wastewater Treatment Plant (LGWWTP) and returning the lands to the Squamish Nation. Facility decommissioning will commence in 2021, after the NSWWTP and the Conveyance Project are operational and the LGWWTP is no longer required. All structures at the LGWWTP are to be removed from the site and all soil will be remediated to meet residential standards.

DESIGN AND CONSTRUCTION UPDATE

The 60% design for the NSWWTP has been submitted and reviewed. The 90% design is expected to be submitted early in 2019 and the final detailed design of the entire facility is scheduled to be submitted in October of 2019. In December 2017, the District of North Vancouver Council approved the issuance of a development permit for the project. Acciona has applied for a building permit for the underground components of the facility.

Acciona mobilized to site shortly after award. Activities focused on establishment of the project office, relocation of the existing storm sewer, site remediation and ground improvements. Acciona has relocated the storm sewer that crossed the site to a new alignment along West 1st Street, completed the removal of contaminated material from the site, and has completed installation of the stone columns. Over 3700 stone columns were installed to densify the soil for improved seismic performance. With installation of the stone columns complete, Acciona proceeded with preloading the site and on November 27, 2018 the Engineer of Record authorized the release of the initial preload from the most western portion of the site. Acciona is currently moving the preload material from the initial preload area and will progressively treat the site from west to east. By releasing the preload, deep excavations and construction of the permanent facility can begin on the western portion of the site in 2019. With respect to the project timeline, Acciona is contracted to deliver the project on the timeline approved by the Board.

North Shore Conveyance Partners (NSCP) has submitted its 90% design for the Conveyance Project. NSCP has almost completed the construction of the temporary construction road through the Squamish Nation. NSCP has mobilized to site and is currently active with the installation of the secant piled walls needed to support the excavation for the new First Narrows Pump Station under the Lions Gate Bridge.

PROJECT BUDGET

On February 28, 2014, the GVS&DD Board approved proceeding with a Design-Build-Finance procurement strategy for the NSWWTP. At that time, the proposed Lions Gate Secondary Wastewater Treatment Plant program had an estimated capital cost of \$700 M (2018 dollars); no grant funding had been secured for the project.

Table 1 provides a summary of the estimated costs of the program in 2014. The table also shows the current approved budget for the entire program to completion. The costs of the project are offset by Senior Government grant contributions that were successfully secured by the Federal government in 2016 and the Provincial government in 2017. The Government of Canada will reimburse the GVS&DD 33% of the eligible project costs up to a maximum of \$212,300,000. The Province of British Columbia has provided the GVS&DD \$193,000,000 or 31.1% of the eligible costs for the NSWWTP, which includes the outfall component of the Conveyance project.

Table 1: Summary of original estimated costs and approved budget

	2014 Program Estimate	Project Budget
Project Initiation and Definition	\$20,000,000	\$20,000,000
NSWWTP Program		
NSWWTP	\$620,000,000	\$541,600,000
Conveyance	\$60,000,000	\$148,900,000
Decommissioning	\$20,000,000	\$20,500,000
District Energy System		\$16,900,000
Total NSWWTP Program	\$700,000,000	\$727,900,000
Contingency	Included above	\$30,000,000
Total Project Costs	\$720,000,000	\$777,900,000
Province of British Columbia	\$193,000,000	
Government of Canada	\$212,300,000	
GVS&DD Net Project Amount	\$ 314,700,000	\$372,600,000

The approved budget for the NSWWTP project is \$777.9 million. This includes \$30 million contingency to account for unforeseen items associated with the NSWWTP and Conveyance projects. The updated project costs have been assessed with respect to the GVS&DD Board endorsed 5 year financial plan.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

As both the plant construction contract and conveyance works contract are design build projects, the contractors for these two projects are required to complete the projects on the basis of the fixed price contractual terms within the overall budget as set out above.

SUMMARY/CONCLUSION

As identified in Metro Vancouver’s *Integrated Liquid Waste and Resource Management Plan* (ILWRMP) approved by the BC Ministry of Environment in May 2011, and consistent with the federally mandated Wastewater Systems Effluent Regulations, the Lions Gate Wastewater Treatment Plant is to be upgraded to secondary treatment no later than December 31, 2020.

In 2017, the GVS&DD entered into a contract with Acciona Wastewater Solutions to design, build and provide construction financing for the NSWWTP and in July 2018 entered into a contract with North Shore Conveyance Partners to design, build and provide construction financing for the Conveyance project. Preliminary planning work is expected to commence on the decommissioning of the existing LGWWTP in 2019.

The approved budget for the NSWWTP project is \$777.9 million, which is partially offset by \$405.3 million Senior Government grant contributions.

27973555

To: Liquid Waste Committee

From: Fred Nenninger, Director, Policy Planning & Analysis, Liquid Waste Services

Date: January 10, 2019 Meeting Date: January 17, 2019

Subject: **Iona Island Wastewater Treatment Plant – Project Definition Update**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated January 10, 2019 titled “Iona Island Wastewater Treatment Plant – Project Definition Update”.

PURPOSE

To update the GVS&DD Board on the work underway to complete the Project Definition Phase for the new Iona Island Wastewater Treatment Plant.

BACKGROUND

In May 2011, Metro Vancouver’s *Integrated Liquid Waste and Resource Management Plan* was approved by the BC Minister of Environment. The plan requires that the Iona Island Wastewater Treatment Plant upgrade should be completed within 20 years. The Federal Wastewater Systems Effluent Regulation that became law in 2012 requires the plant be upgraded by no later than December 31, 2030.

This report is being brought forward to advise the Board on the progress of the technical work and the engagement process that is now underway.

TECHNICAL WORK

The Project Definition Phase consists of eight internal workshops involving Metro Vancouver and a consultant team. The workshop titles are as follows:

- Workshop 1 – Goals, Objectives and Process
- Workshop 2 – Objective Hierarchy and Evaluation
- Workshop 3 – Plant Concepts integration
- Workshop 4 – Plant Concept Evaluation
- Workshop 5 – Plant Concept Selection
- Workshop 6 – Plant Concept Indicative Design
- Workshop 7 – Project Definition Draft Report Review
- Workshop 8 – Project Definition Final Report Presentation

Workshop 1 was held on November 19 and 20, 2018 with the purpose of aligning the project team on the overall goals, objectives and process for the Project Definition.

Workshop 2 is scheduled for January 21 and 22, 2019 and will focus on developing a hierarchy for the new plant design objectives and the evaluation process to be utilized to assess the various design

concepts. The remaining workshops will take place through Fall 2020 when the final Project Definition Report is presented.

Archeological Work

The project archeological consultant has submitted a Heritage Conservation Act permit and four First Nations Heritage permits to various First Nations to enable archeological, geotechnical and environmental work to begin at the Iona Island site.

ENGAGEMENT PROCESS

Metro Vancouver is committed to meaningful engagement with potentially impacted stakeholders and First Nations on the Iona Island Wastewater Treatment Plant Project. Interested stakeholders and First Nations will have the opportunity to provide input on the three project objectives: upgrading the plant to secondary treatment, integrating the new plant with Iona Beach Regional Park and the surrounding environment, and exploring resource recovery opportunities.

Stakeholders

Metro Vancouver is engaging with various stakeholder groups, including but not limited to: local government staff and elected officials; residential and business neighbours of the Plant; environmental groups; regulators and other government agencies; recreational users of Iona Beach Regional Park; and, commercial and recreational Fraser River users.

Over the summer, Metro Vancouver participated in three events to build awareness of the Project and to learn what people value about and how they use Iona Beach Regional Park. In July 2018, two 'pop-up' booths were held at Iona Beach Regional Park to meet and engage with recreational users. And in September 2018, Metro Vancouver participated in the Great Canadian Shoreline Cleanup event at Iona Beach Regional Park. Over the course of these four events, Metro Vancouver staff engaged with over 220 people.

A series of community workshops are planned throughout the Project Definition Phase. These will be scheduled to align with key decision points in the project's Integrated Design Process. The first community workshop was held January 9, 2019 and focused on site discovery and values of participants related to Iona Beach Regional Park and the future wastewater treatment plant. Future workshops will continue to bring together community representatives and other interested stakeholders to develop concepts for the plant upgrade and its integration with Iona Beach Regional Park and surrounding environment, and to explore resource recovery opportunities.

Other key engagement activities include presentations to staff and elected officials (Richmond, Vancouver, Burnaby, UBC and UEL), meetings with regulators and other government agencies, and correspondence with environmental, community, business, recreational and commercial river user groups.

Communication activities used to support and promote these engagement activities include a website, newspaper advertisements, posters, Facebook posts, tweets, and email correspondence.

First Nations

Fourteen First Nations, as identified on the provincial Consultative Areas Database and in accordance with Metro Vancouver’s corporate process for Information Sharing and Engagement with First Nations for Construction Projects, will be provided information on the project and the opportunity to provide feedback on their respective interests.

Metro Vancouver will work closely with the Musqueam Indian Band as their reserve lands are located in close proximity to the Iona Island Wastewater Treatment Plant. On June 21, 2018, at the request of the Musqueam Indian Band, Metro Vancouver participated in National Indigenous Peoples Day. Metro Vancouver will seek ways to meaningfully engage Musqueam Indian Band on the new plant.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The Project Definition financial status as of October 31, 2018 is shown in the following table.

Board Approved	Board Approved Funds Remaining	Project Definition Actual Spent to Date
\$16,500,000	\$13,303,310	\$286,302

SUMMARY / CONCLUSION

The Iona Island Wastewater Treatment Plant is underway with the first of eight integrated design workshops having been completed. The second workshop will be held on January 21 and 22, 2019 and will develop the plant design objectives hierarchy and evaluation process.

Stakeholder and First Nations engagement is also underway. The first community workshop was held January 9, 2019, and other engagement activities will continue throughout 2019 and 2020.

27927799

To: Liquid Waste Committee

From: Paul Dufault, Acting Director, Project Delivery, Liquid Waste Services

Date: January 7, 2019 Meeting Date: January 17, 2019

Subject: **2019 Liquid Waste Capital Projects**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated January 7, 2019, titled “2019 Liquid Waste Capital Projects”.

PURPOSE

The purpose of this report is to inform the GVS&DD Board of the liquid waste capital projects under its purview for 2019, as approved by the Board on October 26, 2018.

BACKGROUND

As part of the capital projects reporting process, an annual report summarizing the capital projects under the former Utilities Committee’s purview has historically been brought forward to its first meeting of the year.

The 2019 Annual Work Plan and Budget for Liquid Waste was reviewed and endorsed by the Utilities Committee at its October 11, 2018 meeting. This report summarizes the individual liquid waste capital projects included in the above-noted budget.

CAPITAL PLANNING PROCESS

As part of the annual budget and five-year financial planning process, a determination is made of the capital projects that are required in order to continue to meet Metro Vancouver’s service obligations. This is done through senior level capital planning teams which prioritize each project on the basis of several criteria including environmental impact, health and safety, and ability to meet service delivery requirements and regulations. Typically in May or June of each year, when the complete updated draft Long Range Capital Plan is prepared, each local government member is provided with copies for their review and comment. Comments received are considered in finalizing the draft plan commencing in late July, for incorporation into the annual budget and five-year financial plan.

Financial information for the projects within the liquid waste capital budget are to be provided to the Committee and Board in the fall of each year as part of the annual budget and five-year financial planning process.

Liquid waste capital projects expected to commence in 2019, and “Approved Projects in Progress” are summarized for reference purposes on Attachments 1 and 2, respectively.

In accordance with the capital expenditure reporting process approved by the Board, interim status reports will be provided to the Liquid Waste and Performance & Audit Committees in June/July and October/November, with a final year-end report to the Committees and Board in April.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

For 2019, liquid waste capital projects account for approximately \$564.8 million of the 2019 Metro Vancouver capital budget.

Proposed 2019 expenditures and total project budget, for each individual project, are tabulated in Attachment 3.

SUMMARY / CONCLUSION

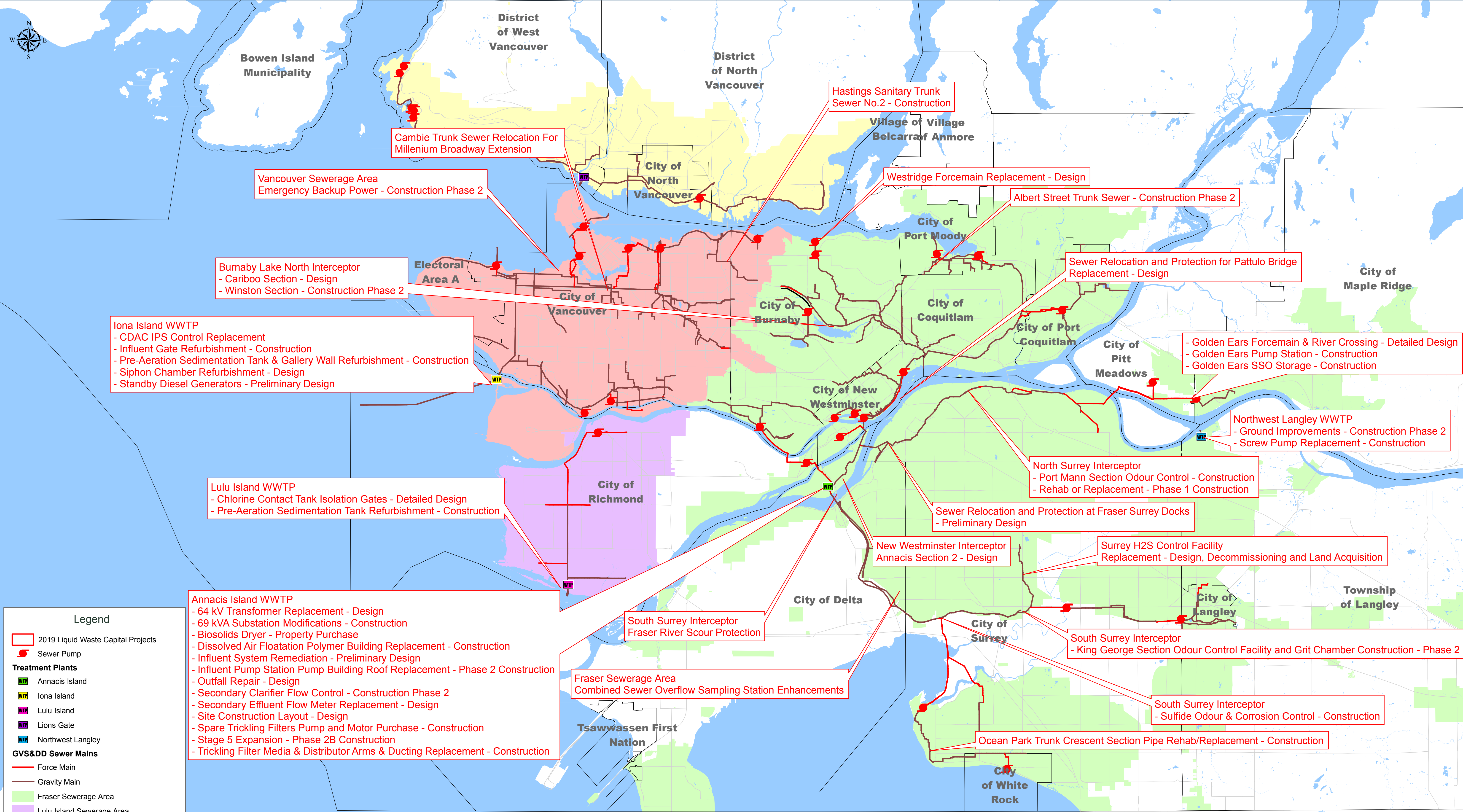
The 2019 liquid waste capital budget was approved by the Board in October 2018. This report provides a high level overview of the capital programs and projects for the Committee's reference throughout 2019.

Attachments:

1. 2019 Liquid Waste Capital New Projects Map
2. 2019 Liquid Waste Capital Approved Projects in Progress Map
3. GVS&DD Capital Programs and Project Details, Liquid Waste Services, 2019 Budget

28077138

2019 Liquid Waste Capital New Projects



Legend

- 2019 Liquid Waste Capital Projects
- Sewer Pump
- Treatment Plants**
 - Annacis Island
 - Iona Island
 - Lulu Island
 - Lions Gate
 - Northwest Langley
- GVS&DD Sewer Mains**
 - Force Main
 - Gravity Main
 - Fraser Sewerage Area
 - Lulu Island Sewerage Area
 - North Shore Sewerage Area
 - Vancouver Sewerage Area

Annacis Island WWTP
 - 64 kV Transformer Replacement - Design
 - 69 kVA Substation Modifications - Construction
 - Biosolids Dryer - Property Purchase
 - Dissolved Air Flotation Polymer Building Replacement - Construction
 - Influent System Remediation - Preliminary Design
 - Influent Pump Station Pump Building Roof Replacement - Phase 2 Construction
 - Outfall Repair - Design
 - Secondary Clarifier Flow Control - Construction Phase 2
 - Secondary Effluent Flow Meter Replacement - Design
 - Site Construction Layout - Design
 - Spare Trickling Filters Pump and Motor Purchase - Construction
 - Stage 5 Expansion - Phase 2B Construction
 - Trickling Filter Media & Distributor Arms & Ducting Replacement - Construction

Lulu Island WWTP
 - Chlorine Contact Tank Isolation Gates - Detailed Design
 - Pre-Aeration Sedimentation Tank Refurbishment - Construction

Iona Island WWTP
 - CDAC IPS Control Replacement
 - Influent Gate Refurbishment - Construction
 - Pre-Aeration Sedimentation Tank & Gallery Wall Refurbishment - Construction
 - Siphon Chamber Refurbishment - Design
 - Standby Diesel Generators - Preliminary Design

Burnaby Lake North Interceptor
 - Cariboo Section - Design
 - Winston Section - Construction Phase 2

Vancouver Sewerage Area
 Emergency Backup Power - Construction Phase 2

Cambie Trunk Sewer Relocation For
 Millenium Broadway Extension

Hastings Sanitary Trunk
 Sewer No.2 - Construction

Westridge Forcemain Replacement - Design

Albert Street Trunk Sewer - Construction Phase 2

Sewer Relocation and Protection for Pattullo Bridge
 Replacement - Design

- Golden Ears Forcemain & River Crossing - Detailed Design
 - Golden Ears Pump Station - Construction
 - Golden Ears SSO Storage - Construction

Northwest Langley WWTP
 - Ground Improvements - Construction Phase 2
 - Screw Pump Replacement - Construction

North Surrey Interceptor
 - Port Mann Section Odour Control - Construction
 - Rehab or Replacement - Phase 1 Construction

Sewer Relocation and Protection at Fraser Surrey Docks
 - Preliminary Design

New Westminster Interceptor
 Annacis Section 2 - Design

Surrey H2S Control Facility
 Replacement - Design, Decommissioning and Land Acquisition

South Surrey Interceptor
 Fraser River Scour Protection

South Surrey Interceptor
 - King George Section Odour Control Facility and Grit Chamber Construction - Phase 2

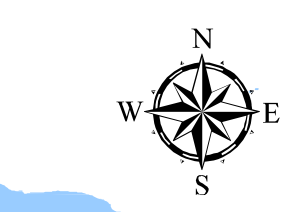
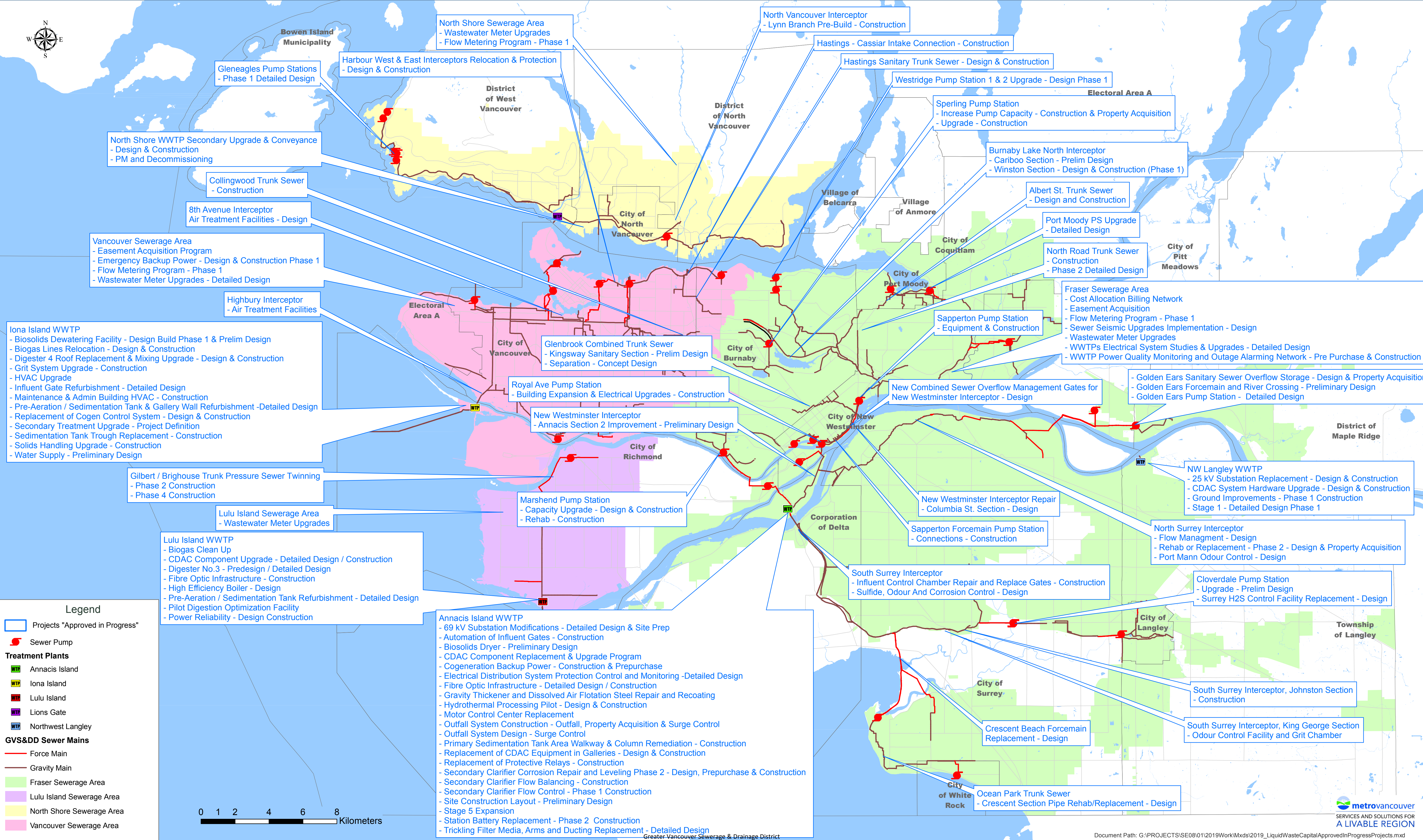
Fraser Sewerage Area
 Combined Sewer Overflow Sampling Station Enhancements

South Surrey Interceptor
 - Sulfide Odour & Corrosion Control - Construction

Ocean Park Trunk Crescent Section Pipe Rehab/Replacement - Construction



2019 Liquid Waste Capital Approved in Progress Projects



Legend

- Projects "Approved in Progress"
- Sewer Pump
- Treatment Plants**
- Annacis Island
- Iona Island
- Lulu Island
- Lions Gate
- Northwest Langley
- GVS&DD Sewer Mains**
- Force Main
- Gravity Main
- Fraser Sewerage Area
- Lulu Island Sewerage Area
- North Shore Sewerage Area
- Vancouver Sewerage Area



Annacis Island WWTP

- 69 kV Substation Modifications - Detailed Design & Site Prep
- Automation of Influent Gates - Construction
- Biosolids Dryer - Preliminary Design
- CDAC Component Replacement & Upgrade Program
- Cogeneration Backup Power - Construction & Prepurchase
- Electrical Distribution System Protection Control and Monitoring - Detailed Design
- Fibre Optic Infrastructure - Detailed Design / Construction
- Gravity Thickener and Dissolved Air Flotation Steel Repair and Recoating
- Hydrothermal Processing Pilot - Design & Construction
- Motor Control Center Replacement
- Outfall System Construction - Outfall, Property Acquisition & Surge Control
- Outfall System Design - Surge Control
- Primary Sedimentation Tank Area Walkway & Column Remediation - Construction
- Replacement of CDAC Equipment in Galleries - Design & Construction
- Replacement of Protective Relays - Construction
- Secondary Clarifier Corrosion Repair and Leveling Phase 2 - Design, Prepurchase & Construction
- Secondary Clarifier Flow Balancing - Construction
- Secondary Clarifier Flow Control - Phase 1 Construction
- Site Construction Layout - Preliminary Design
- Stage 5 Expansion
- Station Battery Replacement - Phase 2 Construction
- Trickling Filter Media, Arms and Ducting Replacement - Detailed Design



**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
CAPITAL PROGRAMS AND PROJECT DETAILS
LIQUID WASTE SERVICES
2019 BUDGET**

	PROJECT LOCATION	2019 CAPITAL BUDGET	TOTAL PROJECT COSTS
CAPITAL EXPENDITURES			
SD Infrastructure Growth Capital			
2019 - Approved Projects in Process			
FSA - AIWWTP Site Construction Layout Preliminary Design	Delta	100,000	250,000
FSA - Albert Street Trunk Sewer Detailed Design	Port Moody	200,000	500,000
FSA - Albert Street Trunk Sewer Construction Phase 1	Port Moody	1,500,000	1,500,000
FSA - Annacis Outfall System Design - Surge Control	Delta	100,000	3,000,000
FSA - Annacis Outfall System Construction - Outfall Property Acquisition	Delta	2,500,000	36,000,000
FSA - Annacis Outfall System Construction - Outfall	Delta	25,000,000	300,000,000
FSA - Annacis Outfall System Construction - Surge Control	Delta	1,000,000	22,000,000
FSA - Annacis Stage 5 Expansion Phase 1 T1 & T2	Delta	34,000,000	243,500,000
FSA - Annacis Stage 5 Expansion Phase 2 Pre Design	Delta	50,000	5,000,000
FSA - Annacis Stage 5 Expansion Phase 2 Detailed Design	Delta	500,000	17,000,000
FSA - Annacis Stage 5 Expansion Phase 2a Construction	Delta	35,500,000	180,000,000
FSA - Burnaby Lake North Interceptor Cariboo Section Preliminary Design	Burnaby	1,000,000	1,000,000
FSA - Burnaby Lake North Interceptor Winston Section Detailed Design Phase 1	Burnaby	500,000	3,200,000
FSA - Burnaby Lake North Interceptor Winston Section Detailed Design Phase 2	Burnaby	1,300,000	2,100,000
FSA - Burnaby Lake North Interceptor Winston Section Construction Phase 1	Burnaby	50,000	39,650,000
FSA - Cloverdale PS Upgrade Preliminary Design	Surrey	500,000	700,000
VSA - Collingwood Trunk Sewer Construction	Vancouver	100,000	5,090,000
FSA - Glenbrook Combined Trunk Kingsway Sanitary Section Prelim Des	Burnaby	150,000	300,000
FSA - Golden Ears Forcemain and River Crossing Preliminary Design	Maple Ridge	3,000,000	5,000,000
FSA - Golden Ears Pump Station Detailed Design	Maple Ridge	2,700,000	4,200,000
VSA - Hastings Sanitary Trunk Sewer Construction	Burnaby	6,000,000	13,300,000
VSA - Hastings Sanitary Trunk Sewer No. 2 Detailed Design	Burnaby	1,000,000	5,000,000
VSA - Hastings-Cassiar Intake Connection Construction	Vancouver	300,000	650,000
LSA - Lulu Island WWTP Digester No 3 Pre Design	Richmond	250,000	600,000
LSA - Lulu Island WWTP Digester No 3 Detailed Design	Richmond	2,000,000	4,100,000
FSA - Marshend Pump Station Capacity Upgrade Prelim Des	Burnaby	450,000	1,000,000
FSA - Marshend Pump Station Capacity Upgrade Detailed Des	Burnaby	150,000	900,000
FSA - NLWWTP Ground Improvements Construction Phase 1	Langley Township	8,000,000	24,000,000
FSA - NLWWTP Stage 1 Detailed Design Phase 1	Langley Township	12,000,000	46,000,000
FSA - North Road Trunk Sewer Construction	Coquitlam	3,000,000	7,000,000
FSA - North Road Trunk Sewer Phase 2 Detailed Design	Coquitlam	300,000	938,000
NSA - North Vancouver Interceptor - Lynn Branch Pre-build Construction	Dist of North Van	100,000	3,500,000
FSA - NSI Flow Management Preliminary Design	Surrey	1,800,000	2,500,000
FSA - NSI Flow Management Detailed Design	Surrey	2,000,000	2,000,000
FSA - Port Moody PS Upgrade Detailed Design	Port Moody	400,000	800,000
FSA - Sapperton Forcemain Pump Station Connections Construction	New Westminster	500,000	9,000,000
FSA - Sapperton Pump Station Equipment & Construction	New Westminster	10,000,000	76,400,000
FSA - South Surrey Interceptor Johnston Section Construction	Surrey	20,000,000	40,750,000
FSA - Sperling PS Increase Pump Capacity Constr & Property Acquisition	Burnaby	750,000	3,000,000
FSA - SSI - King George Section - Odor Control Facility (OCF) and Grit Chamber	Surrey	3,500,000	13,500,000
2019 - New Projects			
FSA - AIWWTP Site Construction Layout Detailed Design	Delta	350,000	350,000
FSA - Albert Street Trunk Sewer Construction Phase 2	Port Moody	1,000,000	3,300,000
FSA - Annacis Stage 5 Expansion Phase 2b Construction	Delta	10,000,000	150,000,000
FSA - Burnaby Lake North Interceptor Cariboo Section Detailed Design	Burnaby	200,000	2,000,000
FSA - Burnaby Lake North Interceptor Winston Section Construction Phase 2	Burnaby	50,000	72,000,000
FSA - Golden Ears Forcemain and River Crossing Detailed Design	Maple Ridge	3,500,000	5,000,000
FSA - Golden Ears Pump Station Construction	Maple Ridge	3,000,000	36,000,000
VSA - Hastings Sanitary Trunk Sewer No. 2 Construction	Burnaby	8,000,000	15,000,000
FSA - NLWWTP Ground Improvements Construction Phase 2	Langley Township	10,000,000	35,000,000
FSA - SSI - King George Section - Odor Control Facility (OCF) and Grit Chamber Construction Phase 2	Surrey	3,000,000	6,000,000
		\$ 223,350,000	\$ 1,504,878,000

	PROJECT LOCATION	2019 CAPITAL BUDGET	TOTAL PROJECT COSTS
SD Infrastructure Maintenance Capital			
2019 - Approved Projects in Process			
FSA - AIWWTP Fibre Optic Infrastructure Detailed Design	Delta	100,000	350,000
FSA - AIWWTP Fibre Optic Infrastructure Construction	Delta	850,000	1,150,000
FSA - AIWWTP Gravity Thickener and DAF Steel Repair and Recoating	Delta	150,000	2,000,000
FSA - AIWWTP Replacement of CDAC Equipment in Galleries Detailed Design	Delta	100,000	395,000
FSA - AIWWTP Replacement of CDAC Equipment in Galleries Construction	Delta	500,000	2,500,000
FSA - AIWWTP SCL Flow Control Construction Phase 1	Delta	50,000	500,000
FSA - AIWWTP Station Battery Replacement - PHASE 2 Construction	Delta	150,000	400,000
FSA - AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement Detailed Design	Delta	750,000	1,700,000
FSA - Annacis Island WWTP - CDAC Component Replacement and Upgrade Program	Delta	100,000	1,500,000
FSA - Annacis MCC 80 051, 80 070, 80 071 Replacement	Delta	600,000	2,844,000
FSA - Annacis Secondary Clarifier Corrosion Repair	Delta	50,000	2,534,000
FSA - Annacis Secondary Clarifier Corrosion Repair and Leveling Phase 2 Design & Prepurchase	Delta	100,000	10,000,000
FSA - Annacis Secondary Clarifier Corrosion Repair and Leveling Phase 2 Constr	Delta	300,000	12,000,000
FSA - Cost Allocation Billing Network (Combined 96 F4)	Regional	50,000	5,230,000
FSA - Crescent Beach FM - Replacement Detailed Design	Surrey	800,000	2,315,000
LSA - Gilbert/Brighthouse Trunk Pressure Sewer Twinning Phase 2 Construction	Richmond	21,000,000	46,700,000
LSA - Gilbert/Brighthouse Trunk Pressure Sewer Twinning Phase 4 Construction	Richmond	10,000,000	40,400,000
NSA - Glen Eagles Pump Stations Phase 1 Detailed Design	West Vancouver	1,500,000	2,500,000
FSA - Golden Ears SSO Storage Detail Des & Property Acq	Maple Ridge	2,500,000	10,500,000
VSA - Harbour West & East Interceptors Reloc & Protect Detailed Design	Vancouver	50,000	1,900,000
VSA - Harbour West & East Interceptors Reloc & Protect Construction	Vancouver	3,000,000	17,600,000
VSA - IIWWTP Digester 4 Roof Replacement & Mixing Upgrade Design	Richmond	50,000	1,500,000
VSA - IIWWTP Digester 4 Roof Replacement & Mixing Upgrade Construction	Richmond	3,500,000	23,300,000
VSA - IIWWTP HVAC upgrade	Richmond	50,000	2,095,000
VSA - IIWWTP Influent Gate Refurbishment Detailed Design	Richmond	250,000	350,000
VSA - IIWWTP Maintenance and Administration Building HVAC Construction	Richmond	150,000	550,000
VSA - IIWWTP PA-Sed Tank & Gallery Wall Refurbishment Detailed Design	Richmond	100,000	175,000
VSA - IIWWTP Replacement of CoGen Control System Des	Richmond	150,000	470,000
VSA - IIWWTP Replacement of CoGen Control System Constr	Richmond	1,200,000	2,000,000
VSA - IIWWTP Sed Tank Trough Replacement Construction	Richmond	50,000	1,550,000
VSA - IIWWTP Water Supply Preliminary Design	Richmond	150,000	600,000
VSA - Iona Grit System Upgrade Constr	Richmond	250,000	8,100,000
VSA - Iona Solids Handling Upgrade Project Construction	Richmond	1,000,000	26,000,000
LSA - LIWWTP CDAC Component Upgrade Detailed Design	Richmond	50,000	120,000
LSA - LIWWTP CDAC Component Upgrade Construction	Richmond	100,000	240,000
LSA - LIWWTP Fibre Optic Infrastructure Construction	Richmond	200,000	480,000
LSA - LIWWTP PA-Sed Tank Refurbishment Detailed Design	Richmond	150,000	215,000
FSA - Marshend PS Rehab Construction	Burnaby	100,000	7,000,000
FSA - New Westminster Interceptor Repair Columbia St. Section Design	New Westminster	200,000	702,000
FSA - NSI Rehab or Replacement - Phase 2 Detailed Design and Property Acquisition	Surrey	2,000,000	4,000,000
FSA - NWI - Annacis Section 2 Improvement Preliminary Design	Delta	400,000	1,000,000
FSA - NWL WWTP 25 kV Substation Replacement Design Phase II	Langley Township	50,000	650,000
FSA - NWL WWTP 25 kV Substation Replacement Construction	Langley Township	4,500,000	9,075,000
FSA - NWL WWTP CDAC System Hardware Upgrade Detailed Design	Langley Township	100,000	650,000
FSA - NWL WWTP CDAC System Hardware Upgrade Construction	Langley Township	100,000	850,000
FSA - Royal Ave. Sewer Pump Station (RYA) Building Expansion & Electrical Upgrade Constr	New Westminster	1,500,000	3,450,000
FSA - Surrey H2S Control Facility Replacement Detailed Design	Surrey	50,000	250,000
FSA - Westridge PS 1 & 2 Upgrades Detailed Design Phase 1	Burnaby	150,000	560,000
FSA - WWTPs Electrical System Studies & Upgrades Detailed Design	Regional	100,000	750,000

	PROJECT LOCATION	2019 CAPITAL BUDGET	TOTAL PROJECT COSTS
2019 - New Projects			
FSA - AIWWTP IPS Pump Building Roof Replacement Phase 2 Construct	Delta	100,000	800,000
FSA - AIWWTP Outfall Repair Detailed Design	Delta	250,000	250,000
FSA - AIWWTP Scheduled 64kV Potential & Current Transformer Replacements Detailed Design	Delta	400,000	400,000
FSA - AIWWTP SCL Flow Control Construction Phase 2	Delta	1,000,000	63,000,000
FSA - AIWWTP Secondary Effluent Discharge Flowmeter Replacement Detailed Design	Delta	150,000	200,000
FSA - AIWWTP Spare Trickling Filter Pump & Motor Purchase Construction	Delta	1,650,000	1,950,000
FSA - AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement Construction	Delta	4,000,000	33,800,000
VSA - Cambie Trunk Sewer Relocation for Translink Millennium Broadway Extension	Vancouver	3,500,000	4,500,000
FSA - Golden Ears SSO Storage Construction	Maple Ridge	2,000,000	40,000,000
VSA - IWWTP CDAC IPS Control Replacement	Richmond	800,000	1,750,000
VSA - IWWTP Influent Gate Refurbishment Construction	Richmond	250,000	1,000,000
VSA - IWWTP PA-Sed Tank & Gallery Wall Refurbishment Construction	Richmond	450,000	1,200,000
VSA - IWWTP Siphon Chamber Refurbishment Detailed Design	Richmond	250,000	250,000
LSA - LIWWTP CCT Isolation Gates Detailed Design	Richmond	100,000	200,000
LSA - LIWWTP PA-Sed Tank Refurbishment Construction	Richmond	1,000,000	3,900,000
FSA - NLWWTP Screw Pump Replacement Construction	Langley City	1,300,000	1,550,000
FSA - NSI Rehab or Replacement - Phase 1 Construction	Surrey	500,000	5,000,000
FSA - NWI - Annacis Section 2 Improvement Detailed Design	Delta	2,000,000	4,000,000
FSA - Sewer Relocations and Protections at Fraser Surrey Docks Preliminary Design	Surrey	1,600,000	1,600,000
FSA - Sewer Relocations and Protections for Pattullo Bridge Replacement Project Detailed Design	New Westminster	1,000,000	1,000,000
FSA - South Surrey Interceptor Fraser River Crossing Scour Protection	Delta	1,700,000	2,200,000
FSA - Surrey H2S Control Facility Replacement Design, Decommissioning & Land Acquisition	Surrey	50,000	1,400,000
FSA - Westridge FM Replacement Detailed Design	Burnaby	500,000	500,000
		\$ 85,600,000	\$ 444,518,000
SD Infrastructure Resilience Capital			
2019 - Approved Projects in Process			
FSA - AIWWTP 69 kV Substation Modifications Detailed Design & Site Prep	Delta	500,000	1,250,000
FSA - AIWWTP Automation of Influent Gates Construction	Delta	1,000,000	3,000,000
FSA - AIWWTP Cogeneration Backup Power Predesign & Detail Design	Delta	300,000	9,000,000
FSA - AIWWTP Cogeneration Backup Power Prepurchase	Delta	5,000,000	30,000,000
FSA - AIWWTP Cogeneration Backup Power Construction	Delta	11,000,000	34,600,000
FSA - AIWWTP PST Area Walkway & Column Remediation Construction	Delta	1,300,000	2,800,000
FSA - FSA Easement Acquisition	Regional	50,000	1,500,000
FSA - FSA Sewer Seismic Upgrades Implementation Design	Regional	100,000	400,000
VSA - Highbury Interceptor Air Treatment Facilities	Vancouver	1,000,000	11,500,000
VSA - IWWTP - Biogas Lines Relocation Detailed Design	Richmond	200,000	780,000
VSA - IWWTP - Biogas Lines Relocation Construction	Richmond	3,000,000	5,000,000
FSA - New CSO Management Gates for New Westminster Interceptor Design	New Westminster	350,000	825,000
FSA - Ocean Park Trunk Crescent Section (OPC) Pipe Rehabilitation/Replacement Design	Surrey	50,000	403,000
FSA - SSI Sulfide Odour and Corrosion Control Detailed Design	Delta	450,000	550,000
VSA - VSA Easement Acquisition Program	Vancouver	50,000	670,000
VSA - VSA Emergency Backup Power Detailed Design	Vancouver	50,000	1,500,000
VSA - VSA Emergency Backup Power Construction Phase 1	Vancouver	5,600,000	9,300,000
2019 - New Projects			
FSA - AIWWTP 69 kV Substation Modifications Construction	Delta	100,000	7,250,000
FSA - AIWWTP Influent System Remediation Preliminary Design	Delta	500,000	1,000,000
VSA - IWWTP Standby Diesel Generators Preliminary Design	Richmond	500,000	500,000
FSA - Ocean Park Trunk Crescent Section (OPC) Pipe Rehabilitation/Replacement Constr	Surrey	50,000	4,550,000
FSA - SSI Sulfide Odour and Corrosion Control Construction	Delta	1,000,000	6,500,000
VSA - VSA Emergency Backup Power Construction Phase 2	Vancouver	50,000	9,000,000
		\$ 32,200,000	\$ 141,878,000
SD Infrastructure Upgrade Capital			
2019 - Approved Projects in Process			
VSA - 8th Avenue Interceptor Air Treatment Facilities Prelim Design	Vancouver	150,000	500,000
VSA - 8th Avenue Interceptor Air Treatment Facilities Detailed Design	Vancouver	500,000	1,000,000
FSA - AIWWTP Biosolids Dryer Preliminary Design	Delta	2,700,000	4,700,000
FSA - AIWWTP Electrical Distribution System Protection Control and Monitoring Detailed Design	Delta	900,000	1,200,000
FSA - AIWWTP Replacement of Protective Relays Construction	Delta	750,000	2,500,000
FSA - All WWTPs Power Quality Monitoring & Outage Alarming Network Prepurchase	Regional	100,000	500,000
FSA - All WWTPs Power Quality Monitoring & Outage Alarming Network Constr	Regional	750,000	2,200,000
FSA - FSA Flow Metering Program - Phase 1	Regional	800,000	2,700,000
FSA - FSA Wastewater Meter Upgrades	Regional	50,000	600,000
FSA - Glenbrook Combined Trunk Sewer Separation Conceptual Design	New Westminster	600,000	700,000
VSA - IWWTP Biosolids Dewatering Facility Preliminary Design	Richmond	250,000	800,000
VSA - IWWTP Biosolids Dewatering Facility Design Build Phase 1	Richmond	1,450,000	5,500,000
VSA - IWWTP Biosolids Dewatering Facility Design Build Phase 2	Richmond	13,000,000	55,000,000

	PROJECT LOCATION	2019 CAPITAL BUDGET	TOTAL PROJECT COSTS
LSA - LIWSA Wastewater Meter Upgrades	Richmond	50,000	300,000
LSA - LIWWTP Power Reliability Detailed Design	Richmond	400,000	900,000
LSA - LIWWTP Power Reliability Construction Phase 1	Richmond	1,400,000	3,000,000
NSA - NSA Flow Metering Program – Phase 1	West Vancouver	50,000	300,000
NSA - NSSA Wastewater Meter Upgrades	Regional	50,000	300,000
FSA - Sperling Pump Station Upgrade Constr	Burnaby	300,000	7,000,000
FSA - SSI Influent Control Chamber Repair and Replace Gates Construction	Delta	400,000	1,170,000
VSA - VSA Flow Metering Program – Phase 1	Regional	500,000	3,200,000
VSA - VSA Wastewater Meter Upgrades Detailed Design	Vancouver	50,000	150,000
2019 - New Projects			
FSA - AIWWTP Biosolids Dryer Property Purchase	Delta	5,000,000	10,000,000
FSA - AIWWTP DAF Polymer Building Replacement Construction	Regional	300,000	550,000
FSA - Combined Sewer Overflow Sampling Station Enhancements	Regional	600,000	1,900,000
		\$ 32,000,000	\$ 112,955,000
SD Infrastructure Upgrade: Secondary Treatment Capital			
2019 - Approved Projects in Process			
VSA - Iona Secondary Treatment Upgrade Project Definition	Richmond	6,000,000	16,500,000
NSA - North Shore WWTP Secondary Upgrade and Conveyance PM and Decommissioning	Dist of North Van	10,800,000	79,000,000
NSA - North Shore WWTP Secondary Upgrade and Conveyance Design and Construction	Dist of North Van	165,300,000	698,900,000
		\$ 182,100,000	\$ 794,400,000
SD Opportunity Capital			
2019 - Approved Projects in Process			
FSA - AIWWTP Hydrothermal Processing Pilot Detailed Design	Delta	100,000	255,000
FSA - AIWWTP Hydrothermal Processing Pilot Construction	Delta	2,700,000	8,675,000
LSA - LIWWTP Biogas Clean-up Project	Richmond	5,000,000	10,400,000
LSA - LIWWTP Pilot Digestion Optimization Facility	Richmond	1,050,000	2,500,000
FSA - North Surrey Interceptor - Port Mann Section - Odour Control Preliminary Design	Surrey	50,000	100,000
FSA - North Surrey Interceptor - Port Mann Section - Odour Control Detailed Design	Surrey	700,000	800,000
		9,600,000	22,730,000
TOTAL CAPITAL EXPENDITURES		\$ 564,850,000	\$ 3,021,359,000

To: GVS&DD Board of Directors

From: Genevieve Lanz, Legislative Services Coordinator, Board and Information Services

Date: January 15, 2019 Meeting Date: January 25, 2019

Subject: **Delegations Received at Committee - January 2019**

RECOMMENDATION

That the GVS&DD Board receive for information the report, dated January 15, 2019, titled “Delegations Received at Committee - January 2019” containing submissions received from the following delegates:

- a) Josh JansenVandoorn, Waste Management Association of British Columbia
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PURPOSE

The purpose of this report is to keep the Board informed of delegation activities at Committee in accordance with Board direction. Attached are summaries of the delegates to the following committees:

Zero Waste Committee - January 10, 2019

- a) Josh JansenVandoorn, Waste Management Association of British Columbia (WMABC)
The delegate spoke to the Committee’s 2019 priorities and Work Plan highlighting challenges facing industrial, commercial and institutional sectors related to regional waste diversion programs and regulatory constraints.

Staff was requested to provide the Zero Waste Committee with a response to Josh JansenVandoorn's delegation presentation and on-table executive summary.

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SPEAKING REMARKS FOR METRO VANCOUVER ZERO WASTE COMMITTEE MEETING

Good morning.

My name is Josh JasenVandoorn and I'm a Board member with the Waste Management Association of BC.

On behalf of the WMABC, thank you for this opportunity to speak to the Committee. I'd also like to welcome the new members to the Committee and we look forward to building relationships with you all.

By way of background, the WMABC is comprised of over 70 independent private waste services businesses with over 3,000 employees that provide the majority of the waste, recycling and disposal services across Metro Vancouver and the province.

As the largest player in the Region's waste management services sector, we have and continue to provide a critical role in the delivery of cost-efficient and effective waste diversion and recycling services for our industrial, commercial and institutional and municipal customers in Metro Vancouver as well as across B.C.

Our purpose for being here today is to discuss the 2019 Zero Waste Committee Priorities and Work Plan. The Plan is extensive and ambitious, and I will limit my comments to three specific waste streams – organics, construction and demolition and multi-family residences.

While each could be a meeting unto itself as there are unique challenges within each, there is a common denominator to all - the lack of waste diversion and recycling processing capacity in the Region.

Waste diversion programs in both the municipal and the IC&I sectors are facing considerable economic and logistical head winds.

One of the most significant challenges has been the surge in plastics and plastic composite products and packaging into the Metro Vancouver market and the lack of recyclability of these materials.

As waste services providers, we do not have the ability to influence the design of products and packaging, however, we do understand the environmental and economic challenges and opportunities associated with waste diversion and processing infrastructure.

There are a wide range of new and innovative diversion and recycling technologies that could be employed in the Region to improve the Region's diversion rate in the IC&I sector that would not require capital and operating costs borne by Metro Vancouver and taxpayers.

What is inhibiting this investment is regulatory certainty. We believe that if this issue was addressed it would incent waste generators, waste services providers and other stakeholders along the materials chain of custody to collaborate, invest and create new jobs.

The WMABC would like to establish a transparent and collaborative process between the waste services industry and Metro to address these challenges so that we can collaboratively work to develop waste diversion solutions that helps Metro Vancouver reach its goal of zero waste and the development of a circular economy.

Chairman Froese, the WMABC stands ready and willing to work with you, the Committee and Metro Vancouver staff.

Thank you.