Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Core Area Liquid Waste Management Committee

Wednesday, June 28, 2023 | **1:30 PM** | **6th Floor Boardroom, 625 Fisgard Street, Victoria, BC V8W 1R7**

C. Coleman (Chair), D. Kobayashi (Vice Chair), M. Alto, S. Brice, J. Brownoff, J. Caradonna, Z. de Vries, B. Desjardins, S. Goodmanson, K. Murdoch, D. Murdock, C. Plant, L. Szpak, D. Thompson, S. Tobias

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 23-448 Minutes of the March 22, 2023 Core Area Liquid Waste Management Committee Meeting

Recommendation: That the minutes of the March 22, 2023 Core Area Liquid Waste Management Committee Meeting be adopted as circulated.

Attachments: Minutes - March 22, 2023

4. Chair's Remarks

5. Presentations/Delegations

The public are welcome to attend CRD Board meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application at www.crd.bc.ca/address no later than 4:30 pm two days before the meeting and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the CRD Board at crdboard@crd.bc.ca.

6. Committee Business

6.1. 23-435 Core Area Liquid Waste Management Committee Mid-Year Update

Recommendation: That the Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
That staff be directed to amend the Core Area Wastewater Operations Service Financial Plan (3.717) to increase expenditures in 2023 by up to $3,021,000 due to Biosolids Disposal and Residual Treatment Facility Revenue budget variances with such expenditures to be funded from Operational Reserves (3.717).

Attachments: Staff Report: CALWMC Mid-Year Update

Appendix A: Core Area Wastewater Treatment Project Overview Map

Appendix B: Core Area Wastewater Treatment Project – Current Status

Appendix C: Core Area Wastewater Capital Program – Current Status

Appendix D: Odour Investigation Action Plan

6.2. 23-431 Liquid Waste Management Plan - Amendment 13

Recommendation: The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
1. That staff be directed to:
a) retain an engineering consultant to review options regarding the CRD's proposed amendments to the Inflow and Infiltration section of the Core Area Liquid Waste Management Plan;
b) reconvene the Technical and Community Advisory Committee to review and provide recommendations to staff on Liquid Waste Management Plan updates and scope of public consultation; and
c) return to the Core Area Liquid Waste Management Committee with a report detailing the results of the consultant review and the Technical and Community Advisory Committee prior to making a submission to the Province regarding Amendment 13 to the Core Area Liquid Waste Management Plan.
2. That the revised Terms of Reference for the Technical and Community Advisory Committee be adopted.

Attachments: Staff Report: Liquid Waste Management Plan - Amendment 13

Appendix A: TCAC - TOR

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is October 11, 2023 @ 9:00 am (special).

To ensure quorum, please advise Jessica Dorman (jdorman@crd.bc.ca) if you or your alternate cannot attend.

Meeting Minutes

Core Area Liquid Waste Management Committee

Wednesday, March 22, 2023 **1:30 PM** **6th Floor Boardroom**
625 Fisgard Street
Victoria, BC V8W 1R7

PRESENT
Directors: C. Coleman (Chair), D. Kobayashi (Vice Chair), H. Braithwaite (for K. Murdoch) (1:57 pm) (EP), S. Brice, J. Caradonna, Z. de Vries (1:35 pm), B. Desjardins, S. Goodmanson (1:31 pm) (EP), S. Hammond (for M. Alto), L. Szpak, S. Tobias, M. Westhaver (for D. Murdock)

Staff: L. Hutcheson, General Manager, Parks and Environmental Services; I. Jesney, Acting General Manager, Integrated Water Services; J. Dales, Senior Manager, Wastewater Infrastructure Operations; G. Harris, Senior Manager, Environmental Protection; J. Kelly, Manager, Capital Projects, Infrastructure Engineering; M. Lagoa, Deputy Corporate Officer; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Director(s) M. Alto, J. Brownoff, K. Murdoch, D. Murdock, C. Plant, D. Thompson

The meeting was called to order at 1:30 pm.

1. Territorial Acknowledgement

Vice Chair Kobayashi provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Desjardins, SECONDED by Director Goodmanson,
That the agenda for the March 22, 2023 Core Area Liquid Waste Management Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 23-180 Minutes of the July 23, 2022 and October 12, 2022 Core Area Liquid Waste Management Committee Meetings

MOVED by Director Brice, SECONDED by Director Desjardins,
That the minutes of the Core Area Liquid Waste Management Committee meetings of July 23, 2022 and October 12, 2022 be adopted as circulated.
CARRIED

4. Chair's Remarks

Chair Coleman thanked Board Chair Plant for the opportunity to be Chair of the committee and staff for their time in providing detailed tours that allowed for a better understanding of the treatment plant.

Z. de Vries joined the meeting at 1:35 pm.

5. Presentations/Delegations

There were no presentations or delegations.

6. Committee Business

6.1. 23-246 Core Area Liquid Waste Management Committee - Service Orientation

I. Jesney presented Item 6.1. for information.

Discussion ensued on the following:
- outfall versus overflow
- pump station versus residual treatment versus treatment plant
- wet weather versus dry weather flow
- water quality and monitoring of outfall
- industry increases and cost sharing

H. Braithwaite joined the meeting at 1:57 pm.

6.2. 23-061 2023 Core Area Liquid Waste Management Committee Terms of Reference

M. Lagoa presented Item 6.2. for information.

6.3. 23-238 Wastewater Operations and Capital Plan Update - March 2023

I. Jesney presented Item 6.3. for information.

Discussion ensued on the following:
- chemical change pilot study
- most concerning non-compliance issues
- non-compliance versus compliance trends
- rainbow trout toxicity
- odour concerns in Vic West

7. Notice(s) of Motion

There were no notice(s) of motion.

8. New Business

There was no new business.

9. Adjournment

MOVED by Director Kobayashi, SECONDED by Director Tobias,
That the March 22, 2023 Core Area Liquid Waste Management Committee meeting be adjourned at 2:22 pm.
CARRIED

_____
CHAIR

_____
RECORDER

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JUNE 28, 2023

SUBJECT **Core Area Liquid Waste Management Committee Mid-Year Update**

ISSUE SUMMARY

To provide the Core Area Liquid Waste Management Committee (Committee) with Core Area Wastewater System (System) capital program and operations updates.

BACKGROUND

Capital Program Update

There are two major capital programs associated with the System. One is the Core Area Wastewater Treatment Project (Project) and the second is the Core Area Wastewater Capital Program, which will be an ongoing program of overall asset renewal and upgrades for all system components which are reflected in the 5-year and long-term capital plans.

Core Area Wastewater Treatment Project
The Project delivered nine major components (location map in Appendix A) and, except for the Residual Solids Treatment Plant, have been completed and accepted operationally by the Capital Regional District (CRD). The status of each of the components is detailed in Appendix B.

Core Area Wastewater Capital Program
This capital program reflects the planned capital spending for the next five years and forms part of the annual service budget that is approved in March each year by the CRD Board. In 2023, 36 projects have been identified with an expenditure estimated at $22,235,000. Of this amount, there are $15,200,000 worth of projects currently progressing in 2023. The status of each project is detailed in Appendix C.

Operations Update

Odour
As identified in Appendix C, there are several ongoing capital projects that have been scoped and are dedicated to the reduction and control of odours originating from the MPWWTP. In addition, work has continued on the Odour Action Plan which has been updated in Appendix D. Vancouver Island University is continuing its collection of data and has moved into analysis of the data collected but is not ready to present results yet.

Odour Complaints
In 2022 there were 101 odour complaints received, with the vast majority potentially related to the MPWWTP. As of June 12, 2023 there have been 27 odour complaints with 19 related to the MPWWTP.

Year	Number of days complaints received	Number of complaints	Number of unique complainants
2022	85	101	29
To Date 2023	25	27	13

The other eight odour complaints associated with the Core Area system came from the areas near the Craigflower Pump Station, the Clover Point Pump Station and the conveyance system.

Alum Trial
Currently, Ferric Chloride (Ferric) is added as a coagulant to backwash streams to separate and thicken solids and help prevent the formation of H_2S. A possible alternative to using Ferric is Aluminum Sulphate (Alum) which also acts as a coagulant but is less expensive and less corrosive. However, Alum is not as effective at reducing H_2S.

The primary objective of the Alum trial was to investigate the implications of replacing Ferric Chloride (Ferric) with Aluminum Sulphate (Alum) at MPWWTP to eliminate the health and safety risks associated with Ferric Chloride (dealing with a corrosive substance).

There were two Alum trials carried out, the first in December 2022 and a follow up trial to look at odours in May 2023.

The first trial had a colder wastewater temperature (16 degrees Celsius) and did not appear to cause any issues in the system. However, the second trial, with a warmer wastewater temperature (19 degrees Celsius) caused excessive H_2S levels both in the plant and in the Residual Solids Conveyance Line (RCSL). The excessive levels created a health and safety risk for workers and if it had continued would have caused excessive odours being produced both at the plant and in the RCSL and its related pump stations. Therefore, the trial was ended early.

Ongoing investigation into the viability of using other chemicals to replace Ferric Chloride is planned.

Compliance
As part of day-to-day operations, compliance monitoring is performed to ensure regulatory requirements are being met and reported.

A summary of non-compliance events to the end of May 2023 follows:

Month	# of times out of Compliance	Reasons for Non-Compliance
January	2	Primary bypass, tertiary bypass (discharge of blended effluent)
February	1	Primary bypass (discharge of blended effluent)
March	2	Max CBOD exceeded permitted levels; average TSS and CBOD exceeded permitted levels
April	1	Average TSS and CBOD exceeded permitted levels
May	1	Average CBOD exceeded permitted level
Total to end of May:	7	Discharge of blended effluent (3 times); average or maximum exceedance for CBOD and/or TSS (4 times)

- Discharges of blended effluent referenced in the table were due to wet weather events.
- TSS and CBOD levels referenced in table were due to short term spikes in the system due to operational activities that influenced monthly averages. These overages were minor in nature.

In comparison, there were 35 non-compliance events in 2022 with 18 through the end of May of 2022. These events are similar in nature with regards to type of non-compliance:

- Effluent quality compliance (TSS/CBOD) is likely the most significant non-compliance issue from the regulator's perspective.
- Premature discharge of blended effluent was also common. This is when the plant discharged primary plus tertiary blended effluent when it was not actually raining and should have been able to treat everything to tertiary. However, when these events occurred, they were short duration and didn't necessarily negatively affect effluent quality.

Budget

Aside from the noted Odour and Compliance issues, the remainder of the system has had minimal unexpected operational issues to date in 2023, the operating budget is currently generally on track except for two areas which are resulting in the need for a budget amendment:

1. Biosolids Disposal Budget – The 2023 operating budget allocated $600,000 for a small amount of landfilling and the mixing and placing of Biosolids Growing Medium (BGM) stockpiles that were set aside in 2022. The budget assumption was that Lafarge Richmond would be receiving biosolids, however that has yet to take place. To date the service has spent approximately $856,000 on landfilling and some BGM mixing/placement.

   For the remainder of the year, two scenarios are possible:

   a) The worst-case scenario is seven more months of landfilling at an estimated cost of an additional $1,865,000 which includes landfill tipping fees as well as the mixing and placing of the final stockpiles of BGM that were set aside in 2022.

   b) The best-case scenario is for two months of landfilling (assuming Lafarge Richmond is able to receive CRD biosolids and/or a new contingency option is developed) at an estimated cost of an additional $890,000 which includes landfill tipping fees as well as the mixing and placing of the final stockpiles of BGM that were set aside in 2022.

2. Residual Treatment Facility (RTF) Revenue – The 2023 operating budget identified a revenue source amounting to $900,000 to come from the RTF acceptance and processing of third-party liquid waste (sludge). The RTF has not been able to receive and process this waste and therefore, there is a revenue shortfall of $900,000.

As a result of the preceding, the worst-case scenario is that the operating budget could be over budget in an amount of up to $3,021,000. This budget overage will need to be covered with the service's operational reserves as there is no other funding source available for the 2023 budget year. The operational reserves are estimated to be $4.7 million at the end of 2023 without the need to use $3,021,000 to fund the above expense. To access the operational reserves, CRD Board authority is required and there is a recommendation at the conclusion of this report to authorize accessing the funds.

CONCLUSION

This report provides the Core Area Liquid Waste Management Committee with updates on both ongoing capital programs for the Core Area Wastewater System and the Core Area Wastewater Treatment Project. In addition, information has been provided regarding operational issues and non-compliance events and budget anomalies.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

That staff be directed to amend the Core Area Wastewater Operations Service Financial Plan (3.717) to increase expenditures in 2023 by up to $3,021,000 due to Biosolids Disposal and Residual Treatment Facility Revenue budget variances with such expenditures to be funded from Operational Reserves (3.717).

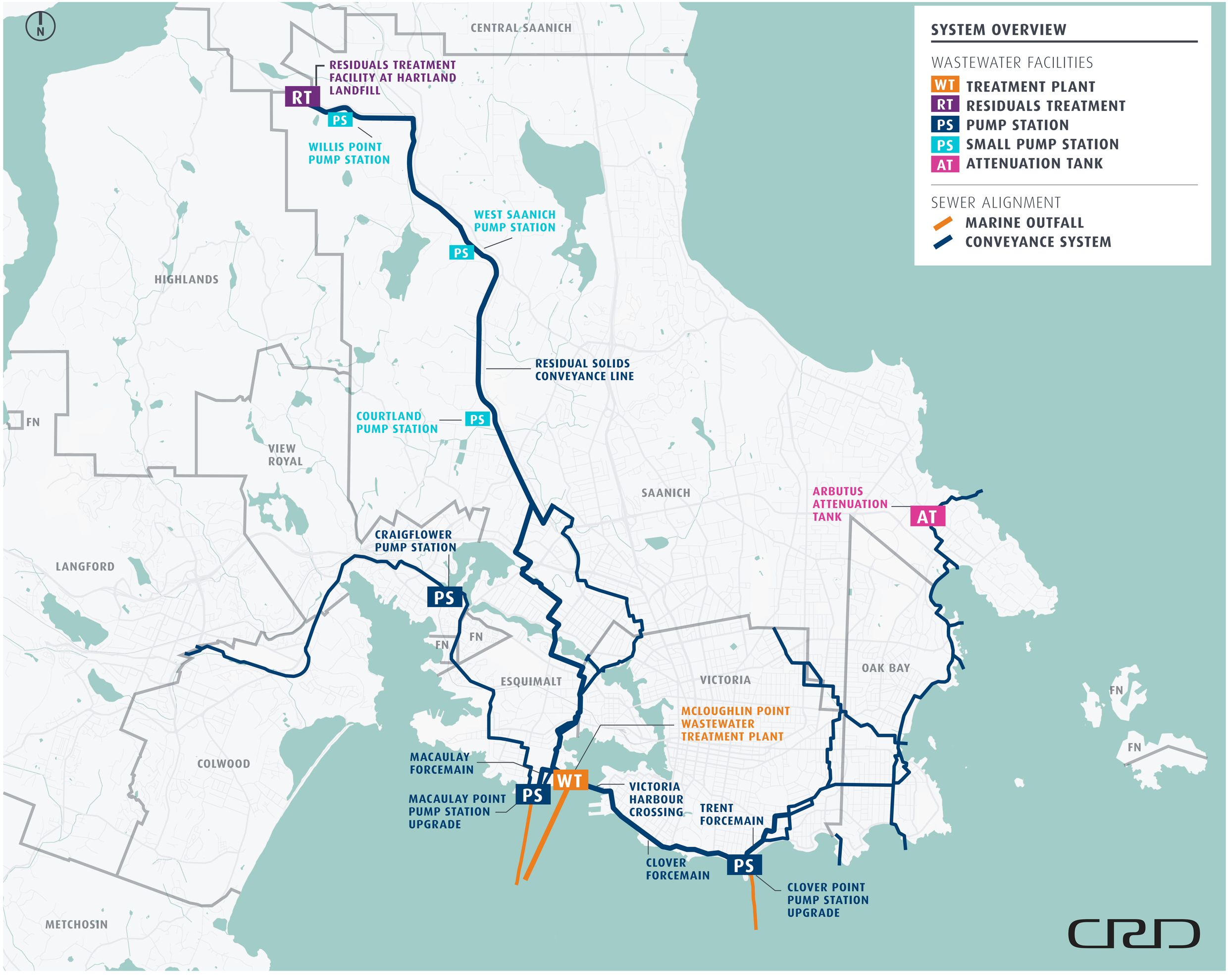
Submitted by:	Ian Jesney, P. Eng., Acting General Manager, Integrated Water Services
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Core Area Wastewater Treatment Project Overview Map
Appendix B: Core Area Wastewater Treatment Project – Current Status
Appendix C: Core Area Wastewater Capital Program – Current Status
Appendix D: Odour Investigation Action Plan

Core Area Wastewater Treatment Overview Map

APPENDIX A



Appendix B

Core Area Wastewater Treatment Project – Current Status

Project Component	Delivery Model	Construction Value (Million Dollars)	Status
McLoughlin Point Wastewater Treatment Plant	Design-Build	$300.7M	- Construction, Performance and Warranty Periods Complete.
Residual Solids Treatment Plant	Design-Build-Finance-Operate-Maintain	$128.4M	- Construction Complete - HRMG in 20-year Operation and Maintenance Period - Mediation process has initiated
Macaulay Point Pump Station and Forcemain	Design-Build	$38.5M	- Construction Complete. - Holdback for deficiencies remains. - Warranty Period ends June 29, 2023.
Clover Point Pump Station	Design-Build	$28.5M	- Construction Complete - Primary Warranty Period Complete - Partial Warranty remains on certain equipment and ends December 30,2023.
Clover Forcemain	Design-Bid-Build	$35.5M	- Construction Complete - Warranty Period Complete
Trent Forcemain	Design-Bid-Build	$12.1M	- Construction Complete. - Warranty Period underway.
Arbutus Attenuation Tank	Design-Bid-Build	$19.8M	- Construction Complete. - Warranty Period underway.
Residual Solids Conveyance Line	Design-Bid-Build	$36.6M	- Construction Complete. - Warranty Period complete.
Residual Solids Pump Station	Design-Bid-Build	$21.6M	- Construction Complete. - Warranty Period

Appendix C

Core Area Wastewater Capital Program – Current Status

Project Number	Project Title	Total Budget	Status
21-02	Marigold Electrical and Building Upgrades	$2,250,000	Currently out for Tender, combined with Currie Pump Station (PS). Closes June 20.
21-03	Currie Major Electrical and Seismic Upgrades	$2,300,000	Currently out for Tender, combined with Marigold PS. Closes June 20.
21-01	Lang Cove Electrical and Building Upgrades	$350,000	Stantec has been awarded the consulting services contract. Design is being finalized before tendering.
21-09	Bowker Sewer Rehabilitation Ph1	$8,600,000	Contract is underway with Insituform and is expected to be completed this year.
21-06	Shoreline Trunk Sewer Upgrade	$2,400,000	Request for Proposals (RFP) is currently open for consulting services for capacity and options study. Only $350,000 available for this year. Combined with 21-07, Western Trunk Sewer Twinning and 21-13 Craigflower Forcemain (FM) Twinning.
21-07	Western Trunk Sewer Twinning	$15,000,000	RFP is currently open for consulting services for capacity and options study. Only $350,000 available for this year. Combined with 21-06, Shoreline Trunk Sewer Upgrade and 21-13 Craigflower FM Twinning. Main amount of budget not expected to be spent until 2027-2030.
21-13	Craigflower Force Main Twinning	$9,600,000	RFP is currently open for consulting services for capacity and options study. Only $350,000 available for this year. Combined with 21-06, Shoreline Trunk Sewer Upgrade and 21-07 Western Trunk Sewer Twinning. Main amount of budget not expected to be spent until 2027-2030.
21-14	Marigold Siphon Assessment	$8,300,000	Pure Technologies has completed an assessment on the siphon. Capital Regional District (CRD) is awaiting a summary report. Only $400,000 available for 2023. Remaining funds will be tied to eventual replacement, depending on results of the report.

Appendix C

Project Number	Project Title	Total Budget	Status
22-02	Gorge and Harriet Siphon	$250,000	Pure Technologies has completed an assessment. CRD is awaiting a summary report.
23-08	McLoughlin Wastewater Treatment Plant Odour Improvement Projects	$800,000	Ongoing: Alternative Coagulant Study; Odour Assessment Study; Odour Collection System Upgrade; H_2S Sensor Replacement

Project Numbers refer to project numbers from the 2023 Capital Plan

Odour Action Update - May 25, 2023

Appendix D

	Summarize and analysis of previous odour complaints (last two years and background)		STATUS UPDATE
1	Summary of odour regulations in other jurisdictions	Nov-04	Complete
2	Analyze complaints' trends as well as geographical and seasonal distribution	Nov-11	Complete
3	Correlate complaints with operating conditions (wet weather, DensaDeg vs. plate settler tanks in use, etc.) or maintenance activities (cleaning tanks, scrubber media replacement, etc.)	Nov-18	Complete
4	Summarize all finding in a TM	Dec-02	Complete

	Confirm the performance of the odour control systems		STATUS UPDATE
Audit of the odour collection system:			
1	Field investigation to confirm the integrity of the tank covers, note deficiencies and document recommendations	Nov-04	Complete
2	Review existing H2S data and create a detail scope of future field investigation as highlighted below	Nov-18	Complete
3	Field investigation to measure negative air pressure under all covers	Jan-31	Complete
4	Field investigation to measure H2S under all covers and at some untreated sources (HVAC units, vents, etc.)	Jan-31	Complete
5	Field investigation to measure the velocity of foul air extraction from each tank	Q2-2023	**Complete**
6	Confirm 6 CFM air extraction from each tank is met	Jan-31	Complete
7	Identify "possible" improvements to the foul air collection system - Recommendations will need to be further assessed	Q3-2023	In progress
Audit of the treatment system:			
1	Confirm the design parameters identified for all units are met	Nov-04	Complete
2	Review water quality and quantity in the BTF	Nov-04	Complete
3	Review all operating variables for treatment systems (differential pressures, online H2S, air flow rate data, runtime, etc.)	Nov-11	Complete
4	Confirm the performance of mist eliminators	Nov-11	Complete
5	Assess the condition of carbon media in ACFs	Jan-31	Complete
6	Review maintenance records and summarize findings	Nov-18	Complete
7	Collect samples for odour and air quality analysis at the inlet and outlet of each online scrubber (BTF or ACF) to confirm the performance of the units comply with the design objectives		
	a. Develop the scope of sampling, including sample locations and required analysis	Oct-28	Complete
	b. Schedule, budget, resources, and procurement for sample collection and analysis	Q2-2023	**Complete**
	c. Analysis of results, if necessary	Q4-2023	Planned
8	Identify "possible" improvements to the foul air treatment system - Recommendations will need to be further assessed	Nov-25	Complete
9	Summarize all findings in a TM	Dec-02	Complete

	Measure odour at the fenceline and beyond.		STATUS UPDATE
1	Install a weather station at MPWWTP	Nov-28	Complete
2	Collect samples for odour analysis at the fence line to confirm MPWWTP does not exceed 5 odour units / m3		
	a. Develop the scope of sampling, including sample locations	Oct-28	Complete
	b. Schedule, budget, resources and procurement for sample collection and analysis	Q 2 - 2023	**Complete**
	c. Analysis of results, if necessary (Sadra)	Q 4- 2023	Planned
3	Finalize and complete the VIU project to measure a large number of emitted chemicals associated with MPWWP in the community	On going	**On going Support**
4	Update the odor and H2S dispersion model based on the updated plant emission data and the new weather station installed at the plant	Q 4 - 2023	**In Progress**

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EEP 23-29

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JUNE 28, 2023

SUBJECT **Liquid Waste Management Plan – Amendment 13**

ISSUE SUMMARY

The Core Area Liquid Waste Management Plan's Inflow and Infiltration section requires an update to meet a provincial requirement from the conditional approval of Amendment 12.

BACKGROUND

Inflow and Infiltration (I&I) is the ingress of stormwater and groundwater into sanitary sewer systems. In general, I&I issues are related to improperly cross-connected stormwater collection pipes, and the age of sewer systems, which deteriorate and allow groundwater intrusion into the sewer over time. I&I becomes a problem in sewer systems by exceeding the capacity of the system to convey and/or treat the high volume of clean rain or groundwater that infiltrates the sewer during wet winter months and rain events. When this capacity is exceeded, the excess flow of mixed stormwater and wastewater overflows to the marine environment at various emergency discharge points. The system is designed to overflow under these conditions to prevent major damage to infrastructure. Under the provincial Municipal Wastewater Regulation (MWR), overflows are not to occur for any storms less than a five-year return period.

Based on a commitment in the Core Area Liquid Waste Management Plan (CALWMP) to reduce maximum daily wet weather flows to less than four times the average dry weather flow by 2030, the goal of the Capital Regional District's (CRD) I&I program is to develop and implement a strategy aimed at reducing the amount of rainwater and groundwater entering the core area's sanitary sewer from both the publicly-owned and privately-owned parts of the system, in order to reduce and eventually eliminate overflows.

As part of the Core Area wastewater treatment project, conveyance system upgrades have reduced overflows at smaller overflow locations to storms greater than a five-year return period, meeting provincial regulatory requirements. However, the Clover Point outfall continues to overflow during smaller and more frequent storms. The Ministry of Environment and Climate Change Strategy (ENV) has given the CRD an informal waiver from installing wet weather treatment at Clover Point, as previous wastewater characterization efforts determined that Clover Point storm overflow effluent quality was similar to primary treatment. Further characterization monitoring is required at Clover Point over the next few years. If effluent quality is determined to be worse than expected, ENV may require additional treatment be installed.

As a condition of the ENV approval of Amendment 12 to the CALWMP, the CRD was required to update the CALWMP with respect to management of I&I and sanitary sewer overflows (following work done for the Wastewater Treatment Project) for ENV approval by December 31, 2021.

The CRD advised ENV on September 16, 2021 that it would be delaying its submission to amend the I&I section of the CALWMP as:

a) the CRD had yet to operate new core area wastewater infrastructure for a wet weather season and would have been reliant on theoretical predictions for sewer flow;

b) the CRD was in the process of updating detailed I&I management plans for each core area municipality, which were completed in 2022; and
c) because the CRD was intending to update all sections of the CALWMP to bring it up to date with new core area wastewater infrastructure and operations.

Municipal staff have requested that the I&I section be updated more proactively so that reduction strategies can be integrated with infrastructure asset management, budgeting and service planning processes. Given the time required to update the entire CALWMP, CRD staff are recommending an amendment to the CALWMP to update the I&I section while continuing to pursue the overall CALWMP update process on a more extended timeline.

Amending I&I commitments in the CALWMP will require public and First Nations consultation. As such, staff recommend reconvening the Technical and Community Advisory Committee (TCAC) to partially satisfy this requirement and to advise on the scope of broader public consultation. The TCAC was formed in 2006 to assist the CALWMP in making appropriate recommendations to the CRD Board related to the Wastewater Treatment Project. The TCAC may also be consulted on other upcoming CALWMP activities, including long-term biosolids management planning, and overall update of the CALWMP. Revised Terms of Reference for the TCAC are included in Appendix A. Staff will first approach previous members of the TCAC to determine their interest in participating again; but due to the extended length of time since the committee last met, staff anticipate a public call for new membership.

First Nations consultation will be conducted with Nations having territorial interests in the core area and surrounding waters. Nations will also be invited to participate on the TCAC. Technical, municipal input has been ongoing since 2021 with local government staff. Information from CALWMP will be referred to local government councils prior to submission to the provincial regulator.

Concurrent with the TCAC review, staff recommend an independent engineering review of the I&I approach developed with municipal staff in 2022. Once the TCAC has reviewed and commented on the proposed changes, staff will prepare an amendment submission to ENV, due by end of December 2023, that outlines new I&I commitments.

ALTERNATIVES

Alternative 1

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That staff be directed to:
    a) retain an engineering consultant to review options regarding the CRD's proposed amendments to the Inflow and Infiltration section of the Core Area Liquid Waste Management Plan;
    b) reconvene the Technical and Community Advisory Committee to review and provide recommendations to staff on Liquid Waste Management Plan updates and scope of public consultation; and
    c) return to the Core Area Liquid Waste Management Committee with a report detailing the results of the consultant review and the Technical and Community Advisory Committee prior to making a submission to the Province regarding Amendment 13 to the Core Area Liquid Waste Management Plan.

2. That the revised Terms of Reference for the Technical and Community Advisory Committee be adopted.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Environmental & Climate Implications

As noted above, the MWR stipulates that overflows must not occur, unless during a storm with a greater than five-year return period. The Clover Point outfall is the only location that does not meet this requirement and (using a conservative model) is predicted to overflow for 60 hours per year during the eight largest winter storm events. In the single complete winter that all project upgrades have been operational, there were only 10 hours where dilute sewage overflowed from the Clover Point outfall, although it is acknowledged that 2022-2023 was an uncharacteristically dry winter. These overflows consist of highly dilute sewage mixed with rainwater, are generally short in duration, and are predicted to represent a negligible risk to the marine receiving environment. Monitoring is ongoing to confirm negligible risk.

The goal of updating the CRD and municipal commitments in the CALWMP is to clarify efforts to reduce sub-five-year return period overflows in the core area by 2030. The proposed approach of reducing and eliminating overflows during sub-five-year storm events is intended to be a practical solution that meets regulatory requirements and provides appropriate environmental protection.

This goal will be supported with a study assessing the impacts of storm event overflows from the Clover Pump Station long outfall, including environmental and social impacts, budget estimates to eliminate sub-five-year overflows and impact on taxpayers.

Intergovernmental Implications

An amendment to the CALWMP to address management of I&I satisfies a provincial regulatory requirement as a condition of the provincial approval of Amendment 12.

Financial Implications

Major improvements to core area marine wastewater discharges were completed in 2020, with $785M in projects delivered through the Core Area Wastewater Treatment project. A preliminary estimate of the cost in achieving the current CALWMP requirement to reduce I&I through conveyance system upgrades sufficiently to reduce maximum daily wet weather flows to less than four times the average dry weather flow by 2030 is $260M. Alternatively, should ENV require wet weather treatment at Clover Point, the anticipated cost is approximately $100M. Both options represent an excessive cost for limited environmental benefit to address 10-60 hours of overflows per year.

CONCLUSION

As a condition of the Ministry of Environment and Climate Change Strategy (ENV) approval of Amendment 12 on June 20, 2018, the Capital Regional District is required to update Inflow and

Infiltration (I&I) commitments in the Core Area Liquid Waste Management Plan. Staff advised ENV that it would be delaying its I&I submission while preparing a broader Liquid Waste Management Plan (LWMP) update; however, several municipalities are waiting for the I&I section update to proceed with infrastructure and asset management planning, and staff are now recommending focusing on the I&I update separately and address the broader LWMP update afterwards.

RECOMMENDATION

The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:

1. That staff be directed to:
   a) retain an engineering consultant to review options regarding the CRD's proposed amendments to the Inflow and Infiltration section of the Core Area Liquid Waste Management Plan;
   b) reconvene the Technical and Community Advisory Committee to review and provide recommendations to staff on Liquid Waste Management Plan updates and scope of public consultation; and
   c) return to the Core Area Liquid Waste Management Committee with a report detailing the results of the consultant review and the Technical and Community Advisory Committee prior to making a submission to the Province regarding Amendment 13 to the Core Area Liquid Waste Management Plan.
2. That the revised Terms of Reference for the Technical and Community Advisory Committee be adopted.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Technical and Community Advisory Committee - Core Area Wastewater Treatment – Terms of Reference (Revised)

APPENDIX A

TECHNICAL AND COMMUNITY ADVISORY COMMITTEE
CORE AREA WASTEWATER TREATMENT

TERMS OF REFERENCE

INTRODUCTION

The CRD has a mission to be local government leaders in providing cost effective, innovative and environmentally responsible sewage treatment to the residents in the core communities (Esquimalt, Colwood, Langford, Oak Bay, View Royal, Saanich, Victoria, and Songhees and Esquimalt First Nations).

With the Core Area Wastewater Treatment Program now in operation, future decisions will be needed in a number of areas related to the service, including the following:

- Inflow and infiltration program
- Sanitary sewer overflows
- Biosolids management and beneficial use

A Technical and Community Advisory Committee (TCAC) serves to assist the Core Area Liquid Waste Management Committee (the steering committee) in making appropriate recommendations to the CRD Board in the areas outlined above.

ROLE AND RESPONSIBILITIES

The TCAC will respond to requests from the steering committee for technical and community consultation advice and input in order to facilitate informed decision-making in a variety of areas, including those outlined above.

MEMBERSHIP, SELECTION AND APPOINTMENT

Including the chair, there will be 26 members:

1 - member of the Core Area Liquid Waste Management Committee – TCAC Chair
7 - municipal engineering or other technical representatives
5 - members at large via public advertisement
2 - members nominated by environmental groups
2 - members nominated by the Esquimalt and Songhees First Nations
1 - member nominated by the Department of National Defence
1 - member nominated by the Greater Victoria Chamber of Commerce
1 - member nominated by the West Shore Chamber of Commerce
1 - member from post secondary institute
1 - member from CRD Roundtable on the Environment
1 - member from the Victoria Labour Council
1 - member from Tourism Victoria
1 - member from CRD Solid Waste Advisory Committee
1 - member nominated by the Esquimalt Chamber of Commerce

Members will be appointed by the CRD Board on the recommendation of the Core Area Liquid Waste Management Committee. Members will serve without remuneration.

ADVISORY COMMITTEE RESOURCES

Staff representatives from the following organizations will be invited to attend TCAC meetings to provide information as required:

- Ministry of Environment
- Environment Canada
- Vancouver Island Health Authority

A consulting engineering expert in sewage treatment and related matters will also attend TCAC meetings to provide advice and information.

CRD staff will provide administrative and technical support to the advisory committee as required.

RULES OF ORDER

CRD Board rules of order will apply.

TERM

The term of the TCAC will be for the period required to address the matters, as determined by the CALWMC.

Approved by CRD Core Area Liquid Waste Management Committee - 11 October 2006
Revised by CRD Core Area Liquid Waste Management Committee - 06 December 2006
Revised by CRD Core Area Liquid Waste Management Committee - 28 November 2007
Revised by CRD Core Area Liquid Waste Management Committee - 12 June 2013
Revised by CRD Board - 14 August 2013
Revised by CRD Core Area Liquid Waste Management Committee - _____ 2023