Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

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

Wednesday, July 27, 2022 | **1:30 PM** | **6th Floor Boardroom, 625 Fisgard Street, Victoria, BC V8W 1R7**

D. Blackwell (Chair), L. Seaton (Vice-Chair), S. Brice, B. Desjardins, F. Haynes, L. Helps, B. Isitt, J. Loveday, R. Martin, R. Mersereau, K. Murdoch, C. Plant, D. Screech, N. Taylor, G. Young

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. 22-494 Minutes of the March 23, 2022 Core Area Liquid Waste Management Committee Meeting

Recommendation: That the minutes of the Core Area Liquid Waste Management Committee meeting of March 23, 2022 be adopted as circulated.

Attachments: Minutes - March 23, 2022

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 for "Addressing the Board" on our website 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. 22-490 Bowker Sewer Rehabilitation Recommendation to Award Contract 2022-743

Recommendation: That the Core Area Liquid Waste Management Committee recommends to the CRD Board:
That Contract No. 2022-743, Bowker Sewer Rehabilitation, be awarded to Insituform Technologies Ltd. for an amount of $7,500,000 (excluding GST) and authorize staff to expend up to an additional $500,000 in contract contingency funds as required during the execution of the project.

Attachments: Staff Report: Bowker Sewer Rehabilitation Recommendation to Award Contract

Appendix A: Location Map

6.2. 22-496 Core Area Wastewater System Commissioning and Operations Update and Capital Program Status Report

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: CAWW System Commissioning & Operations Update and Capital

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is October 12, 2022 at 9:30 am (Special) .

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

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625 Fisgard St.,
Victoria, BC V8W 1R7

Capital Regional District

Meeting Minutes

Core Area Liquid Waste Management Committee

Wednesday, March 23, 2022 **1:30 PM** **6th Floor Boardroom**
625 Fisgard Street
Victoria, BC V8W 1R7

PRESENT

Directors: D. Blackwell (Chair), L. Seaton (Vice-Chair), S. Brice, B. Desjardins, S. Dubow (for L. Helps) (EP), F. Haynes, B. Isitt (EP), J. Loveday (EP), R. Martin (EP), R. Mersereau, C. Plant, D. Screech, N. Taylor (EP), G. Young

Staff: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; T. Robbins, General Manager, Integrated Water Services; G. Harris, Senior Manager, Environmental Protection; S. May, Senior Manager, Facilities Management and Engineering Services; T. Pillipow, Committee Clerk; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Directors L. Helps, K. Murdoch

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

1. Territorial Acknowledgement

Chair Blackwell provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Seaton, SECONDED by Director Haynes,
That the agenda for the March 23, 2022 Core Area Liquid Waste Management Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 22-195 Minutes of the July 28, 2021 Core Area Liquid Waste Management Committee Meeting

MOVED by Director Brice, SECONDED by Director Seaton,
That the minutes of the Core Area Liquid Waste Management Committee meeting of July 28, 2021 be adopted as circulated.
CARRIED

3.2. 22-196 Minutes of the October 13, 2021 Core Area Liquid Waste Management Committee Meeting

MOVED by Director Brice, SECONDED by Director Seaton,
That the minutes of the Core Area Liquid Waste Management Committee meeting of October 13, 2021 be adopted as circulated.
CARRIED

4. Chair's Remarks

5. Presentations/Delegations

There were no presentations or delegations.

6. Committee Business

6.1. 22-049 2022 Core Area Liquid Waste Management Committee Terms of Reference

T. Robbins spoke to Item 6.1

MOVED by Director Seaton, SECONDED by Director Desjardins,
That the Core Area Liquid Waste Management Committee receive the 2022 Terms of Reference attached at Appendix A.
CARRIED

6.2. 22-181 Overview of Rainfall Intensity-Duration-Frequency Curves

S. May spoke to Item 6.2.

Discussion ensued on the following:
- measurements of 100-year storm data accuracy
- climate change historical data versus newly evolving prediction tools
- Intensity-Duration-Frequency curves versus real data in current operations

MOVED by Director Brice, SECONDED by Director Desjardins,
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
That this report be received for information.
CARRIED

6.3. 22-182 Biosolids Management and Planning Update

G. Harris spoke to item 6.3

Discussion ensued on the following:
- non-class A biosolids commissioning
- pilot study on gassification and pyrolysis
- dried solids versus gasification processes
- Lafarge contract conditions

MOVED by Director Mersereau, SECONDED by Director Haynes,
The Core Area Liquid Waste Management Committee recommends to the Capital Regional District Board:
That this report be received for information.
CARRIED

6.4. 22-186 Core Area Wastewater Treatment Plant Capacity Update

T. Robbins spoke to item 6.4

Discussion ensued on the following:
- average dry weather flows and peak wet weather flows for 2021 and operational implications
- treatment capacity allocations and available treatment capacity at McLoughlin WWTP
- interpretation of peak wet weather flow capacities
- treatment levels during dry weather versus wet weather events

MOVED by Director Seaton, SECONDED by Director Haynes,
That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That this report be received for information.
CARRIED

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 Seaton, SECONDED by Director Plant,
That the March 23, 2022 Core Area Liquid Waste Management Committee meeting be adjourned at 2:08 pm.
CARRIED

_____
CHAIR

_____
RECORDER

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JULY 27, 2022

SUBJECT **Bowker Sewer Rehabilitation Recommendation to Award Contract 2022-743**

ISSUE SUMMARY

To seek Core Area Liquid Waste Management Committee and Capital Regional District (CRD) Board approval to award Contract 2022-743 for the Bowker Sewer Rehabilitation – Phase 1.

BACKGROUND

The Bowker Sewer was originally constructed around the year 1914 to serve Victoria, Oak Bay and the Saanich Panhandle. In 2008, portions of the sewer were rehabilitated by Cured-in-Place-Pipe (CIPP) lining, a cost-effective trenchless technology that largely eliminates the need to disturb the surface works. Based on recent closed-circuit television (CCTV) inspections, most of the remaining old sewer also needs to be rehabilitated with CIPP lining. Appendix A details the Bowker Sewer and which portions are to be lined.

In 2020-21, a Capital Plan was approved by the CRD Board and included a project to rehabilitate about 2,700 meters (m) of the Bowker Sewer with a budget of $8.6 million. A breakdown of budget components is as follows:

Project Name & No.	Engineering & Project Management	Construction	Contingency	Total Budget
Bowker Sewer Rehabilitation No. 21-09	$600,000	$7,500,000	$500,000	$8,600,000

The CRD retained AECOM Canada Ltd. (AECOM) to design and tender the project. Given current market conditions and the uncertainty of price escalation, AECOM broke the tender down into base bid, higher priority pipe segments (about 1,500m), and provisional price pipe segments (about 1,200m).

A request for qualification (RFQ) was issued for public response to pre-qualify competent contractors. On April 8, 2022, an invitation to tender (ITT) was provided to the two pre-qualified contractors. On May 13, 2022, the ITT closed and two tenders were received.

The low-bid tender was significantly below the estimated value for the project, and given the scope of work and estimated cost, was clearly submitted in error. After discussions with AECOM as to the ability of the vendor to perform the scope of work, the vendor confirmed they had erred and requested to withdraw their bid, which AECOM recommended CRD accept.

The only remaining bid was as follows:

Tenderer	Tender Amount of Base Bid (excl. GST)	Tender Amount of Provisional Items (excl. GST)	Total Amount (excl. GST)
Insituform Technologies Ltd.	$5,587,894	$3,328,831	$8,916,725

AECOM contacted ITL and verified it has a good understanding of the project and the tender met the ITT requirements. ITL's base bid of $5,587,894 is within the $7,500,000 construction budget and several provisional items can be included in the contract to utilize the full project budget (which will rehabilitate about 2,100m of the 2,700m of sewer pipe requiring relining). The remaining 600m of sewer pipe relining can be included in pipe rehabilitation work scheduled for 2024.

AECOM confirmed that ITL's tendered prices are within industry standards, based on the current market, and will provide good value to the CRD. IWS staff have conducted their own review of the tenders and concur with this assessment.

ALTERNATIVES

Alternative 1
That the Core Area Liquid Waste Management Committee recommends to the CRD Board:

That Contract No. 2022-743, Bowker Sewer Rehabilitation, be awarded to Insituform Technologies Ltd. for an amount of $7,500,000 (excluding GST) and authorize staff to expend up to an additional $500,000 in contract contingency funds as required during the execution of the project.

Alternative 2
That the Core Area Liquid Waste Management Committee recommends to the CRD Board:

That Contract No. 2022-743, Bowker Sewer Rehabilitation, not be awarded and direct staff to cancel or retender the project.

IMPLICATIONS

ITL has demonstrated that they understand the scope of work and their pricing will provide good value to the CRD. ITL has successfully completed lining projects for the CRD and other municipalities in Greater Victoria in the past. Staff can include additional pipe into the ITL contract (under Provisional Items) for a total length of about 2,100m at a total price of about $7,500,000. ITL have indicated that they can complete the work within the specified completion date of October 15, 2023. The 100-year-old sewer needs to be rehabilitated before it fails and using trenchless technologies to line the pipe minimizes impact on the public and environment. During construction, any noise resulting from bypass pumping and traffic impacts will be managed by the contractor in consultation with the CRD and the municipalities. Work will take place during the dry months and will be paused during the wet winter months when pipe flows are higher.

The tender could be cancelled and retendered to try to solicit interest from firms that did not qualify under the RFQ process; however, such cancellation and re-tendering without a change in the

scope of the project or the specifications would not be in line with CRD's policies and practices, would delay the rehabilitation of 100-year-old pipe, have serious schedule implications; may result in ITL choosing not to proceed with a further bid with CRD for this work; and the re-tendered cost will likely be more expensive due to continuing pressures of wages, equipment, fuel, and materials. Staff recommend proceeding with the qualified tenderer at this time.

CONCLUSION

The Bowker Sewer has exceeded typical design life expectations and now needs to be rehabilitated. The first phase of rehabilitation was included in the 2020-21 Capital Plan and approved by the Board with a budget of $8.6 million. AECOM completed the design and tender for rehabilitation work. Two tenders were received but CSS requested that their tender be withdrawn. AECOM confirmed that ITL understands the scope of work and their pricing will provide good value to the CRD. Their tender was compliant, and they have successfully completed numerous similar rehabilitation projects. About 2,100m of the 2,700m sewer pipe length can be rehabilitated at a cost of about $7,500,000. The delegated signing authority limit for the Chief Administrative Officer is $5 million, therefore approval of the award of contract by the CRD Board is required.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee recommends to the CRD Board:

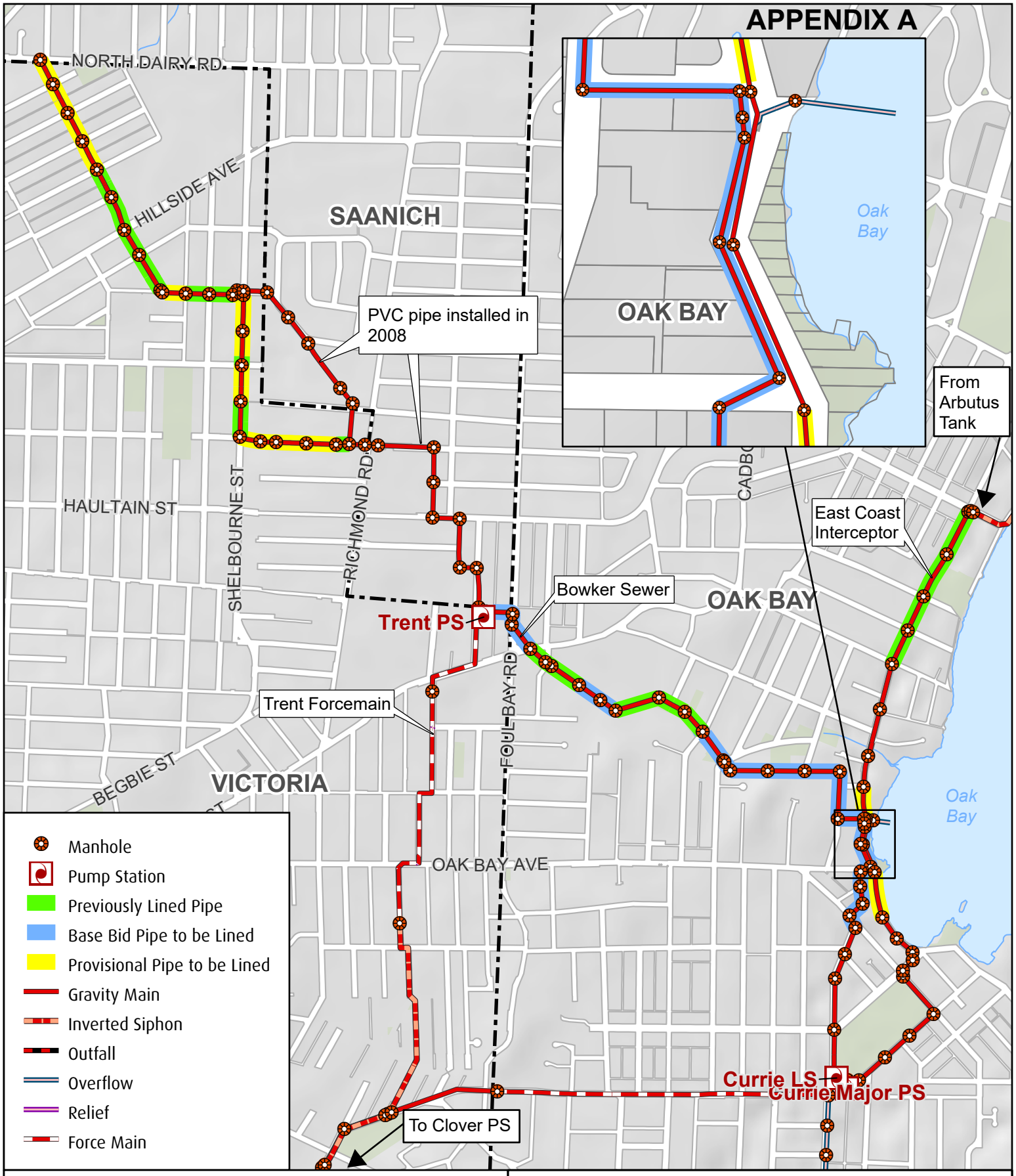
That Contract No. 2022-743, Bowker Sewer Rehabilitation, be awarded to Insituform Technologies Ltd. for an amount of $7,500,000 (excluding GST) and authorize staff to expend up to an additional $500,000 in contract contingency funds as required during the execution of the project.

Submitted by:	Ian Jesney, PEng., Senior Manager, Infrastructure Engineering
Concurrence:	Ted Robbins, BSc., CTech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Location Map

APPENDIX A



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DISCLAIMER

This map is for general information only and may contain inaccuracies.

July 2022 | Bowker Sewer Rehabilitation.mxd | helpdesk@crd.bc.ca

Core Area Wastewater
Bowker Sewer Rehabilitation

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JULY 27, 2022

SUBJECT **Core Area Wastewater System Commissioning and Operations Update and Capital Program Status Report**

ISSUE SUMMARY

To provide the Core Area Liquid Waste Management Committee (Committee) a Core Area Wastewater System commissioning and operations update and a capital program status report.

BACKGROUND

On January 13, 2021, the Capital Regional District (CRD) accepted operational responsibility for the McLoughlin Point Wastewater Treatment Plant (MPWWTP). The CRD accepted operational responsibility for the other conveyance system components, including pump stations, pipelines, and the Arbutus Attenuation Tank between September 2020 and December 2021. Although the new conveyance and treatment infrastructure constructed under the project was tested and deemed ready for service commencement, as it was handed over to the CRD for operation, the commissioning period of the MPWWTP, and the system as a whole, continues to extend into the two-year performance period for the MPWWTP (ending December 2022). During this time, the commissioning activities at the MPWWTP and conveyance infrastructure facilities are expected to periodically impact plant performance and effluent quality, and some plant and conveyance facility systems, including odour management. While the following summary of ongoing commissioning activities and detailed information about regulatory compliance and deficiencies are provided to update the Committee on the status of the operation 18 months into the two-year performance period, staff are confident that the issues identified will be addressed and that the MPWWTP will achieve performance expectations.

IMPLICATIONS

Ongoing Commissioning Activities

Operational documentation – Documentation provided by the contractors and documentation prepared by the CRD during the first year of operation including, standard operating procedures, safety procedures, and preventative maintenance routines, are being continually updated to reflect changes resulting from actual operating experience. Many maintenance procedures developed at the design and start-up phases of the project, had not been carried-out in the field, so various documents have required revisions.

Equipment adjustments/failures – The MPWWTP and the Conveyance Pump Stations contain many components, including process mechanical equipment (treatment process equipment, screens, pumps, motors, valves, chemical feed systems), electrical, instrumentation and control equipment (motor controls, switchgear, generators, SCADA controls), that can require adjustment or fail once under normal operating conditions. Resolution of these equipment issues has had some impact on plant performance. At the MPWWTP, as expected with a newly constructed, large, complex facility, during the initial operating period some components and equipment failed or have not performed as expected. CRD staff continue to work with Harbour Resource Partners (HRP) at MPWWTP to identify and address these issues through the

warranty management process. Since January 2021 to date there have been 308 warranty or deficiency items identified, 236 of which have been addressed, 40 remain unresolved and 32 are being disputed.

MPWWTP optimization – CRD staff have been working closely with the HRP's commissioning and performance period representatives (one representative is stationed at MPWWTP until December 2022), the Owner's engineer, Stantec, as well as a plant optimization engineer (who was previously under contract with HRP and has since been retained by the CRD) to monitor plant process performance and make on-going recommendations to the CRD regarding plant operations.

Effluent Compliance and Reporting

The CRD manages its Core Area liquid waste in accordance with the Core Area Liquid Waste Management Plan (up to and including Amendment 12), and the Municipal Wastewater Regulation Registration (Registration) for the MPWWTP, issued on June 9, 2020 and revised on February 22, 2021 by the BC Ministry of Environment and Climate Change Strategy (ENV) under the *Environmental Management Act*. The Registration sets out the wastewater treatment and performance criteria for the MPWWTP and authorizes the CRD to discharge treated effluent to the receiving waters. The MPWWTP discharge must also meet the Federal Wastewater Systems Effluent Regulations (WSER), which fall under the *Fisheries Act*. The provincial Registration is the more stringent regulatory requirement; the MPWWTP is designed to achieve the criteria set out in the Registration, which were detailed in the July 28, 2021 report to the Committee.

Regular compliance reporting under federal and provincial legislation is carried out in accordance with requirements. The Province is notified immediately when effluent quality criteria are not met (e.g. exceedance of maximum suspended solids limits), and compliance reports for all seven of the CRD's wastewater facilities are submitted on a monthly basis. Reporting to the Federal government is completed via online submission on a quarterly basis. Staff have submitted the required regulatory reporting and continue to meet with representatives of ENV regularly to discuss compliance related issues.

The Federal WSER effluent quality criteria have been met each month, with the exception of total suspended solids (TSS) on single days in April 2021 and June 2022. The provincial Registration requirements for both carbonaceous five-day biochemical oxygen demand ($cBOD_5$) and TSS are monthly averages of 10 mg/L. The January 2021 – June 2022 monthly average TSS figures reported have ranged from 5.0 mg/L to 14.6 mg/L not including the exceedances noted above; TSS has been in compliance 8 of 18 months. The January 2021 – June 2022 monthly average $cBOD_5$ figures reported have ranged from 7.1 mg/L to 17.4 mg/L; $cBOD_5$ has been in compliance 8 of 18 months.

In addition, as per the Registration and WSER requirements, the CRD reports all treatment process interruptions or bypasses to ENV and/or Fisheries and Oceans Canada (DFO). This year to date there have been 15 reports to the regulators, including 9 related to plant bypasses or other unauthorized discharges resulting from commissioning, and 6 related to TSS or $cBOD_5$ discharge loadings above the maximum effluent quality limits. It is important to note that despite the observed instances of non-compliance with the Registration, there are no anticipated adverse impacts to health or the environment. These events have no significant environmental impact due to the generally low level of exceedances and discharge location. However, the goal continues to

be to operate MPWWTP consistently in full compliance as soon as possible, so each event that potentially contributes to non-compliance is carefully reviewed and an incident summary/probable cause and mitigation measures/corrective actions are documented.

The MPWWTP is a complex plant that involves complex treatment processes. In most cases a single cause and effect reason is unidentifiable for each non-compliance result, but rather a number of often compounding factors. The critical issues contributing to plant performance and reduced effluent quality, which are also the focus of the on-going plant optimization work are summarized as follows:

1. Fluctuating influent flow rates – Flows from the Trent and Clover Pump Station have fluctuated significantly which have resulted in higher flow velocities through the primary and initial secondary treatment processes resulting in solids carryover to downstream secondary and tertiary treatment processes. In March 2022, the CRD modified the operation of the Trent Pump Station to reduce the pump rate fluctuations.

2. Biological Aerated Filter (BAF) optimization – The CRD's plant optimization engineer is working closely with SUEZ, the BAF designer/manufacturer for HRP, to optimize the flow velocity through the 12 BAF cells and backwash process to achieve effective removal of solids.

3. Tertiary Disk Filters – Filter fouling is resulting in the need for filter cleaning at a frequency that exceeds the specified Operation and Maintenance (O&M) manual frequency which impacts available treatment capacity during maintenance.

4. Organic and fibrous material screening – At the Clover and Macaulay Pump Stations and MPWWTP, fine screening equipment continue to be adjusted and optimized to maximize solids capture and improve automated washing processes in order to maintain operational effectiveness and reduce solids entering the treatment processes.

5. Influent solids reduction – High influent solids levels related to the Residuals Treatment Facility (RTF) operation are being evaluated. The CRD is trialing Chemically Enhanced Primary Treatment to determine the potential benefits of removing more solids through the primary treatment process.

<u>Residuals Treatment Facility and Biosolids Plan</u>
The RTF has been receiving sludge from the MPWWTP and producing Class A biosolids during 2022. Unfortunately, due to unplanned shutdowns at the cement kilns at the Lafarge cement manufacturing facility (which is under contract with the CRD to receive Class A biosolids for use as an alternative fuel at the facility), the CRD has only been able to ship 422 tonnes of biosolids to the facility as of the end of June 2022. This has resulted in the need to landfill approximately 603 tonnes so far this year.

Harbour Resource Management Group (HRMG) and the CRD continue to resolve service failures related to the quality of effluent discharged from the RTF into the centrate return line.

The Long Term Biosolids Beneficial Use Strategy is expected be presented to the Committee by the fourth quarter of 2023, with the finalized biosolids strategy to be submitted for provincial approval no later than June 18, 2024.

Communications and Community Engagement

CRD staff continue to communicate and engage regularly with various stakeholders typically on commissioning and construction related matters. Questions or concerns are received via email (wastewater@crd.bc.ca) or phone (250-940-7400). In addition, commissioning and maintenance activity information is posted bi-weekly on the CRD website and public advisories are issued for specific activities that are likely to cause odour or noise impacts in localized areas.

The majority of the concerns received have been related to odour from the MPWWTP. CRD staff continue to respond to every complaint and are logging and mapping every complaint to try to correlate the occurrence with operational activities and other potential contributing factors.

The CRD continues to closely monitor the potential sources of odour at the MPWWTP. The following major improvements or tasks have recently or will be completed in relation to the odour treatment systems:

1. Replacement of odour treatment system activated carbon media – there are three cells containing activated carbon to 'scrub' the foul air exhausted from the treatment processes. The carbon was expected to have a five-year service life but was determined to be ineffective after approximately 15 months due to high moisture content. CRD replaced the carbon in one cell in June and will be replacing the carbon in the two remaining cells in July. However, the CRD is working with HRP to determine the cause of the high moisture content before bringing the two cells on-line and damaging the carbon.

2. A vent on a sludge holding tank was found to be exhausting odour laden air. An activated carbon odour filtration system has been added to the vent, eliminating the odour laden air discharge.

3. The MPWWTP odour treatment system was not designed to extract air from the tertiary treatment process tanks. The secondary odour treatment system will be modified to treat this potential source of odour laden air. The system is expected to be operational by October. Similar issues are arising at the Macaulay Point Pumpstation and there may be a need to modify the odour treatment system to include areas of the pumpstation that are not connected to the system.
4. The CRD will be undertaking an 'audit' of the design and performance of the MPWWTP odour treatment system and conveyance infrastructure with the owner's engineer (Stantec). This work is expected to begin in September.

5. The CRD has undertaken some initial odour investigation work with Vancouver Island University (VIU), who has done similar work with the Regional District of Nanaimo. With VIU, the CRD is hoping to 'fingerprint' the chemical odour profiles from different sources and associate these profiles with odour present in different locations. This work is expected to occur this Fall.

As noted, staff are still refining the plant operation and working through plant maintenance routines which staff are discovering can generate some odour depending on the type of maintenance activity, due to open tank hatches and exhaust fans not maintaining negative air pressure. In addition, through neighborhood odour surveys staff have identified other sources of odour in some areas and continue to work closely with the City of Victoria to identify potential sources along the City sewer system and Esquimalt sewer systems. We are also conducting work to ensure the underground chambers and odour control systems along the residuals conveyance pipeline are functioning properly and that other manholes along the gravity pipelines are sealed.

However, as per the Core Area Wastewater Project Agreement between the CRD and HRP, the plant is to have been designed such that odour laden air at the plant will be captured and treated prior to discharge such that all air exhausted from the plant will contain a maximum odour concentration at and beyond the plant site boundary of less than five odour units per cubic metre (not perceptible). In addition, the odour treatment systems are designed with sufficient redundancy in place to allow for all normal maintenance activities to occur without interruption or reduction in the level of odour treatment and without exceeding the plant site boundary concentration limit. The CRD remains committed to achieving the requirements of the Project Agreement.

Core Area Capital Program Status Report

There are 32 active projects under the current Core Area Wastewater Service capital program. Most of the projects are related to trunk sewer improvements. The projects have approved budgets totaling $21.9 million, of which approximately $16.5 million is currently committed to in-stream projects (including the Bowker Sewer Rehabilitation Project).

CONCLUSION

The CRD accepted operational responsibility for the various facilities constructed under the Core Area Wastewater Treatment Project between September 2020 and December 2021. The CRD has not accepted operational responsibility for the Arbutus Attenuation Tank yet. Although the new conveyance and treatment infrastructure constructed under the project was tested and deemed ready for service commencement as it was handed over to the CRD for operation, the commissioning period of the MPWWTP and the system as a whole continues to extend into the two-year performance period for the MPWWTP (ending December 2022). During this time, the commissioning activities at the MPWWTP and conveyance infrastructure facilities are expected to periodically impact plant performance and effluent quality, and some plant and conveyance facility systems, including odour management. Regular compliance reporting under federal and provincial legislation has been carried out in accordance with requirements.

RECOMMENDATION

There is no recommendation, this report is for information only.

Submitted by:	Ted Robbins, BSc., CTech., General Manager, Integrated Water Services
Concurrence:	Russ Smith, Acting General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer