

**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE  
MEETING OF WEDNESDAY, JUNE 26, 2024**

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**SUBJECT**     **Core Area Liquid Waste Management Committee 2024 Mid-Year Capital Projects and Operations 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 five-year and long-term capital plans.

**Core Area Wastewater Treatment Project**

The Project delivered nine major components (location map in Appendix A) and all projects are complete and in operation. All the liquid waste projects are being operated by Capital Regional District (CRD) staff, the Residual Solids Treatment Plant is under a 20-year Operation and Maintenance Contract and a mediation process is underway to address some current operational concerns. 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 2024, 42 projects have been identified with a combined budget of \$32,769,000. The status of the more substantial projects are detailed in Appendix C.

**Operations Update**

**Odour**

Certain factors such as wind, temperature, and tide patterns impact and increase the risk of odour emissions beyond the facility boundary during maintenance activities. Standard operating procedures now require a review of these factors to align maintenance activities that could produce offsite odours with favorable conditions. Preventative maintenance tasks with a higher risk of odour emissions are now complete for the summer of 2024 to avoid conflicts with seasonally warmer temperatures.

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 McLoughlan Point Wastewater Treatment Plant (MPWWTP). In addition, work has continued on our Odour Action Plan. Vancouver Island University is continuing its collection and analysis of data and has moved

into analysis of the data collected, summarizing the data into a report, but is not ready to present results yet.

In 2023, CRD staff received 116 odour complaints, of which 102 were assumed to be related to MPWWTP, seven were associated with the Residuals Treatment Facility or the solids conveyance line, 38 were associated with CRD and municipal conveyance within the McLoughlin catchment, and four were outside of Core Area. As of June 12, 2024, there have been 20 odour complaints, of which 17 were assumed to be related to the MPWWTP.

| <b>Year</b>  | <b>Number of days complaints received</b> | <b>Number of complaints</b> | <b>Number of unique complainants</b> |
|--------------|---|-----------------------------|--------------------------------------|
| 2022         | 85  | 101                         | 29                                   |
| 2023         | 116                                       | 151                         | 46                                   |
| To Date 2024 | 16  | 20                          | 8                                    |

The other three odour complaints associated with the Core Area system came from the areas near the Marigold Pump Station and the conveyance systems within Esquimalt. The 20 total complaints for 2024 represents a substantial reduction from the 63 complaints received in 2023 during the same reporting period.

### **2024 System Upgrades**

Infrastructure work scheduled for 2024 prioritizes odour mitigation through improved system performance and reduce odour emissions, these projects include:

- Secondary Odour Control System Upgrades: reduced moisture through the pre-filter improves odour elimination and extends the lifespan of the product and reduces maintenance activities.
- Densadeg No. 1 scum removal system: improved scum removal eliminates an odour source and reduces the required frequency of Plant maintenance.
- Tank Cover Upgrades: a new design for tank covers will reduce maintenance project timelines and odour impacts by allowing more efficient access.

### **Compliance**

Compliance monitoring is performed to ensure regulatory requirements are being met and reported.

The table below is a summary of non-compliance events to the end of May 2024:

| <b>Month</b>         | <b># of times out of Compliance</b> | <b>Reasons for Non-Compliance</b>                                 |
|----------------------|-------------------------------------|---|
| January              | 5                                   | Primary bypass, tertiary bypass (discharge of blended effluent)   |
| February             | 2                                   | Secondary bypass, tertiary bypass (discharge of blended effluent) |
| March                | 1                                   | Primary bypass (discharge of blended effluent)                    |
| April                | 0                                   | In compliance   |
| May                  | 0                                   | In compliance   |
| Total to end of May: | 8                                   | Discharge of blended effluent (8 times);                          |

- Discharges of blended effluent referenced in the table were due to disk filter repair work and wet weather events.
- The one March non-compliance event was due to a short duration screen power failure resulting in a spike of flow to McLoughlin Wastewater Treatment Plant.

In comparison, there were seven non-compliance events in 2023 through the end of May of 2023. 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 ongoing odour system improvements and compliance events, the remainder of the system has had minimal unexpected operational issues to date in 2024. The operating expenditures are in alignment with the budget, with the exception of overspending on waste sludge disposal at the Hartland Landfill and legal costs associated with the Residual Treatment Facility. If waste sludge continues to be landfilled in the third quarter a budget amendment will be required, transferring funds from the Operating Reserve Fund.

### **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**

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

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| Submitted by: | Jason Dales, B.SC., WD IV, Senior Manager, Wastewater Infrastructure Operations |
| Concurrence:  | Alicia Fraser, P. Eng., General Manager, Integrated Water Services              |
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### **ATTACHMENT(S)**

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