

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JULY 13, 2022**

SUBJECT Monitoring Wastewater for COVID

ISSUE SUMMARY

To provide a summary of the value of wastewater COVID monitoring, previous monitoring in the region, and potential opportunities for future monitoring.

BACKGROUND

Wastewater epidemiology has been a surveillance tool employed by health authorities since well before COVID. It was first used to assess illicit drug use and the prevalence of more common infectious diseases. COVID-specific wastewater surveillance was initiated by numerous academic, research, private for-profit, and health agency labs very quickly after COVID became prevalent in 2019/2020.

Wastewater COVID results cannot provide an exact number of infected individuals in the community, but they can provide high-level information about changes in overall rates of community infection over time. Health agencies generally use wastewater data to infer community COVID levels, particularly as centralized efforts to undertake direct human testing (i.e., nasal swabs, etc.) have declined, and the tracking of at-home rapid testing results has not been fulsome.

The Capital Regional District (CRD) participated in a wastewater COVID study with the University of Victoria and a private sector company. Samples were collected weekly from December 2020 to July 2021 from the McLoughlin, Macaulay, Clover and Saanich Peninsula wastewater systems. The Regional District of Nanaimo (RDN) also contributed samples from their treatment plants. Due to low COVID levels on Vancouver Island during this period, most CRD/RDN wastewater COVID results were not detectable throughout the first and second waves. Community COVID levels were higher in the CRD/RDN during the third wave and, as such, wastewater COVID levels were more frequently detected during this time. The University of Victoria and the private sector company applied for a grant, with CRD/RDN support, to continue the project beyond July 2021, but were unsuccessful and sampling was ceased. A more detailed summary of results and analytical challenges is currently being prepared for publication in a scientific journal.

The BC Centre for Disease Control (BCCDC) recently announced plans to expand their wastewater COVID (and other infectious disease) surveillance outside of their current focus in the Lower Mainland (Metro Vancouver) treatment plants. Since this announcement, Island Health has polled the CRD and other island wastewater utilities regarding their willingness and ability to submit samples to BCCDC three times per week. Staff have confirmed a willingness, but a formal request to participate has not yet been received.

IMPLICATIONS

Intergovernmental Implications

As a wastewater utility, there are no wastewater management actions that the CRD could take based on wastewater COVID findings. Results are only of relevance to provincial health ministries and authorities. It is therefore, ultimately up to these agencies to decide on the value of, and provide support for, continued monitoring.

Financial Implications

If a formal request to participate in the BCCDC project is received, all analytical and shipping costs would be covered by the BCCDC or Island Health.

Service Delivery Implications

The staff time and effort to collect samples three times per week would coincide with routine sampling that operators and other sampling staff already undertake; the resultant increase in effort would be minimal. Samples would most likely only be provided from the McLoughlin Point Wastewater Treatment Plant, but could also be provided from the Saanich Peninsula Wastewater Treatment Plant upon request from the BCCDC.

CONCLUSION

Wastewater COVID monitoring can provide health agencies with information about the prevalence of COVID in the community, but it is of little use to wastewater utilities. Potentially, there are future opportunities to provide wastewater samples to BCCDC for ongoing community pathogen (COVID and otherwise) surveillance, but a formal request to collect samples has not yet been received.

RECOMMENDATION

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

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer