



COVID-19 wastewater surveillance dashboard

About the dashboard

We're working with our partners across Canada as part of a pan-Canadian wastewater surveillance network to monitor the spread of COVID-19. Our partners include municipal, provincial and territorial governments, as well as other federal departments and academia.

The wastewater dashboard allows you to track and compare the COVID-19 levels in some major communities in Canada over time. Data are presented as a 7-day rolling average.

The data presented here come from sewage samples submitted to the National Microbiology Laboratory for testing.

Some communities are monitoring their wastewater for COVID-19. A list of other [Canadian wastewater COVID-19 surveillance dashboards and websites](#) is available.

Why we monitor wastewater

The virus that causes COVID-19 is found in the stool (feces) of infected people while they are infected. By monitoring wastewater (sewage) we can:

- detect COVID-19 in communities
- detect COVID-19 in institutional settings such as long-term care facilities
- monitor which variants are circulating
- monitor other public health threats that aren't related to COVID-19, such as other infectious diseases, antimicrobial resistance and opioid use

Because people can have COVID-19 without any symptoms, they can sometimes spread it without even knowing they have it. Wastewater monitoring can provide an early warning of COVID-19 in a community or setting. Even a few days of early warning can be critical to the success of public health interventions. It can also be an important source of information for people making their own personal health decisions.

Acknowledgements

We thank participating municipalities for submitting wastewater samples and associated data. We also thank federal, provincial and territorial public health professionals for valued input on the development of this program, as well as the many scientists supporting wastewater surveillance networks nationally.

Canadian Wastewater Survey (CWS)

We've been working with Statistics Canada on the Canadian Wastewater Survey (CWS) since March 2020 to conduct wastewater surveillance in Halifax, Montréal, Toronto, Edmonton, and Vancouver.

For more information on the CWS please refer to:

- [Canadian Wastewater Survey_\(CWS\)](#)
- [Canadian Wastewater Survey_\(detailed\)](#)

Cities of Charlottetown and Summerside, Prince Edward Island

We work with the cities of Charlottetown and Summerside and the Government of Prince Edward Island to conduct wastewater surveillance at 2 wastewater treatment plants.

City of St. Johns, Newfoundland and Labrador

We work with the Government of Newfoundland and Labrador to conduct COVID-19 wastewater surveillance in the city's wastewater treatment plant.

City of Regina, Saskatchewan

We work with the city of Regina, Saskatchewan Health Authority, University of Regina, and EPCOR Water Prairies to conduct COVID-19 wastewater surveillance in the city's wastewater treatment plant.

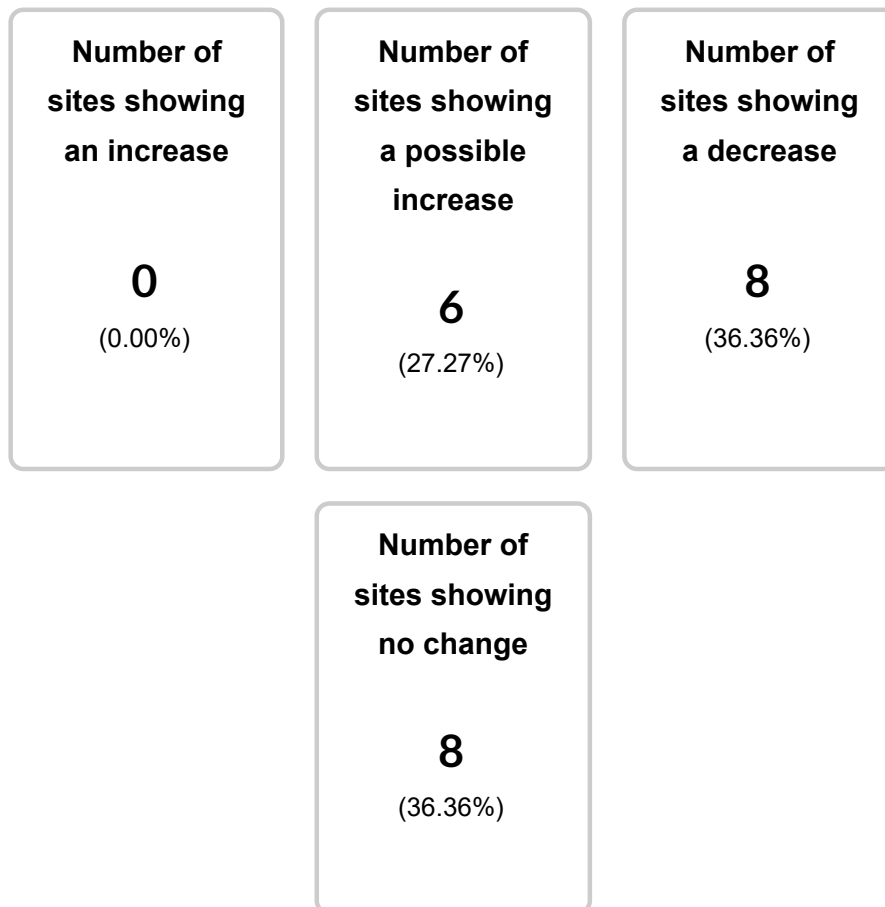
City of Winnipeg, Manitoba

We work with the city of Winnipeg and the province of Manitoba to conduct wastewater surveillance in the city's 3 wastewater treatment plants.

Wastewater dashboard

This dashboard provides trend data about the levels of COVID-19 in the wastewater (sewage) of different communities and settings across Canada. This can reflect the levels of COVID-19 in those communities. We update this information on Tuesdays and Fridays at 12:00 noon Eastern Time. In the event of a holiday, we update on the next business day. Data may lag slightly, due to the time it takes to transport and analyze the samples. This report was **last updated on July 4, 2022** with data up to and including June 27, 2022.

Key updates



- An **increase** is a statistically significant increase in the wastewater signal.
- A **possible increase** is an increase in the wastewater signal that is not statistically significant.

- A **decrease** is a statistically significant decrease in the wastewater signal.
- **No change** is either a steady signal or insignificant decrease in the wastewater signal.

Interpreting wastewater data

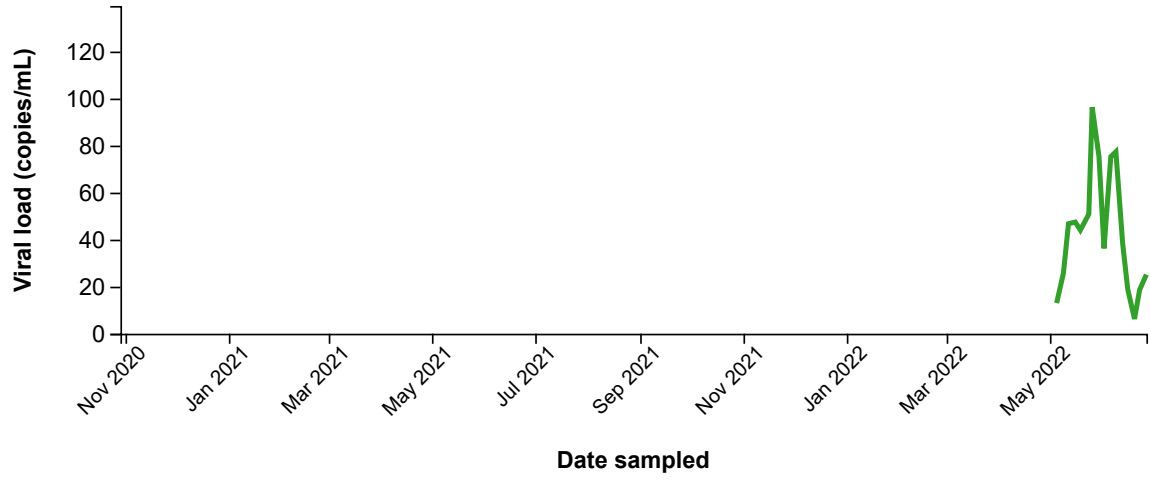
The wastewater dashboard shows the concentration of COVID-19 in wastewater samples from different sites.

The solid green line shows the 7-day rolling average of the viral load for each site. We calculate the 7-day rolling average by averaging the viral loads from each day with the previous 6 days. A dotted green line that shows the daily viral load can be added by using the 'show daily values' button. Use caution when interpreting daily and short-term changes in viral load, as the wastewater signal can change from day to day. An ongoing increase or decrease in the viral load is more reliable for indicating trends.

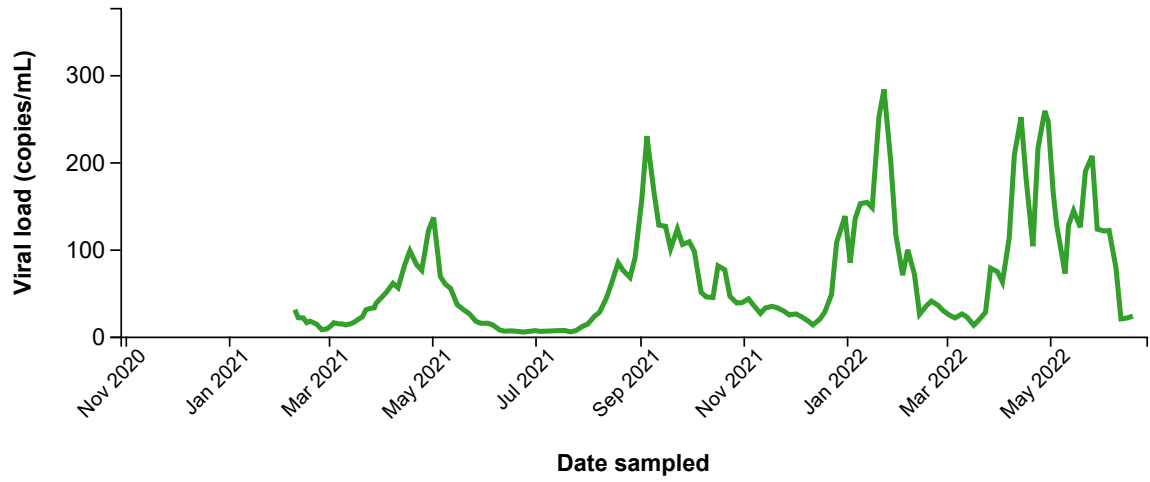
If the wastewater signals are high or increasing, this may indicate a high level of COVID in your community. It's important to pay attention to public health alerts and to follow public health advice. Consider the risks and make informed decisions about [individual public health measures](#). Even if they're no longer required in your community or setting, individual public health measures can help reduce the spread of COVID-19.

Figure 1. Trend graph of 7-day rolling average of COVID-19 viral load in wastewater, as of June 27, 2022

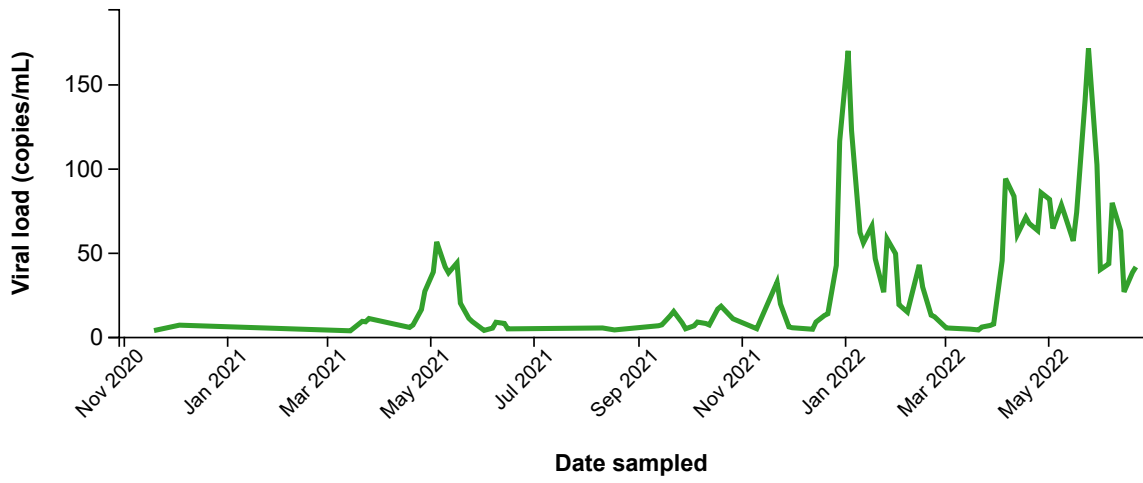
Charlottetown



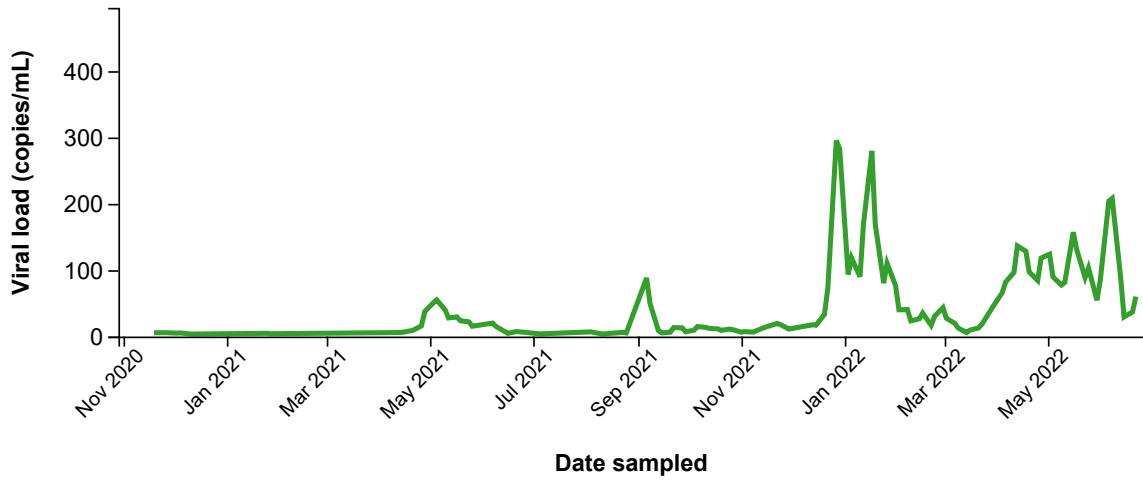
Edmonton Goldbar



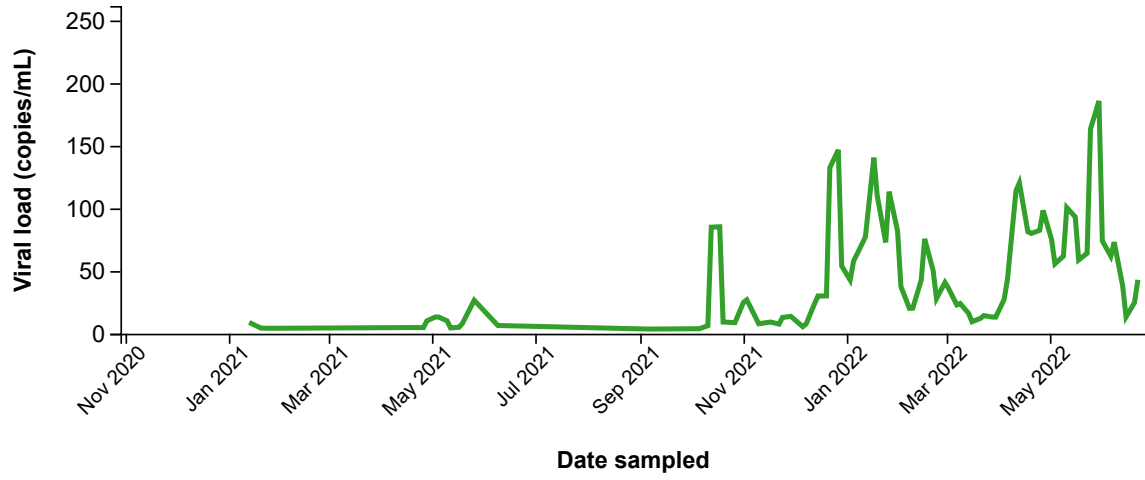
Halifax Dartmouth



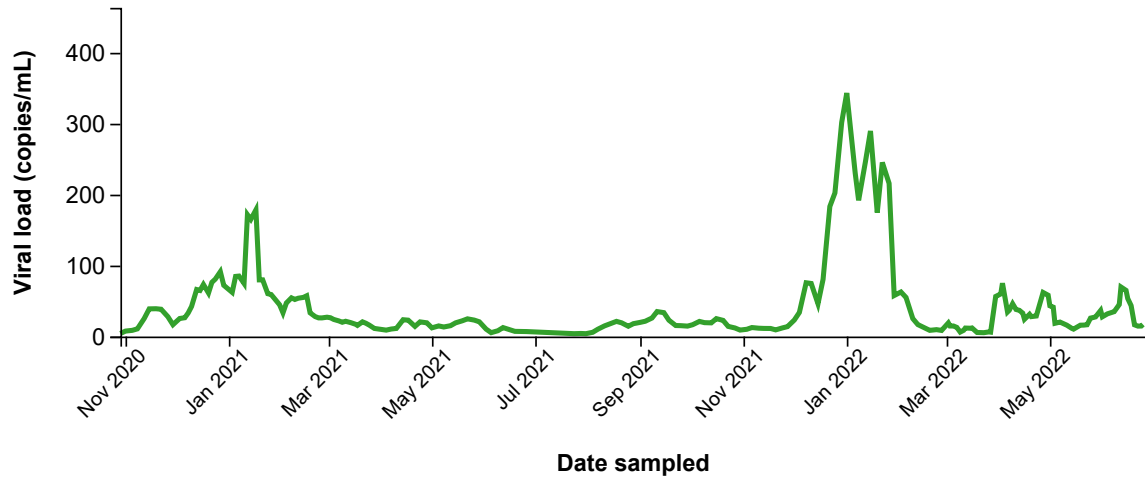
Halifax Halifax



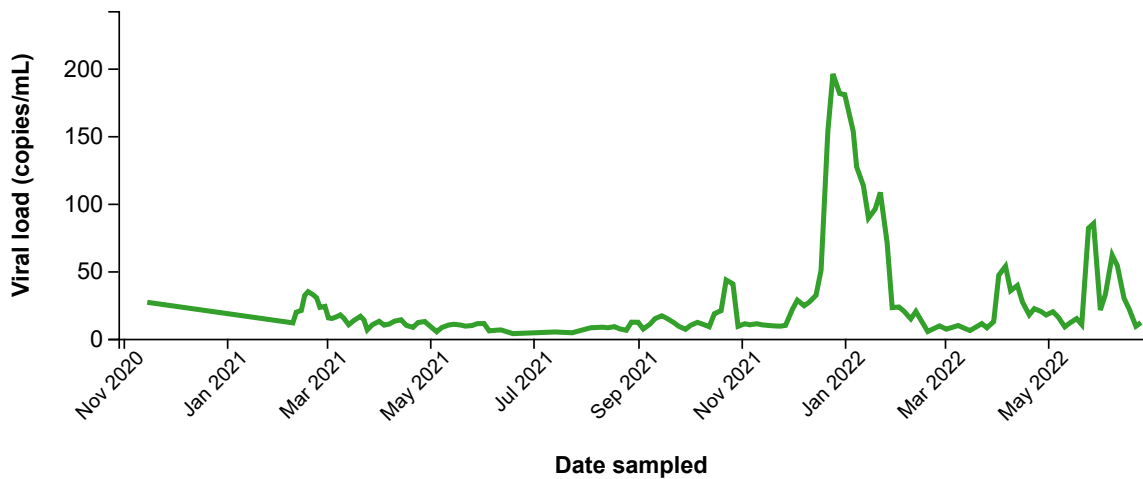
Halifax Millcove



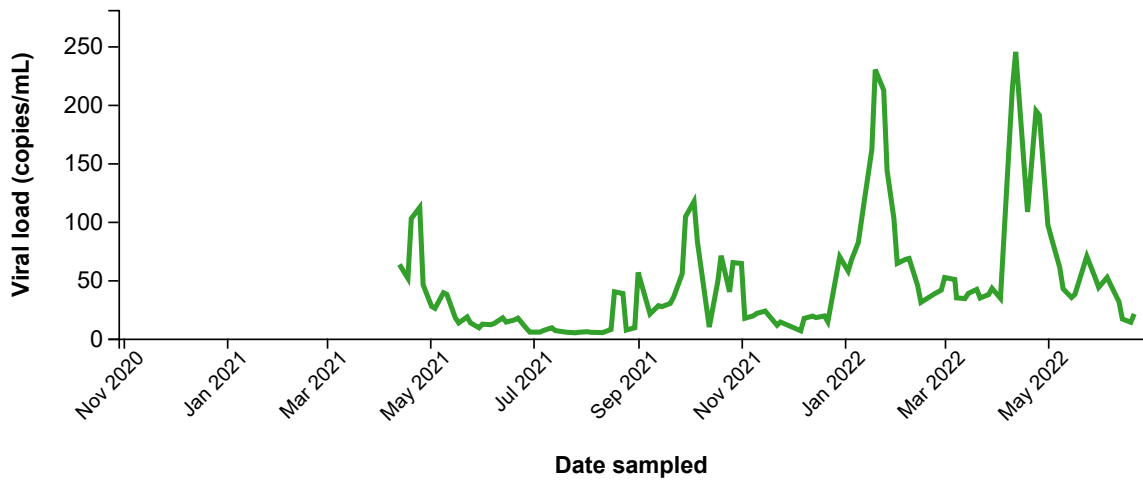
Montreal North



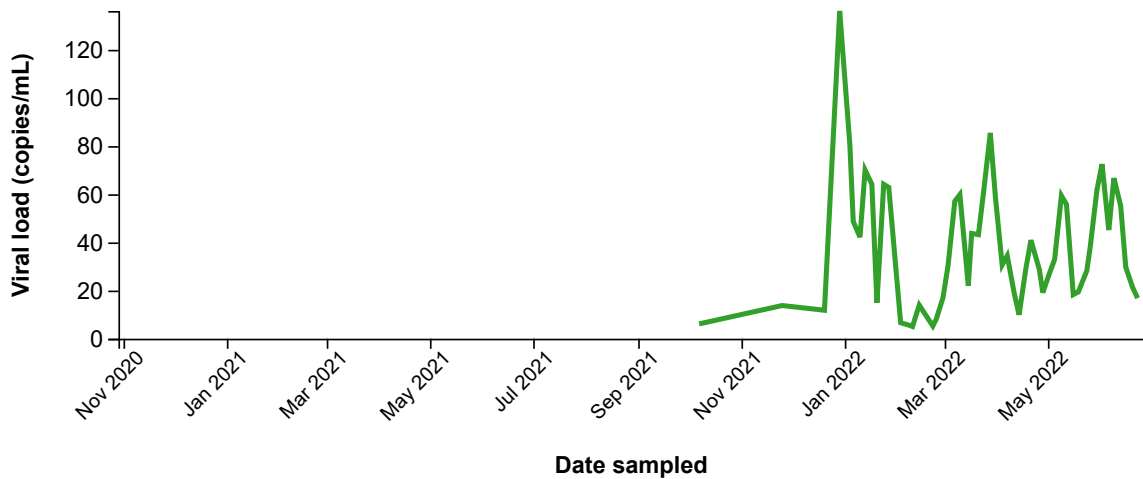
Montreal South



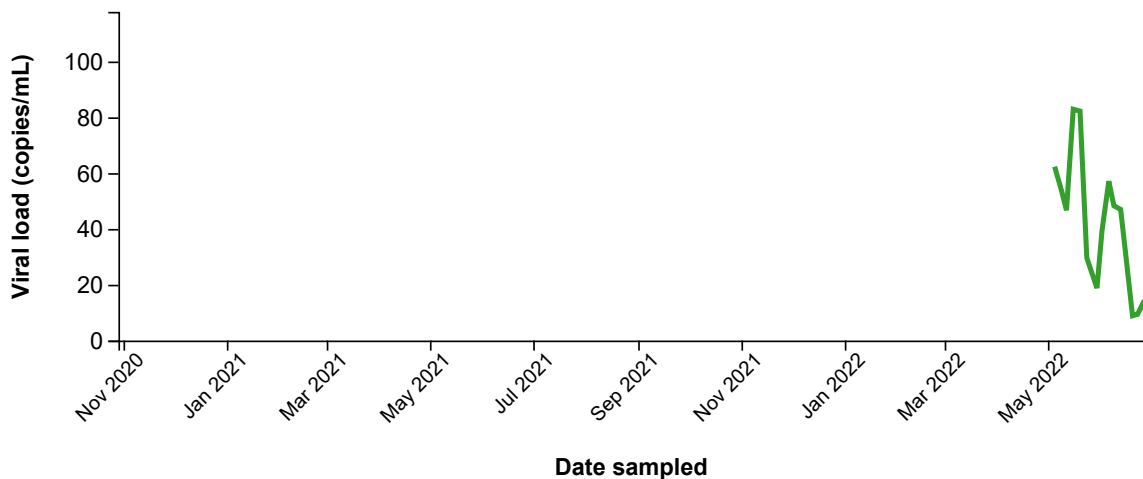
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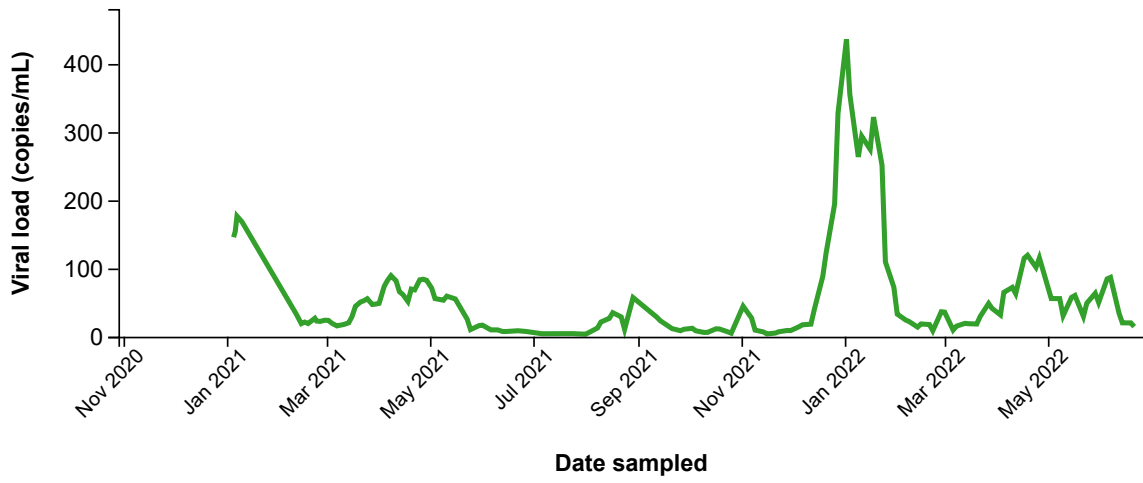
St. John's



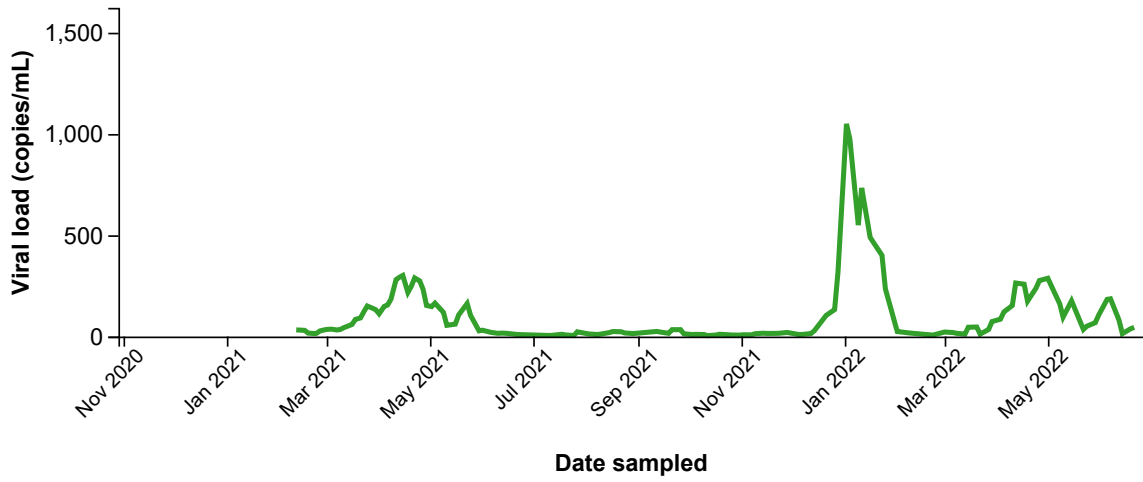
Summerside



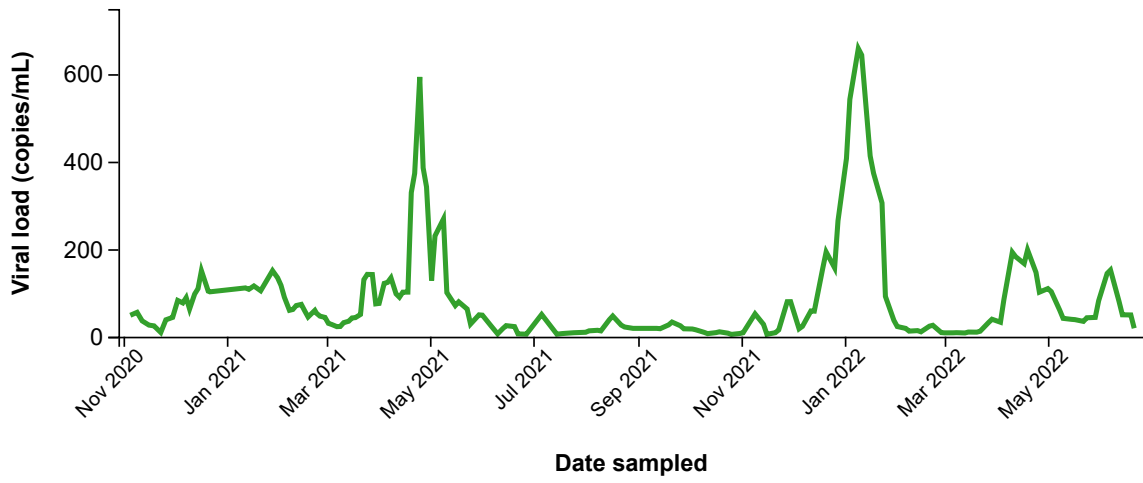
Toronto Ashbridges Bay



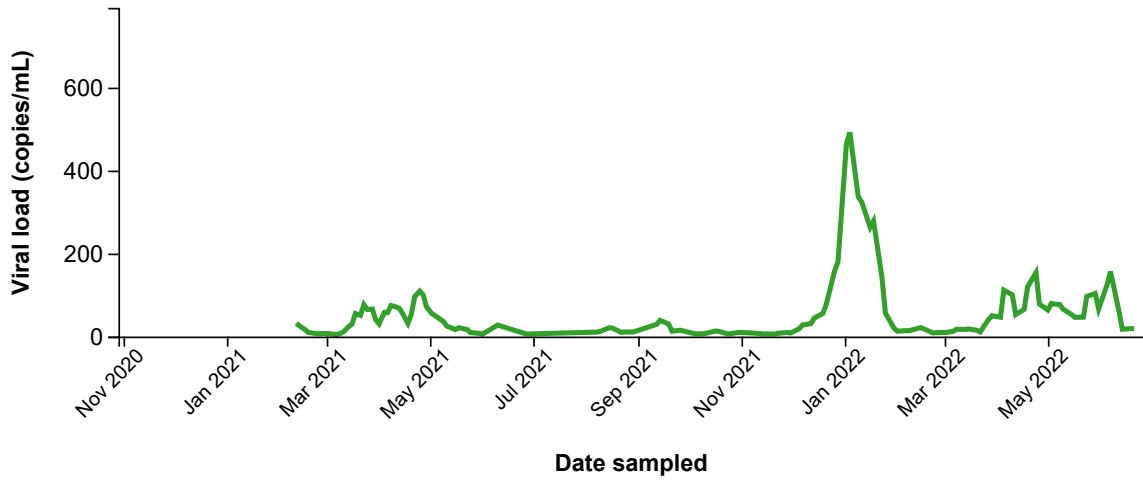
Toronto Highland Creek



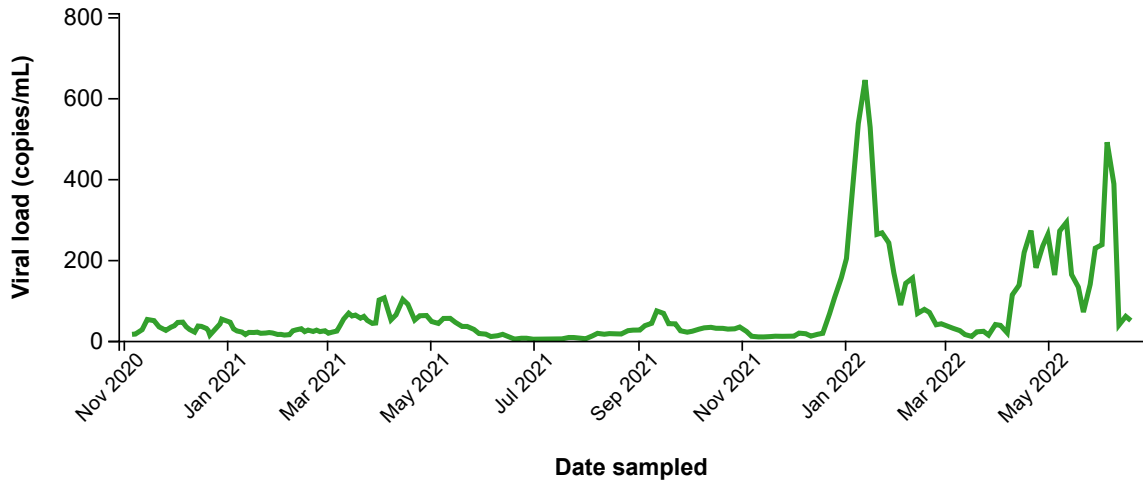
Toronto Humber



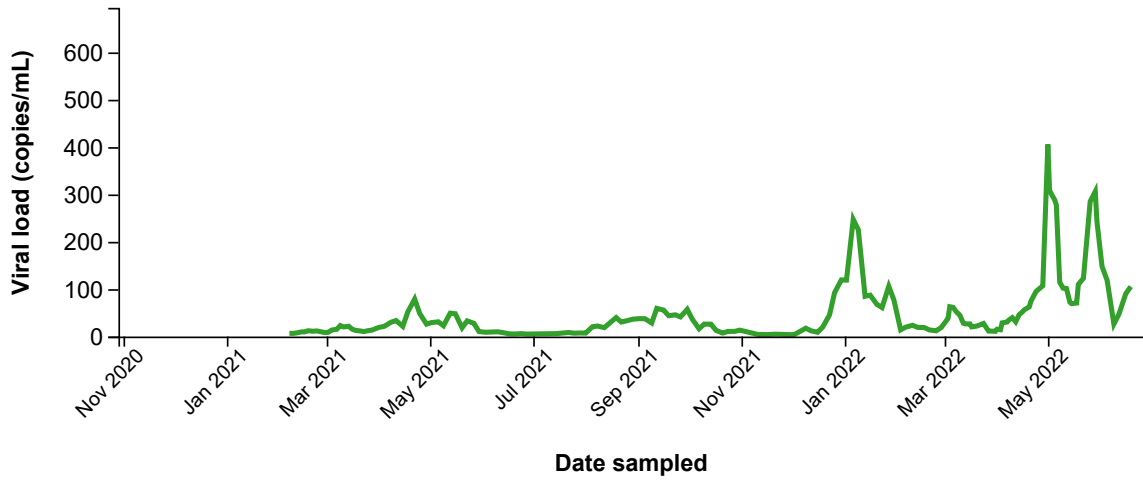
Toronto North Toronto



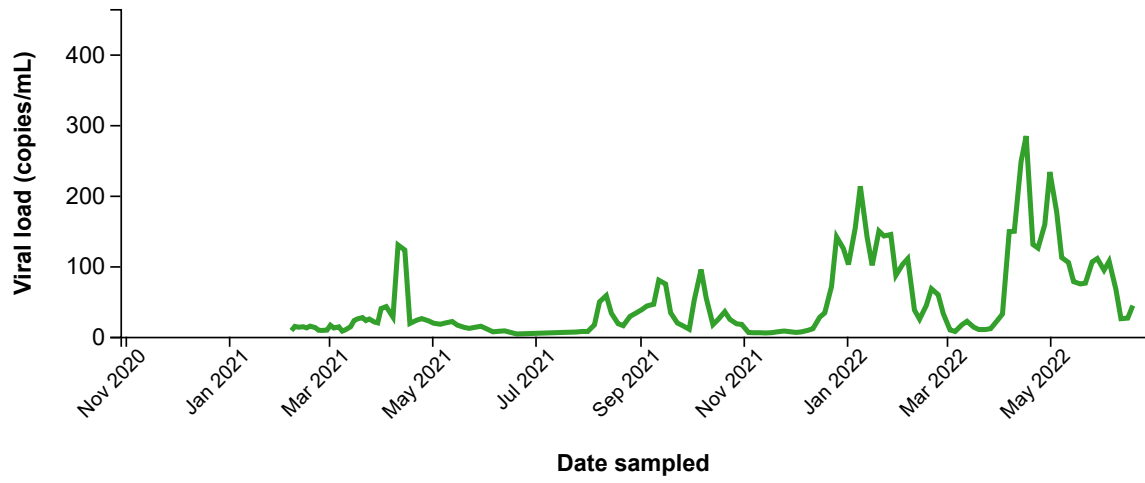
Vancouver Annacis Island



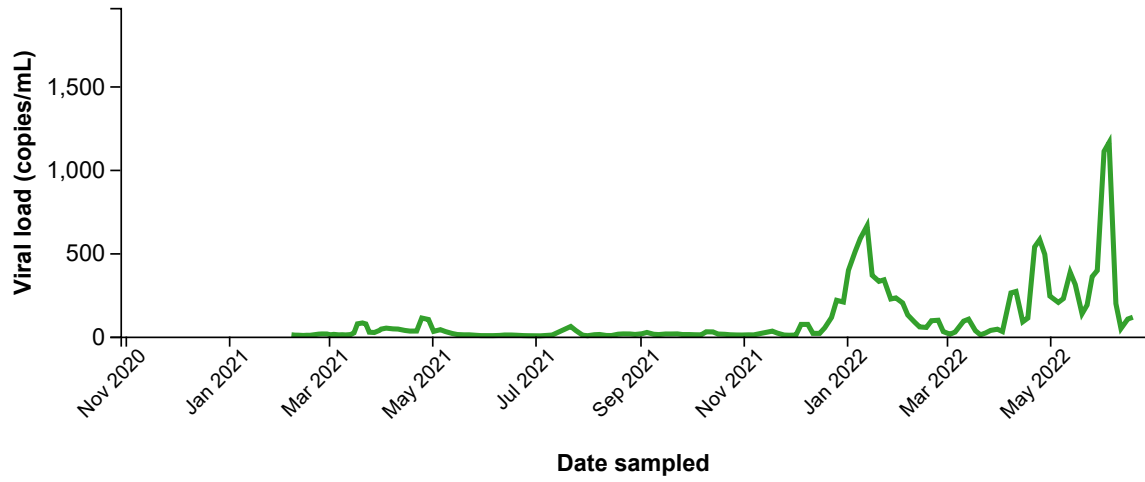
Vancouver Iona Island



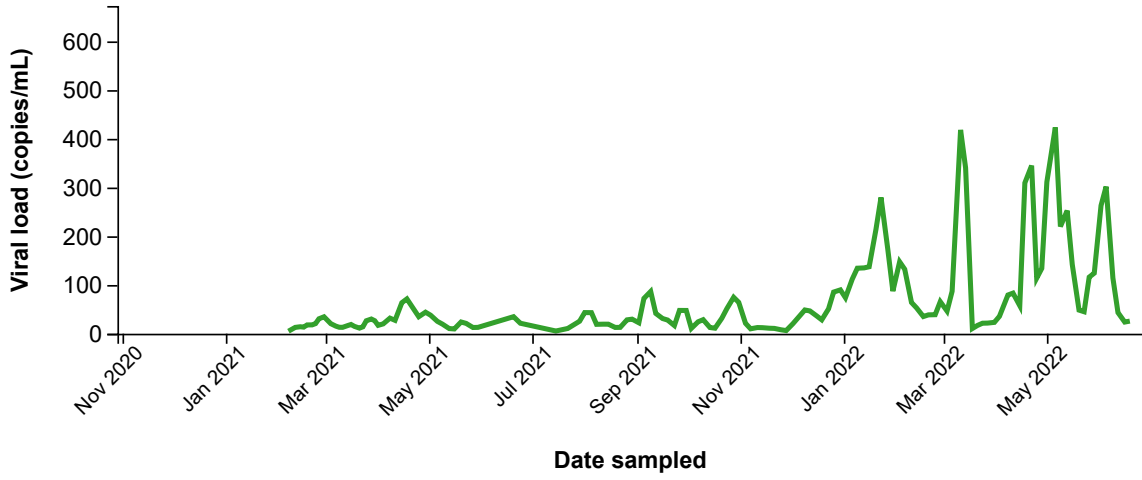
Vancouver Lions Gate



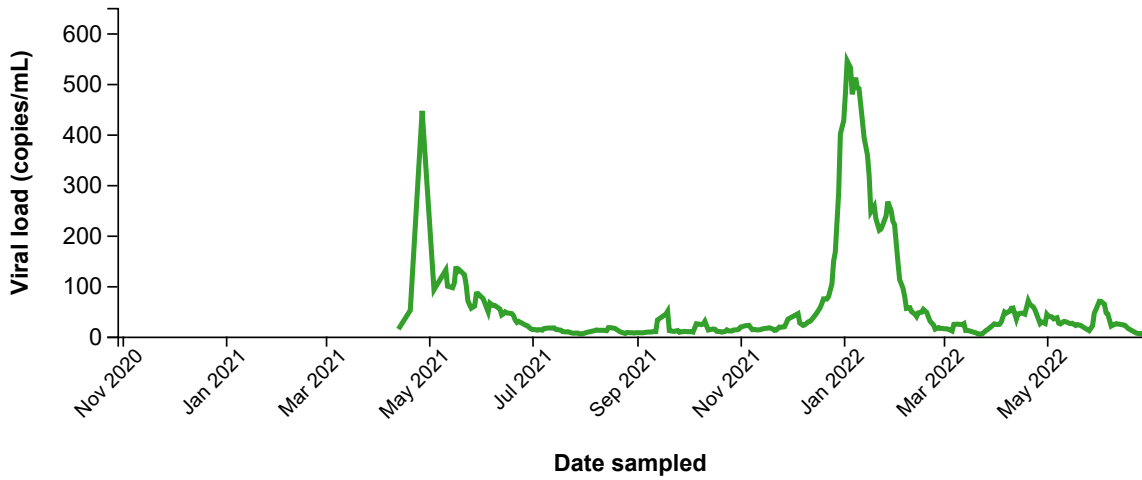
Vancouver Lulu Island



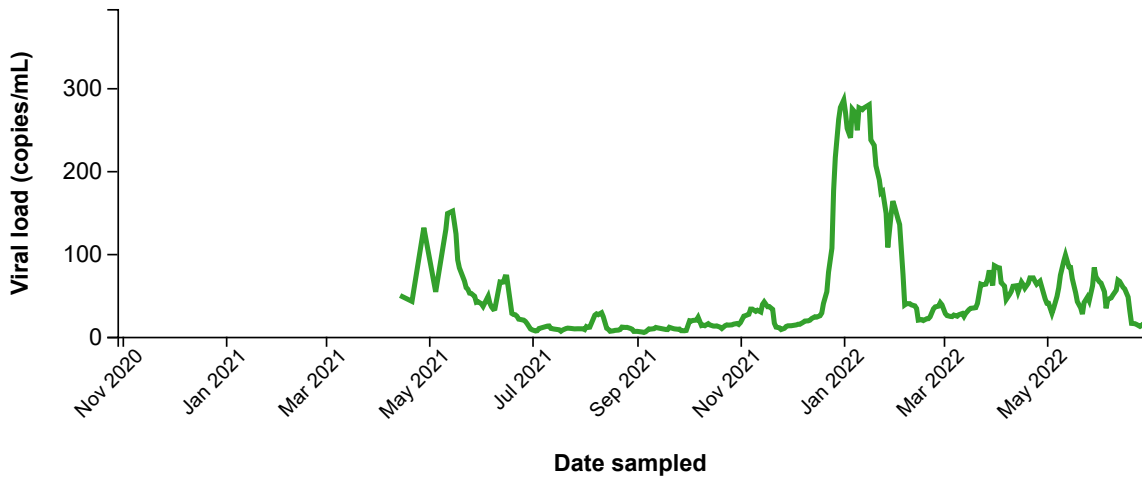
Vancouver Northwest Langley



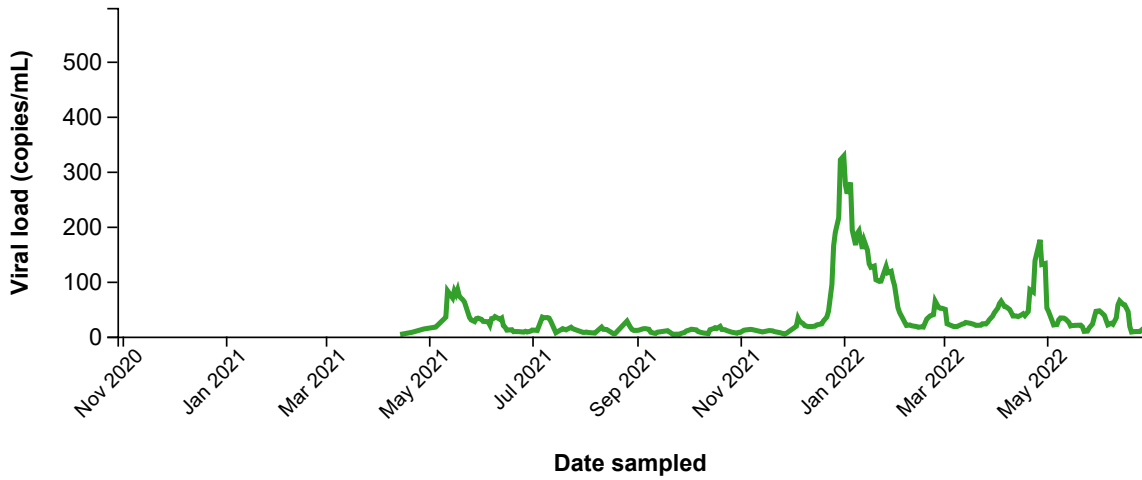
Winnipeg North End



Winnipeg South End






Winnipeg West End



7-day rolling average of COVID-19 viral load in wastewater, as of June 27, 2022

Search: Showing 1 to 10 of 3,151 entries Show entries

Date ↑ ↓	Site ↑ ↓	7-day rolling average of COVID-19 viral load (copies/mL) ↑ ↓
2020-10-29	Montreal North	4

Date 	Site 	7-day rolling average of COVID-19 viral load (copies/mL) 
2020-11-01	Montreal North	8
2020-11-05	Montreal North	9
2020-11-05	Toronto Humber	49
2020-11-06	Vancouver Annacis Island	16
2020-11-08	Montreal North	11
2020-11-08	Vancouver Annacis Island	16
2020-11-09	Toronto Humber	56
2020-11-12	Montreal North	25
2020-11-12	Toronto Humber	36

1 2 3 4 5 316 Next →

Canadian wastewater COVID-19 surveillance dashboards and websites

These dashboards and websites are led by provincial, territorial and academic partners across Canada.

For corrections or additions, please contact: nmlwastewater@phac-aspc.gc.ca.

Filter items Showing 1 to 10 of 25 entries Show entries

Region 

Link 

Region  

Link  

Region  	Link  
Alberta	<u>Centre for Health Informatics Dashboard</u>
British Columbia	<u>Metro Vancouver COVID-19 Wastewater Dashboard</u>
Newfoundland and Labrador	<u>Newfoundland and Labrador Wastewater Surveillance Report</u>
Northwest Territories	<u>Northwest Territories COVID-19 Dashboard</u>
Ontario	<u>Ontario Science Table Dashboard</u>
Ontario	<u>Brant County Health Unit Dashboard</u>
Ontario	<u>City of Greater Sudbury Dashboard</u>
Ontario	<u>Durham Region COVID-19 Wastewater Surveillance</u>
Ontario	<u>Eastern Ontario Health Unit Dashboard</u>
Ontario	<u>Halton Region Dashboard</u>

Technical notes

This page has information about how we conduct wastewater testing and the limitations of the data. It also includes definitions for some of the scientific terms used in this dashboard.

Methodology

Scientists across the country provide wastewater surveillance data through their provincial and territorial networks.

Scientists are still learning about how to detect and measure COVID-19 in wastewater. While there are different ways of doing this, the scientific community, including the Public Health Agency of Canada, is working together to build a standard that will help everyone understand, compare and share data about COVID-19 in wastewater.

We've compared wastewater data with local data and found that the trends are consistent. Differences in the strength of the wastewater signals are mostly due to differences in processing methods.

We present COVID-19 viral load as a 7-day rolling average because high levels on a single day don't show the broader trend. Our approach helps us to understand the overall trends while giving you better information to make your own health decisions.

We present data for all sites, including where an area is serviced by multiple wastewater treatment plants.

Limitations

While wastewater surveillance offers many advantages, it does have some limitations.

The wastewater signal can be hidden by the composition of wastewater, which varies by community. For example, ground or surface water can make the COVID-19 wastewater signal stronger or weaker. This can be an issue during seasonal snow-melt and large rain events.

The wastewater signal can also be affected by:

- industrial flow into the sewage system
- sand and salt to roads in winter, and

- the temperature of the collection system

We're working with our partners to identify other issues with wastewater surveillance, and developing measures to reduce the effects.

Wastewater surveillance also detects people with or without symptoms. Considering the above limitations, we're not sure how much virus is shed with each wave. For this reason we don't recommend comparing wastewater surveillance data from different waves of COVID-19 to estimate the number of cases in a community.

Definitions

- The **7-day average** is generated by averaging the levels from a given day with the 6 previous days. The average is termed "rolling" as it changes each day.
- **Copies per mL** is the number of copies of the target RNA found in a milliliter (mL) of raw sewage by the specific wastewater treatment facility.
- **Viral load** is the amount of SARS-CoV-2 genetic material present in a sample of wastewater.
- **Wastewater signal** is a measure of the level of virus in wastewater that identifies increasing, stable or decreasing number of virus particles in wastewater.

Date modified:

2022-06-07