

COMMUNITY NOTICE

COVID-19 Testing at Wastewater Treatment Plants

January 18, 2021 - Nipissing First Nation will be working with the University of Ottawa and Ontario First Nations Technical Services in the near future to conduct COVID-19 testing at both the Garden Village and Duchesnay Wastewater Treatment Plants.

This free wastewater testing service provides an early indicator to help identify and track if COVID-19 is present in the community. Our Wastewater Treatment Operators will be taking scheduled test samples to measure the COVID-19 indicators in our wastewater.

Early COVID-19 Detection

It is known that a significant proportion of people with active COVID-19 infections shed the coronavirus (called SARS-CoV-2) in their stool, sometimes even before their symptoms start. Every time an individual with COVID-19 goes to the bathroom, they flush the virus into the wastewater system.

We are fortunate to have been offered this opportunity by the University of Ottawa, and we will be working with Tricia Hamilton, Senior Engineer of Ontario First Nations Technical Services Corporation, to conduct this testing.

In essence, we are testing our Sewage Collection System where anyone connected to our system can contribute including those who may not even know they are infected. As we continue to navigate the COVID-19 pandemic, additional means of testing for COVID-19 in the community can help determine our best collective response.

The limitations of the weekly testing means that the daily positive test numbers identified are partial views of COVID-19 activity in the community, and may identify asymptomatic cases.

How does COVID-19 wastewater testing work?

Starting as early as January 25th, 2021, we will be taking a total of four samples a week (two from each community per week). The wastewater operators will collect tests on Monday and Tuesday each week and they will be transported to a laboratory by Purolator. At the lab, the viral RNA levels will be immediately tested. The results will be reported, as soon as possible, to our Nipissing First Nation Health Services Department.

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Nipissing is the first First Nation in North America to take this step of conducting weekly wastewater readings. It is also important to note that for a number of reasons, there is some variability in the readings and researchers and engineers are working on improving the methodology.

Some of the reasons for this variability include:

- Level of virus in stools is fairly low;
- Actual number of people with COVID-19 may be quite low in relation to the total population, and;
- Wastewater is a harsh environment which may break down the viral RNA resulting in lower readings.

Nonetheless, ongoing research has observed a strong correlation with other established COVID-19 measures. There are indications that we can learn about COVID-19 in our community by analyzing our wastewater possibly days before we learn it from other methods, but most importantly, this is another “tool” in our toolbox in this fight against the COVID-19 pandemic.

This research collaboration is co-lead by Robert Delatolla, Associate Professor at the University Ottawa Faculty of Engineering.

Should you have any questions or concerns about this COVID-19 testing at NFN wastewater treatment plants, please contact:

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