

Wisconsin State Laboratory of Hygiene

SARS-CoV-2 Wisconsin Wastewater Monitoring Project

Frequently Asked Questions (FAQs)

I. Project Overview

1. *What is the objective of the Wisconsin State Laboratory of Hygiene's (WSLH) project?*

- Our goal is to determine the presence of the novel corona virus (SARS-CoV-2) that causes COVID-19 in Wisconsin communities served by wastewater treatment facilities by quantifying the genetic material of the SARS-CoV-2 virus in wastewater influents.
- We will **not** be assessing the infectivity/viability of the virus.

2. *How much will the testing cost?*

- \$0 - There will be no charge to participating Wisconsin wastewater treatment facilities who opt to use the provided pre-paid UPS shipping label.

3. *When will sampling begin and end?*

- Our goal is to have the monitoring network in-place ASAP and have it run for 1 year. (e.g. mid-summer 2020 thru mid-summer 2021)
- Once you are a confirmed participant, we will let you know your start date, approximate end date and provide additional instructions/information (e.g. detailed sampling instructions, shipping instructions, etc.).

II. Sample collection

1. *What type of sample should I collect?*

- **Influent** (500 mL total: 2 bottles x 250 mL each).
- We prefer a subsample from a well-mixed 24-hour flow-weighted influent composite.
- In **some** cases, the lab may request a primary sludge sample (250 mL) depending on the WWTF's process flows and the influent viral load.

2. *Which days should samples be collected?*

- Tuesdays are ideal however we will work with you to determine your sampling schedule. Sampling frequency will be appropriate for the size of community you serve (e.g. once or twice per week, or once or twice per month).

3. *What type of sample container is required? Does it need to be sterile?*

- The lab will supply sample containers for the full duration of the study.
- However, in case of shortages: A new plastic bottle (LDPE/HDPE) can be used. Sterile containers are preferred, but not necessary.
 - Do not use whirl-paks as they are prone to leaking.

4. What will the WSLH be testing for in the samples?

- We are looking for and quantifying the genetic material of the SARS-CoV-2 virus – the presence and concentration of characteristic RNA of the SARS-CoV-2 virus. We DO NOT assess the infectivity/viability of the virus. We will also be measuring the genetic material of a bacteria that is associated with fecal material to assess how “dilute” the influent sample is.

5. How should influent samples be stored before shipment?

- Refrigerate immediately after collection (4 - 8°C; 39 - 46°F) and in most cases ship the same day.
- If shipping is delayed ≤ 7 days: Store samples in a refrigerator and ship as soon as possible.
- If shipping is delayed > 7 days: Freeze* (-20°C; -4°F). **Do not freeze volumes larger than 200 mL.** Ship frozen samples as soon as feasible.

**Freezing is a last resort as it may damage the genetic material we are looking for.*

6. How should samples be labeled?

- Please label sample bottles with the wastewater treatment facility name and collection date. Please also fully complete the sample’s Lab Slip and ensure all information on the Lab Slip matches those on the sample bottles.

III. Sample shipment/drop-off

1. How should samples be shipped?

- The WSLH will provide a cooler/shipper, gel-ice packs, and a pre-paid UPS shipping label.
- Contact the lab if other shipping arrangements need to be made. Additional fees may apply if a facility chooses a different shipping vendor.
- If samples cannot be shipped on collection day, please ship the following day.

2. Can I deliver samples in-person?

- This may be possible, however please contact the lab at least 24 hours in advance to make arrangements. We can be reached at (608) 263-2444 from 7:45 AM – 4:30 PM, Monday – Friday.

IV. Results

1. Will results and interpretation be shared with us?

- Absolutely. We are currently working with the Wisconsin Department of Health Services (DHS) to develop a data release and communication plan. This plan will include sending each participating facility a report which will include testing results and information on how to interpret them. We plan to also share results with your local public health department and the DHS.

2. Depending on results, do you intend to conduct additional sampling of the wastewater treatment chain or upstream sewer lines?

- No, not for this project. Our primary goal is community-wide assessment and trends in SARS-CoV-2 prevalence. We believe this is best achieved with routine and consistent monitoring of influent sewage at wastewater facilities. That said, if data trends in a given community suggest that higher spatial resolution within the larger community could be helpful in targeting virus control measures, we may consider sampling upstream sewer lines on a case specific basis.

V. Safety

1. Is SARS-CoV-2 in wastewater a risk to human health?

- For this project, we are not evaluating the infectivity of the samples therefore we are not able to tell if there is viable virus present in the wastewater. However, this is a new and rapidly evolving area of research and several groups from around the world are looking into this. The concentrations of viral RNA are very low in wastewater *influent*s and other labs have shown that the virus RNA is absent from WWTP *effluent*s. The current state of knowledge (as of July 2020) is that infective virus has NOT been recovered from wastewater influent & effluent and therefore the health risk to wastewater operators is low. Also according to the U.S. Centers for Disease Control and Protection (CDC), no additional COVID-19-specific protections are recommended for workers involved in wastewater management, including those at wastewater treatment facilities. Please visit CDC's website for the latest information on this topic: <https://www.cdc.gov/coronavirus/2019-ncov/community/sanitation-wastewater-workers.html>

Have additional questions? Please feel free to contact the WSLH COVID Sewage Team at:

Email: CovidSewageTeam@slh.wisc.edu

Phone: (608) 263-2444