

## FAQs: Water, Sanitation & Hygiene During the COVID-19 Pandemic

June 24, 2020, 12:00 PM – 1:30 PM EDT

The National Association of County and City Health Officials (NACCHO), in collaboration with the Centers for Disease Control and Prevention (CDC), held a webinar to inform local jurisdictions how they can ensure safe water, sanitation, and hygienic conditions to protect human health during the novel coronavirus (COVID-19) pandemic and as facilities begin to reopen.

This is a summary of the questions asked and answered during the webinar. Refer to the [webinar recording](#), [presentation slides](#), and resource list at the end of this document for more information. For answers to general questions regarding COVID-19, visit NACCHO's [COVID-19 Frequently Asked Questions](#) webpage.

**For health departments with questions about CDC's sewage surveillance efforts, contact [eocevent456@cdc.gov](mailto:eocevent456@cdc.gov)**

### COVID-19 and Water

#### Is there a risk of COVID-19 transmission through drinking water?

There has been no detection of SARS-CoV-2 (the virus causing COVID-19 disease) in treated drinking water. Current treatment methods, such as chlorine and chloramine, are expected to be effective against SARS-CoV-2. The Environmental Protection Agency (EPA) regulates water treatment plants to ensure that treated water is safe to drink.

#### If I am worried about my tap water, what guidance is there for choosing bottled water?

While there is currently no evidence that drinking water poses a risk for COVID-19, you may still wish to purchase bottled water for other health and/or aesthetic reasons. For more information, visit the CDC's [Commercially Bottled Water](#) webpage.

### COVID-19 and Wastewater

#### How does COVID-19 sewage surveillance work?

The SARS-CoV-2 virus is shed in the feces of [pre-symptomatic](#), [asymptomatic](#), and [symptomatic](#) individuals with COVID-19. Sewage surveillance would provide information on community-level infections, allowing for an early warning system to inform decision making. The CDC is currently evaluating sewage surveillance techniques to be used for public health response ([Webinar recording time 00:16:45](#)).

#### How does viral shedding in feces vary between active symptomatic and asymptomatic cases, as well as recovered individuals?

Based on [studies](#), there is a sharp spike in viral shedding early in the infection before lowering quickly. Sewage surveillance would allow new incident cases to be identified early on. Currently, there is no difference in viral shedding magnitudes between asymptomatic and symptomatic cases.

#### Is diarrhea often a symptom among COVID-19 positive individuals?

Diarrhea can be a symptom of COVID-19: [studies](#) have seen this in 10 – 20% of cases. Although diarrhea and other gastrointestinal symptoms are often present with other symptoms, there is an ongoing effort to learn more about cases that only present gastrointestinal symptoms.

## **What are the procedures used when analyzing sewage samples for SARS-CoV-2?**

The CDC is currently identifying the best sampling scheme (i.e., how often sewage samples are needed, volume of samples) before sewage surveillance can be implemented. Polymerase chain reaction (PCR) detection will be used to detect the virus RNA in sewage. After sewage surveillance becomes operational for identifying community-level infections, the CDC will explore the potential for using sewage surveillance to track the evolution of the virus and molecular epidemiology of the outbreak.

## **If the SARS-CoV-2 virus is detected in the sewage, does that mean there is a risk of infection from wastewater?**

Detection of the SARS-CoV-2 virus in the sewage does not mean the virus is infectious. Sewage surveillance utilizes polymerase chain reaction (PCR) detection, a test that detects specific regions of the virus. All regions of the virus particle must be intact for it to be infectious, while PCR detection can occur even when a viral particle has been damaged. There is little evidence that the virus detected in sewage is infectious. For answers to more questions regarding COVID-19 transmission through water, visit the CDC's [COVID-19 Frequently Asked Questions](#) webpage.

## **How can wastewater workers remain safe from COVID-19?**

Although there is currently no epidemiological evidence of higher infection rates among wastewater workers, the virus that causes COVID-19 has been detected in untreated wastewater, though there is no evidence to support that it is infectious. The CDC is currently exploring whether there is an excess risk associated with sewage workers, with preliminary data supporting that there is no excess risk. Personal protective equipment (PPE) normally required when handling untreated wastewater should be sufficient to protect wastewater workers. For more information, visit the [CDC's Information for Sanitation and Wastewater Workers on COVID-19](#) webpage.

## **Will UV light inactivate the SARS-CoV-2 virus in wastewater?**

There is evidence that UV disinfection is effective against the virus; however, due to the inconsistencies of sunlight there are limited guidelines. Standard treatment methods used at wastewater treatment plants are highly effective at inactivating SARS-CoV-2.

## **What are the precautions needed for laboratories processing SARS-CoV-2?**

For environmental samples, the CDC recommends a biosafety level 2 (BSL-2) with unidirectional airflow and BSL-3 precautions, including respiratory protection and a designated area for donning and doffing PPE. Visit the [Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 \(COVID-19\)](#) webpage for more information.

## **Safe Reopening of Facilities**

### **As buildings begin to reopen, is there a risk for Legionnaires' disease?**

The COVID-19 pandemic resulted in the shutdown of many facilities, resulting in water stagnation at these buildings. Standing water can lead to low or undetectable levels of disinfectant, and hot water temperatures can decrease to the ideal growth range for *Legionella* bacteria (77 – 108°F, 25 – 42°C). This unprecedented shutdown prompted the CDC to develop [Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation](#), which outlines steps to minimize risk of *Legionella* and mold.

### **What is the risk of Legionnaire's disease from water fountains that have been inactive for several months?**

Drinking water fountains do have the potential to grow *Legionella*, and certain design factors can increase that risk. For instance, carbon filtration systems can be reservoirs for *Legionella* growth if not maintained. Flushing water systems in buildings that have been shut down is critically important to preventing Legionnaires' disease.

## Can COVID-19 be spread through air conditioning systems?

There is no evidence at this time indicating a concern for SARS-CoV-2 transmission through air conditioning. The CDC recommends a variety of ventilation in buildings to increase air flow and reduce the risk of spreading COVID-19. For more information on creating a safe environment and workplace, including more detailed ventilation considerations, visit the CDC's [COVID-19 Employer Information for Office Buildings](#) webpage.

## Does the CDC have guidance for private homeowners' water systems?

While the CDC's guidance is specifically tailored to larger commercial buildings, it is recommended that homes where water was stagnant (i.e., vacation rental homes) should flush their water systems before patrons reoccupy these residences.

## Is there a risk of Legionnaires' disease through flushing toilets?

There may be a risk of *Legionella* exposure if toilet water is not cold, and if water is sprayed during flushing. As part of a *Legionella* water management plan, [conducting an environmental assessment](#) is the best way to understand the risk of your water system.

## Resources

### Centers for Disease Control and Prevention (CDC)

- [Water Management Program Toolkit](#)
- [Preventing Legionnaires' Disease: A Training on Legionella Water Management Program \(PreventLD Training\)](#)
- [Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation](#)
- [Consideration for Public Pools, Hot Tubs, and Water Playgrounds During COVID-19](#)
- [Interim Guidance for General Population Disaster Shelters During the COVID-19 Pandemic](#)
- [COVID-19 and Water](#)
- [Building Reopening Guidance](#)
- [Water, Sanitation, & Hygiene \(WASH\)-related Emergencies & Outbreaks](#)
- [Hurricane Guidance](#)
- [COVID-19 Communication Resources](#)

### National Association of County and City Health Officials (NACCHO)

- Webinar: Healthy and Safe Swimming at Public Aquatic Venues during the COVID-19 Pandemic ([Webinar Recording](#)) ([Webinar Slides](#)) ([FAQ](#))
- [Local Health Department COVID-19 Directory](#)
- [COVID-19 Data Lab](#)

### Environmental Protection Agency (EPA)

- [List N: Disinfectants for Use Against SARS-CoV-2 \(COVID-19\)](#)
- [Information on Maintaining or Restoring Water Quality in Building with Low or No Use](#)
- [Coronavirus and Drinking Water and Wastewater](#)
- [Water Utility Resource for the COVID-19 Pandemic](#)
- [Tribal Water Utility Resources for the COVID-19 Pandemic](#)

### Cooling Technology Institute (CTI)

- [Guideline: Best Practices for Control of Legionella](#)