

Initializing wastewater surveillance system to monitor COVID-19 levels in Rhode Island



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In the first steps to establish a wastewater surveillance system for COVID-19, the Rhode Island Department of Health expanded partnerships with municipalities and healthcare facilities and developed laboratory sample analysis workflow. This work provides the foundation to build out the surveillance system throughout the state, creating an early detection method to observe the presence of COVID-19 in a community.



The “What”

In response to the changing public health surveillance needs to monitor COVID-19, the Rhode Island Department of Health (RIDOH) began exploring opportunities to establish a wastewater surveillance system. This system, which will use funding through the Epidemiology and Laboratory Capacity for the Prevention and Control of Emerging Infectious Diseases (ELC) cooperative agreement can track the presence of the SARS-CoV-2 virus shed through feces in wastewater.

In Sept of 2021, RIDOH partnered with a wastewater processing facility to explore the process of collecting and analyzing wastewater samples. In July of 2022, RIDOH signed an agreement with the Department of Corrections to begin to pilot the expansion of wastewater testing at the Rhode Island State Health Laboratories. RIDOH recently completed the design and execution of the workflow and is now in the process of working with the Department of Corrections to decide how the data can best be used to reduce the spread of COVID-19 within their facility.

In May of 2023, RIDOH met with all of Rhode Island Municipal wastewater treatment facility (WWTF) superintendents to discuss the role of wastewater surveillance in public health. RIDOH answered questions and listened to concerns. A suggestion resulting is the importance educating the state's leadership and the League of Cities and Towns, a non-partisan advocacy and membership



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organization representing all 39 municipalities across Rhode Island to support statewide wastewater surveillance. WWTF's are currently in the position of educating their leadership on the merits of time and effort spent on routine collection and shipping of wastewater composite samples for testing.

The “So What”

Now that RIDOH has a functioning collection and sample analysis workflow, the project team is taking steps to reach out to different communities to expand testing and develop a wastewater surveillance network. Expanding the surveillance network will provide a more complete picture of COVID-19 throughout the state, providing an early detection method to observe the presence of COVID-19 in a community.



The “Now What”

RIDOH is communicating with municipalities and hospitals to schedule discussions and trainings on the wastewater surveillance project and the potential power of this surveillance approach for COVID-19 and other diseases of concern.

Key contributors to this project include Erica Michonski, Dr. Glen Gallagher, Dr. Rajendra Kothavade, and Kerry Patterson, Rhode Island Department of Health.