

Dr. Zuzana Bohrerova, former Associate Director of the Ohio Water Resources Center, led a project funded by the Federal CARES grant to the State of Ohio during the COVID-19 pandemic and CDC grant via the Ohio Department of Health (ODH) titled **“Coordination and management of statewide and campus SARS-CoV-2 wastewater monitoring.”** The project aimed to coordinate — in partnership with the Ohio Environmental Protection Agency (EPA), U.S. EPA and ODH — an effort to develop a network of analytical laboratories at Ohio’s universities and commercial labs to measure SARS-CoV-2 in raw wastewater.



Figure 1. Wastewater monitoring at an Ohio State University dorm.

Ohio, covering 49% of the population.

The SARS-CoV-2 wastewater surveillance has provided communities with valuable information such as early indications of whether COVID-19 cases in the community are increasing or decreasing, helping local hospitals prepare for potential outbreaks. Over 1000 notifications have been sent to local health districts. At the end of June 2022, management of the wastewater monitoring network transitioned to ODH along with Dr. Bohrerova. As people increasingly take at-home COVID-19 tests which are not publicly reported, wastewater surveillance will continue to play a vital role in evaluating the spread of COVID-19 in communities.

Prior to 2020, wastewater monitoring had not been applied on a scale as large as detecting worldwide infectious disease spread, and it was primarily utilized for research purposes rather than public health and response. Wastewater monitoring for SARS-CoV-2 ribonucleic acid is a novel surveillance tool that monitors trends and changes in the occurrence of COVID-19 in communities. The network collaborated with water reclamation facilities that were willing to collect samples for analysis on a regular basis. Samples were collected twice a week and sent to the labs for testing to determine the presence of coronavirus ribonucleic acid (RNA) fragments. Through the project, wastewater samples were collected and analyzed from 70 communities and 12 universities across

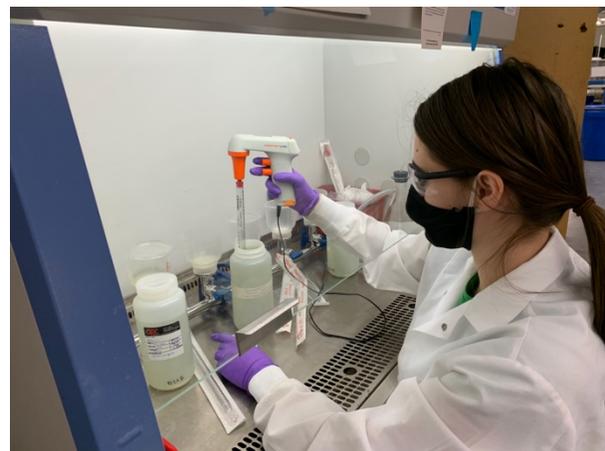


Figure 2. Filtration and extraction of wastewater sample in a lab.

Researcher Profile: Dr. Bohrerova is the former Associate Director of the Ohio Water Resources Center and former Research Specialist in the Department of Civil, Environmental and Geodetic Engineering at Ohio State University, focusing on water treatment and other water issues in Ohio. She now serves as the Ohio Department of Health Program Manager of the Ohio Wastewater Monitoring Network.