



Haley Ward samples wastewater for traces of the coronavirus at the University of Maine.



MICHAEL SAUDA
Senior Project Manager
Haley Ward

the source, but that would get very expensive,” he explains.

Haley Ward provided weekly reports containing sampling methodology, laboratory analytical reports, chains of custody, and test results. The university system’s Science Advisory Board worked with officials

from each campus to determine what actions, if any, were needed to prevent an outbreak, part of a multifaceted approach to identifying and containing COVID-19 on system campuses and in Maine communities.

Throughout the project, the team was able to identify a couple of potential spreading events and enacted measures to isolate those at risk. “The technology worked as we expected,” Sauda says. The university developed its own laboratory analytical capabilities and, with Haley Ward’s support and guidance, began collecting samples, even involving students in the process.

“Immersive learning experiences are so important in college,” Sauda says. He’s thrilled he was able to help implement a solution to help keep students and faculty safe. “The sampling process gives crowded environments, like college campuses, the data they need to predict the emergence or reemergence of COVID-19 in the community,” he concludes. “It’s a brilliant solution.” ■

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Wastewater Testing for College Campuses

PROJECT: UNIVERSITY OF MAINE SYSTEM COVID-19 WASTEWATER TESTING, MAINE

FIRM: HALEY WARD, INC. (FORMERLY CES, INC.) BANGOR, MAINE

As the University of Maine System prepared to bring students back to campus in the fall of 2020, university officials were exploring all avenues to monitor and mitigate the risks of large COVID-19 outbreaks.

Michael Sauda, senior project manager for Haley Ward, had a solution. Sauda got a master’s degree in public health, and when the pandemic began, he knew he could leverage Haley Ward’s experience in wastewater monitoring to develop a sampling strategy to track markers of the novel coronavirus in crowded communities. “Research had shown that increases in

the excretion of SARS-CoV-2 from symptomatic, asymptomatic, or pre-symptomatic individuals often precede community outbreaks by several days,” he says.

When the University of Maine reached out to Haley Ward for help in monitoring its COVID-19 risks, Sauda suggested the wastewater sampling process, and Haley Ward launched a pilot. Working in collaboration with an environmental genetic analytical laboratory, the team began collecting weekly wastewater samples from three campuses during the 2020 fall semester. The tests pulled a sample every 15 minutes for 24 hours, which was then sent to the lab for analysis.

The biggest challenge was finding the right location to get an accurate sample of the campus without including other communities, Sauda says. In one case, they had to move a sampler because it was on a shared sewer pipe with a nursing home, which would have skewed results. “We could have sampled every single building at