

**Testing wastewater for COVID-19: The clearest path to understanding
community infection**

Video	Audio
Dr. Moyer	"If the COVID-19 is found in wastewater, it's getting there because people in the community that have the virus are actually shedding some of it."
	Because not everyone who has COVID-19 is tested or has symptoms, wastewater surveillance can capture the presence of the COVID-19 virus shed by people with and without symptoms, giving a more accurate picture of how much virus is in the community.
	The process starts here at Rochester Public Works in Rochester, Minnesota.
Corey Bjornberg Process Control Engineer Rochester Public Works	"We collect wastewater from the entire city of Rochester, so about 110,000 to 115,000 people. All that wastewater comes here. And we can take one sample, we do some initial processing and then we hand it off to Mayo."
Corey Bjornberg	"You know, they're the backbone of what we're doing here."
	Mayo Clinic labs don't actually test the water for the SARS-CoV-2 virus itself, they test for a particular gene that's extracted from the sample. They do so using droplet digital PCR analysis.
Dr. Moyer	"It's very sensitive, and it's quantitative."
	Mayo Clinic molecular genetic pathologist, Dr. Ann Moyer.
Ann Moyer, M.D., Ph.D. Laboratory Genetics and Genomics Mayo Clinic	"We can measure the amount of RNA that's in the wastewater using that technology. So, we're really measuring the amount of viral RNA rather than the amount of total virus."

	<p>Here is the latest graph which shows the SARS-CoV-2 RNA levels have dramatically decreased since the beginning of 2022 when it was very high due to the omicron surge.</p>
Dr. Moyer	<p>"In addition to just knowing what's going on, it's useful because if you see the cases or the amount of virus that's in the wastewater increasing, then that might suggest that more patients might need to seek medical care soon, because there's more community transmission."</p>
	<p>Meaning it could help predict future COVID-19 surges.</p>
Dr. Moyer	<p>"I think it's just that it's a really interesting, new technique. And it's something we couldn't have probably done five or 10 years ago."</p>
Dr. Moyer	<p>"Now that we've got this process set up, which involves going from collecting the wastewater to extracting the viral RNA to testing it, we could definitely use the same process again, and just put a different assay at the end to detect a different pathogen."</p>
	<p>For the Mayo Clinic News Network, I'm DeeDee Stiepan.</p>