

Wastewater Surveillance: Overview Part 1

What is wastewater surveillance?

Wastewater surveillance is one method used to monitor the amount of SARS-CoV-2 in an area. In Massachusetts, the Department of Public Health collects SARS-CoV-2 data from more than 20 Wastewater Treatment Plants (WWTPs).

How does wastewater surveillance work?

When a person has COVID-19, the SARS-CoV-2 virus is shed in their stool. A community's collective wastewater flows to a wastewater treatment plant, where samples are taken and sent to a laboratory for SARS-CoV-2 testing.

What does wastewater surveillance data show?

Wastewater data can also help us track trends in the number of people that have COVID-19 in a community. The amount of virus that a person has in their stool and the length of time that they have virus in their stool varies. Because of this, the amount of virus measured in wastewater does not tell us total number of cases in the area and does not tell us the amount of increase or decrease in cases in communities. However, if the amount of virus in wastewater increases or decreases over several time points, that information shows that cases are either increasing or decreasing in the community. Importantly, wastewater data can provide an early warning about increasing cases since virus will show up in wastewater several days, maybe even a week, before positive test numbers start to increase.

Wastewater Surveillance: Overview Part 2

Which treatment plants participate in wastewater surveillance?

Samples are generally taken 2 or more times each week at the following wastewater treatment plants:

Treatment Plant	Geographic Coverage
Amherst Public Works	Amherst
Athol WWTP	Athol
Billerica Influent	Billerica
Veolia Brockton Plant	Brockton
Chicopee Plant	Chicopee
Fitchburg WWTP	Fitchburg
Greenfield WWTP	Greenfield
Haverhill WWTP	Haverhill
Hull WWTP	Hull
North Brookfield WWTP	North Brookfield
South Essex Sewage District	Peabody & Salem
Plymouth Headworks Influent	Plymouth
Provincetown Treatment Plant	Provincetown
South Hadley Water Pollution Control	South Hadley
Uxbridge WWTP	Uxbridge
Wareham Water Pollution Control	Wareham

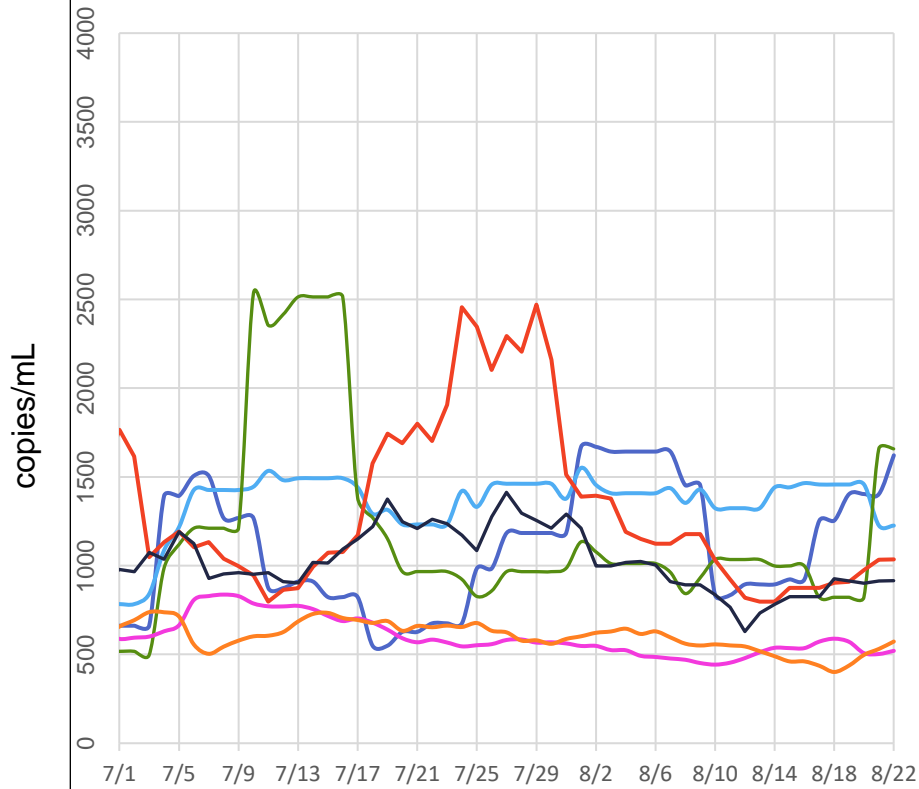
Treatment Plant	Geographic Coverage
Greater Lawrence Sanitary District	Lawrence, Methuen, North Andover, Andover, Dracut, & Salem
Pittsfield WWTP	Pittsfield, Dalton, Hinsdale, & Lenox
Upper Blackstone Clean Water	Worcester, Auburn, Holden, Millbury, Rutland, West Boylston, & Leicester
MWRA Deer Island Treatment Plant North	Wilmington, Reading, Wakefield, Burlington, Bedford, Woburn, Stoneham, Melrose, Malden, Winchester, Lexington, Waltham, Belmont, Arlington, Medford, Everett, Revere, Chelsea, Winthrop, Somerville, Cambridge, Watertown, Boston, Newton, Brookline
MWRA Deer Island Treatment Plant South	Framingham, Ashland, Natick, Wellesley, Needham, Newton, Brookline, Boston, Dedham, Westwood, Norwood, Walpole, Canton, Milton, Quincy, Braintree, Randolph, Stoughton, Holbrook, Weymouth, Hingham

Wastewater surveillance across MA treatment plants

LAST UPDATED ON AUGUST 25, 2022

North Shore & Boston 7-Day Averages

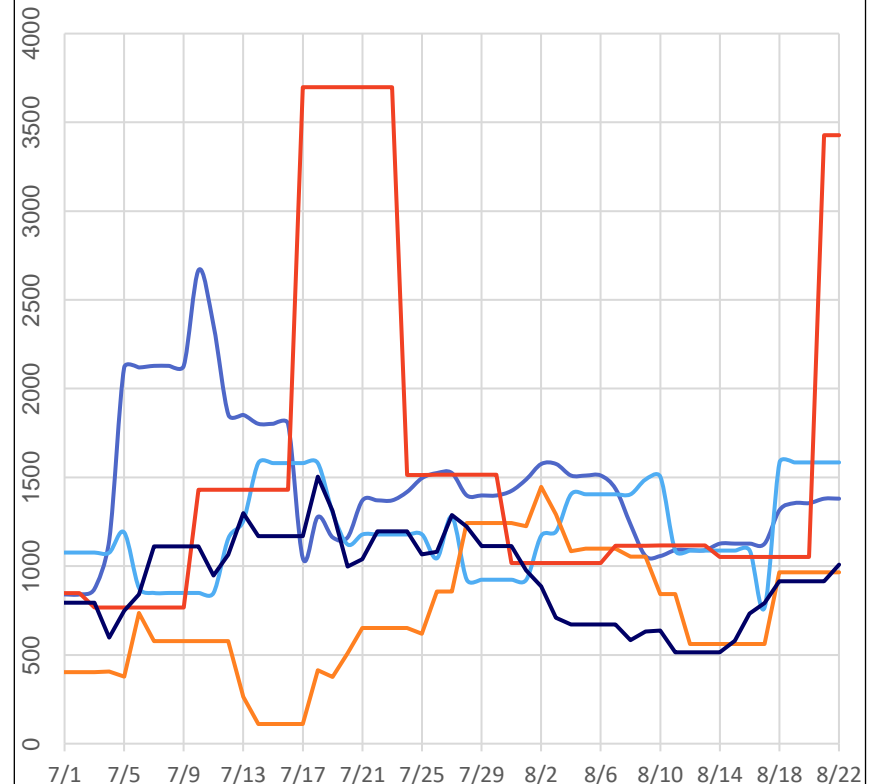
July 1, 2022 – August 22, 2022



- Billerica
- Greater Lawrence Sanitary District
- Haverhill Public Works
- MWRA North
- MWRA South
- Peabody (South Essex Sewage)
- Salem (South Essex Sewage)

South Shore & Cape Cod 7-Day Averages

July 1, 2022 – August 22, 2022



- Brockton
- Hull
- Plymouth
- Provincetown
- Wareham

Samples are currently taken 1 - 7 times a week and analyzed by Biobot Analytics, a wastewater epidemiology company based in Cambridge, MA. The graphs represent the "7-day averages" which are the average viral copies over the past 7 days in each treatment plant.

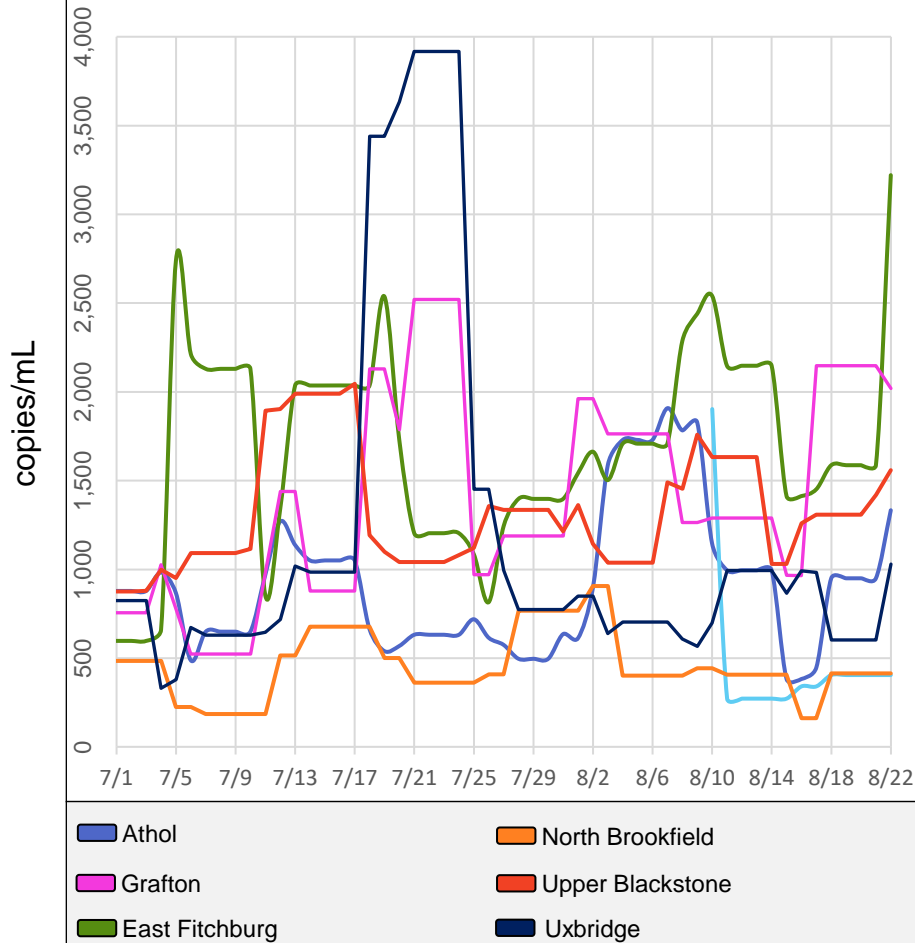
MWRA data: <https://www.mwra.com/biobot/biobotdata.htm>

Wastewater surveillance across MA treatment plants

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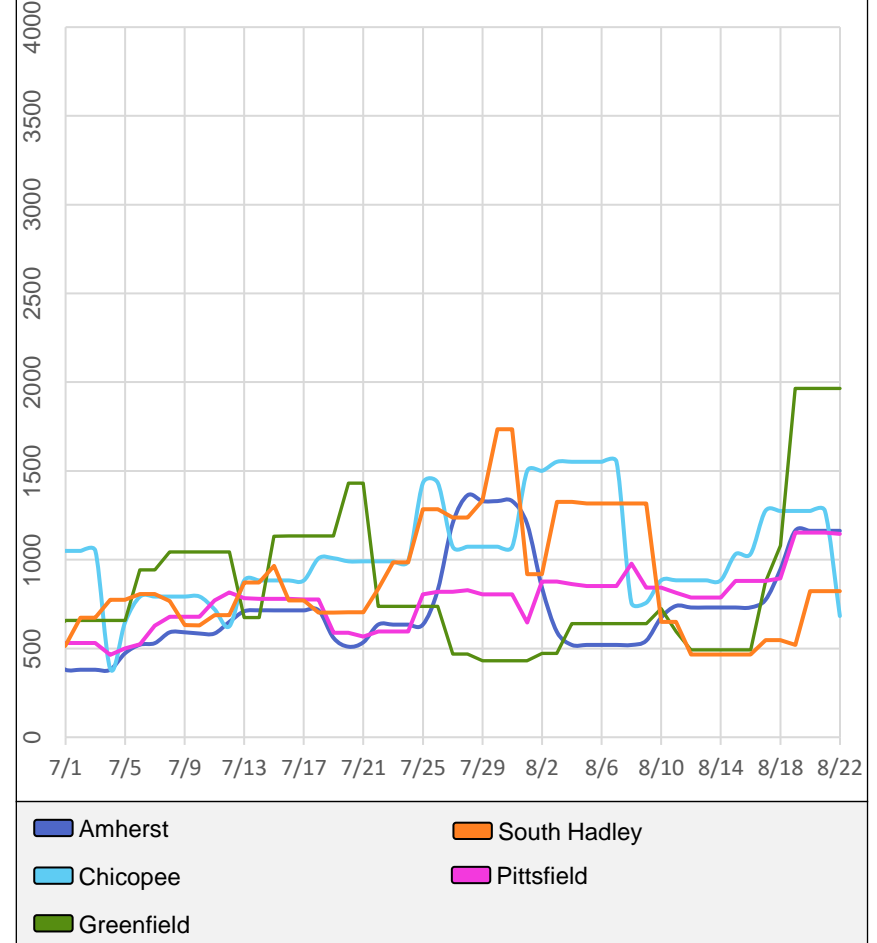
Central MA 7-Day Averages

July 1, 2022 – August 22, 2022



West MA 7-Day Averages

July 1, 2022 – August 22, 2022



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