

WASTEWATER SURVEILLANCE UPDATE

DASHBOARD | WEBSITE

DATE: August 2nd, 2022

TO: Chautauqua County Health Department, City of Dunkirk Wastewater Treatment Plant, City of Jamestown Wastewater Treatment Plant & Stakeholders

FROM: Lydia Bennett, on behalf of the New York State Wastewater Surveillance Network

RE: Chautauqua County Weekly Wastewater Surveillance Data Report

Wastewater samples collected on June 25th, 2022 had quantifiable levels of SARS-CoV-2 RNA in the following wastewater treatment plant catchment indicating community-level transmission:

- City of Dunkirk
- City of Jamestown

The trend in SARS-CoV-2 over the past two weeks is increasing in the following catchments:

- City of Dunkirk
- City of Jamestown

Compared to levels found across New York State's average, wastewater levels of SARS-CoV-2 are elevated for the following catchment:

- City of Dunkirk
- City of Jamestown

Attached with this memo are several figures that you may find useful.

If you have any questions, please contact
Lydia Bennett | lbennett@cdcfoundation.org

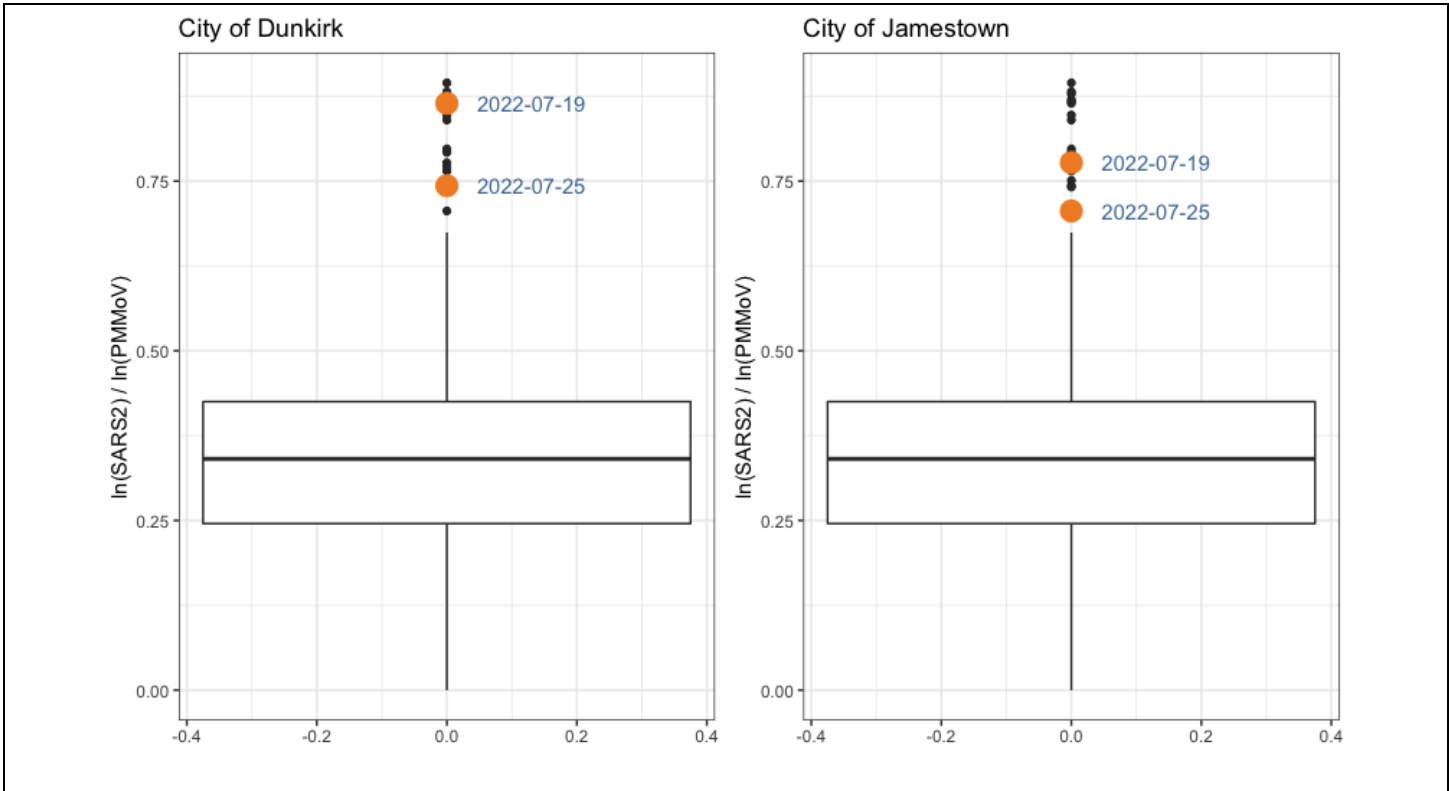


Figure 1:
Observed levels of SARS-CoV-2 intensity at the Chautauqua influents compared to NYS values.

Orange points represent the SARS-CoV-2 intensity of samples taken at the influent over the last two weeks. The box plot represents all SARS-CoV-2 values from the previous two weeks as observed from wastewater treatment facilities across New York. The box plot shows the median (solid line), first and third quartiles (box edges), minimum (lower whiskers), maximum (upper whisker), and outliers (black dots) for all NY WWTP's. The concentration of SARS-CoV-2 is normalized by population, $\ln(\text{SARS-CoV-2})/\ln(\text{PMMoV})$, to give overall intensity. The most recent samples reveal greater intensity at the City of Dunkirk and City of Jamestown influents in Chautauqua County, as opposed to the rest of the state.

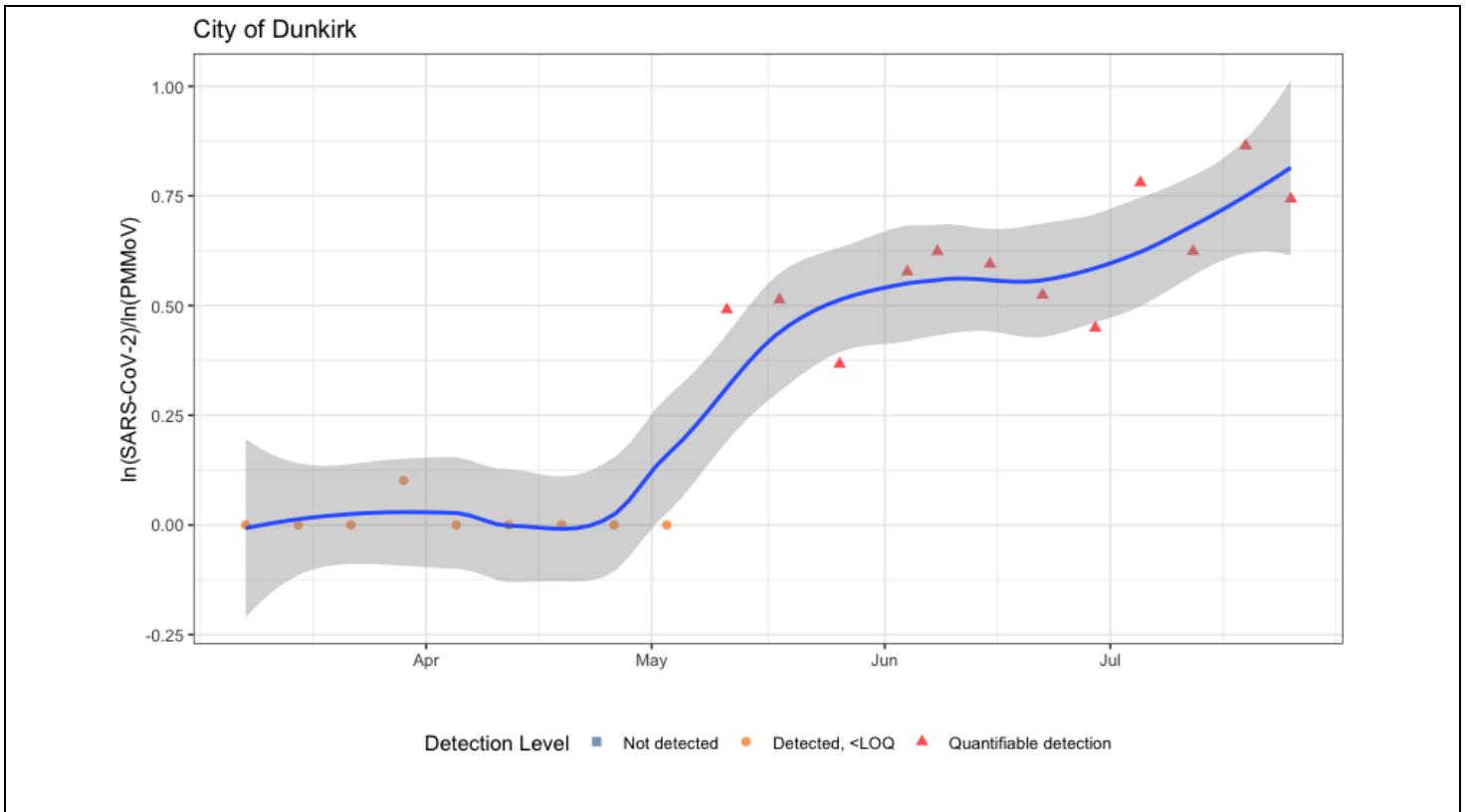


Figure 2:
SARS-CoV-2 intensity over time at the City of Dunkirk influent.

A smoothed trend line (blue), uncertainty (gray), and wastewater samples (dots) are shown. Wastewater sample points are color coded to specify the level of SARS-CoV-2 detected. The concentration of SARS-CoV-2 is normalized by population, $\ln(\text{SARS-CoV-2})/\ln(\text{PMMoV})$, to give overall intensity. The recent trend from the influent is increasing.

The level of SARS-CoV-2 RNA can tell us roughly how many cases can be expected in a population.

- Not detected: <10 cases per 100,000
- Detected, <LOQ: 10-50 cases per 100,000
- Quantifiable detection: >50 cases per 100,000

Over the past two weeks, the population served by the City of Dunkirk influent experiencing an increasing trend. This would mean that the population could expect higher daily COVID-19 cases in the coming weeks, if this trend continues. The most recent sample had a quantifiable detection, suggesting daily case incidence of greater than 50 cases per 100,000.

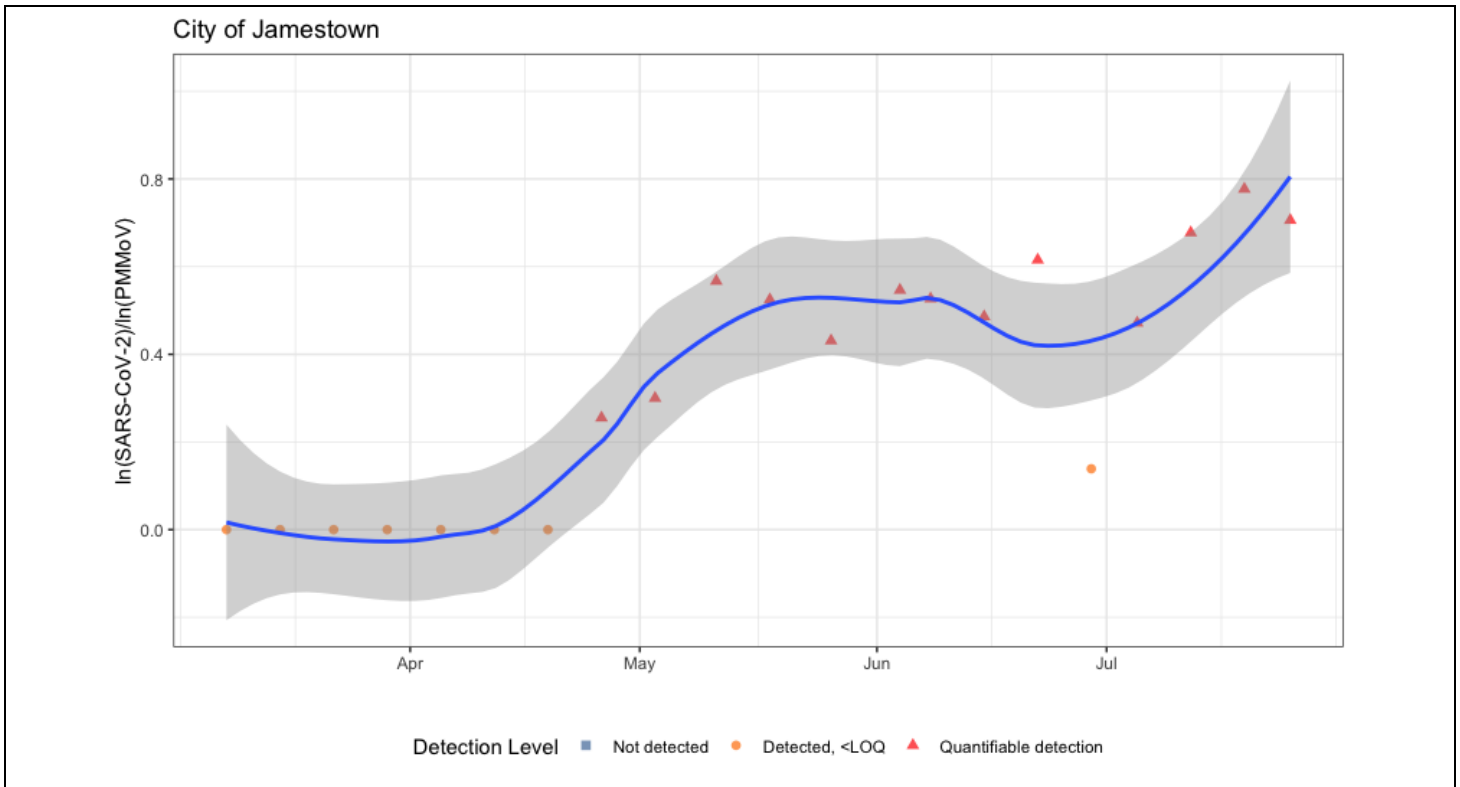


Figure 3:
SARS-CoV-2 intensity over time at the City of Jamestown influent.

A smoothed trend line (blue), uncertainty (gray), and wastewater samples (dots) are shown. Wastewater sample points are color coded to specify the level of SARS-CoV-2 detected. The concentration of SARS-CoV-2 is normalized by population, $\ln(\text{SARS-CoV-2})/\ln(\text{PMMoV})$, to give overall intensity. The recent trend from the influent is increasing.

The level of SARS-CoV-2 RNA can tell us roughly how many cases can be expected in a population.

- Not detected: <10 cases per 100,000
- Detected, <LOQ: 10-50 cases per 100,000
- Quantifiable detection: >50 cases per 100,000

Over the past two weeks, the population served by the City of Jamestown influent is experiencing an increasing trend. This would mean that the population could expect higher daily COVID-19 cases in the coming weeks, if this trend continues. The most recent sample had a quantifiable detection, suggesting daily case incidence of greater than 50 cases per 100,000.