

# Albany County Wastewater Surveillance Update

DATE: November 06, 2024

TO: Albany County Health Department, Wastewater Facilities, & Stakeholders <sup>1</sup>

FROM: Shailla Raymond, MPH <sup>2</sup>

RE: Albany County Weekly Wastewater Surveillance Data Report

## Dashboard | Website

This report contains information **Albany County** treatment plants over the time period of **2024-10-16 to 2024-10-31**.

Below is a table describing the samples collected from the last two weeks. The table includes:

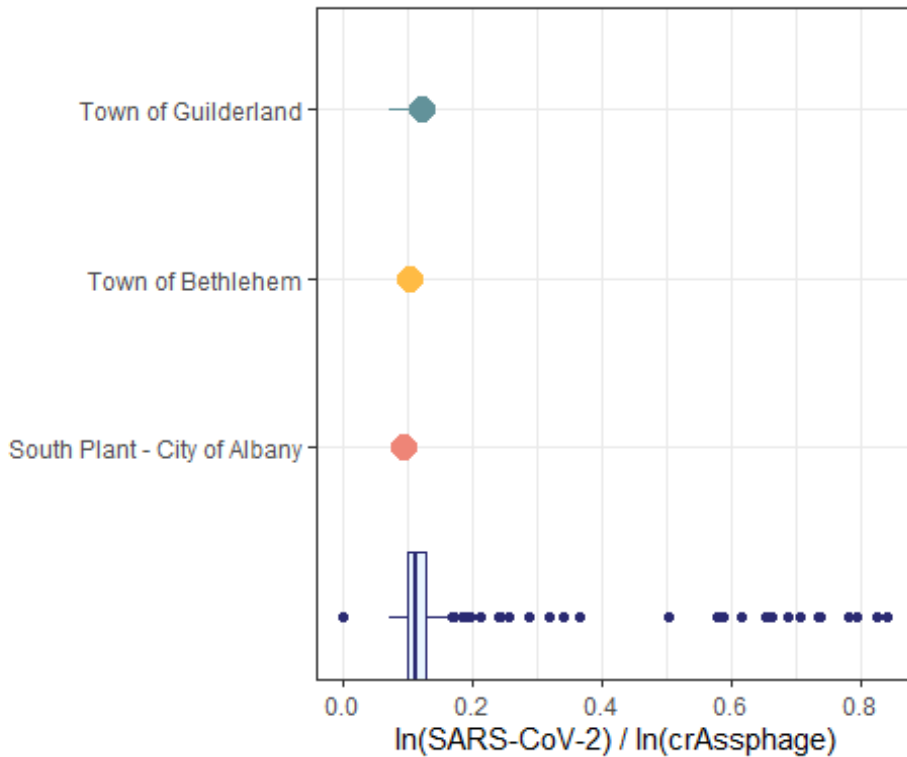
- Catchment location and sample collection date
- Comparison of SARS-CoV-2 from a facility to all NYS wastewater
- Level of SARS-CoV-2 detection: “Quantifiable” and “Detection <LOQ” levels suggest community-level transmission

All Samples from Albany County			
From to			
Collection Date	Detection Level	Compared to NYS	Two-Week Trend
<b>Town of Bethlehem</b>			
October 31, 2024	Detected, <LOQ	higher	increasing
October 24, 2024	Detected, <LOQ	higher	increasing
October 17, 2024	Detected, <LOQ	lower	increasing
<b>Town of Guilderland</b>			
October 30, 2024	Detected, <LOQ	higher	increasing
October 23, 2024	Detected, <LOQ	higher	increasing
October 16, 2024	Detected, <LOQ	lower	increasing
<b>South Plant - City of Albany</b>			
October 28, 2024	Detected, <LOQ	lower	increasing
October 21, 2024	Detected, <LOQ	lower	increasing

<sup>1</sup> Thank you for your continued participation in the New York State Wastewater Surveillance Network. We appreciate the time and service you give every week. Because of people like you, we can use wastewater data to provide an early warning to communities, forecast hospitalizations, and look at trends of SARS-CoV-2 in the sewershed population, county, region, and state.

<sup>2</sup> Contact me if you have any questions or concerns (561-777-0430 or [sraymond@cdcfoundation.org](mailto:sraymond@cdcfoundation.org))

## Box Plot for Treatment Plants in Albany County from 2024-10-16 to 2024-10-31

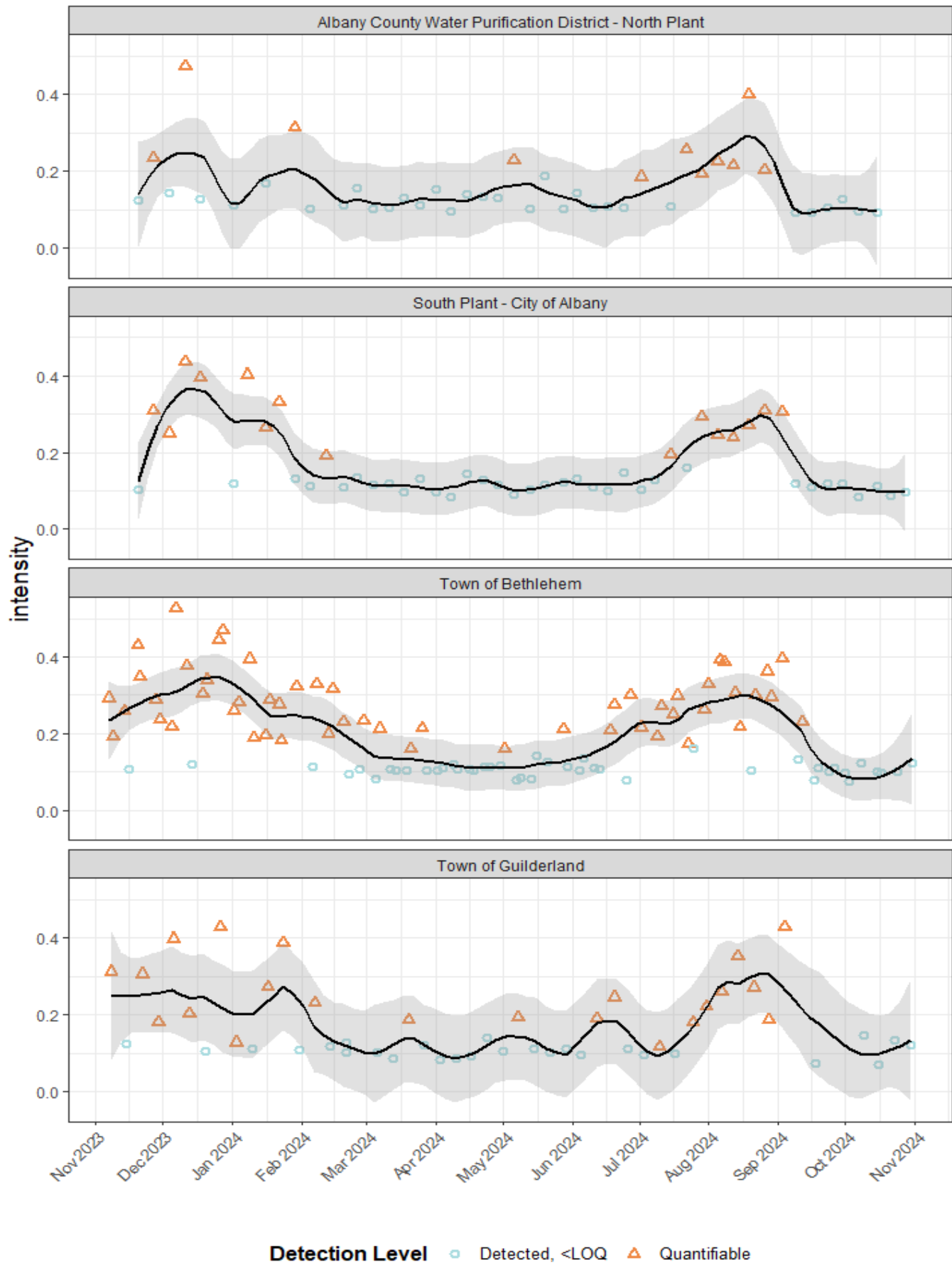


Points represent the SARS-CoV-2 intensity of samples taken at the influent over the last two weeks. The box plot represents all SARS-CoV-2 values from the previous two weeks as observed from wastewater treatment facilities across New York. The box plot shows the median (solid line), first and third quartiles (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,  $\ln(\text{SARS-CoV-2}) / \ln(\text{crAssphage})$ , to give overall intensity.

The most recent sample from South Plant - City of Albany on October 28, 2024 is lower when compared to New York State values.

The most recent sample from Town of Bethlehem on October 31, 2024 is higher when compared to New York State values.

The most recent sample from Town of Guilderland on October 30, 2024 is higher when compared to New York State values.



**Detection Level**    ○ Detected, <LOQ    △ Quantifiable

A smoothed trend line (black), uncertainty (gray), and wastewater samples (shapes) 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,  $\ln(\text{SARS-CoV-2})/\ln(\text{crAssphage})$ , to give overall intensity.

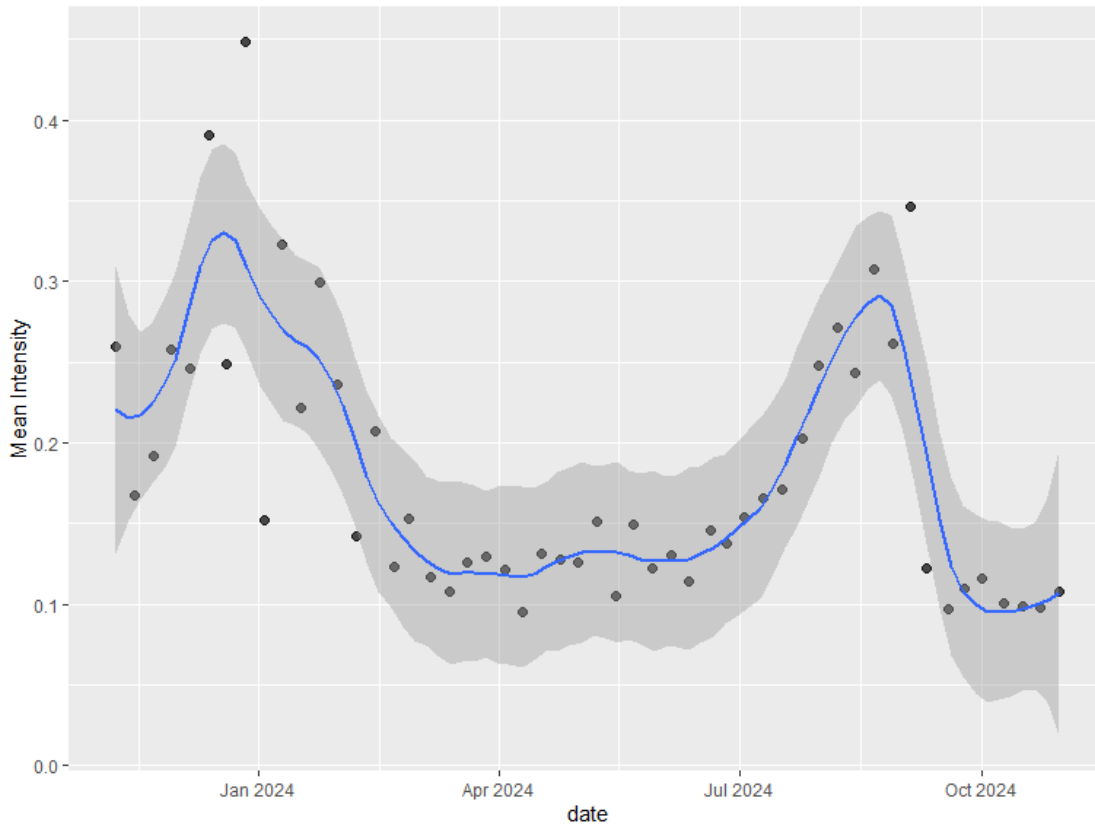
The level of SARS-CoV-2 RNA can tell us roughly how many cases can be expected in a population.

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

The most recent sample from South Plant - City of Albany on October 28, 2024, had a detection level of "Detected, <LOQ" suggesting daily case incidence of 10 to 50 cases per 100,000 people.

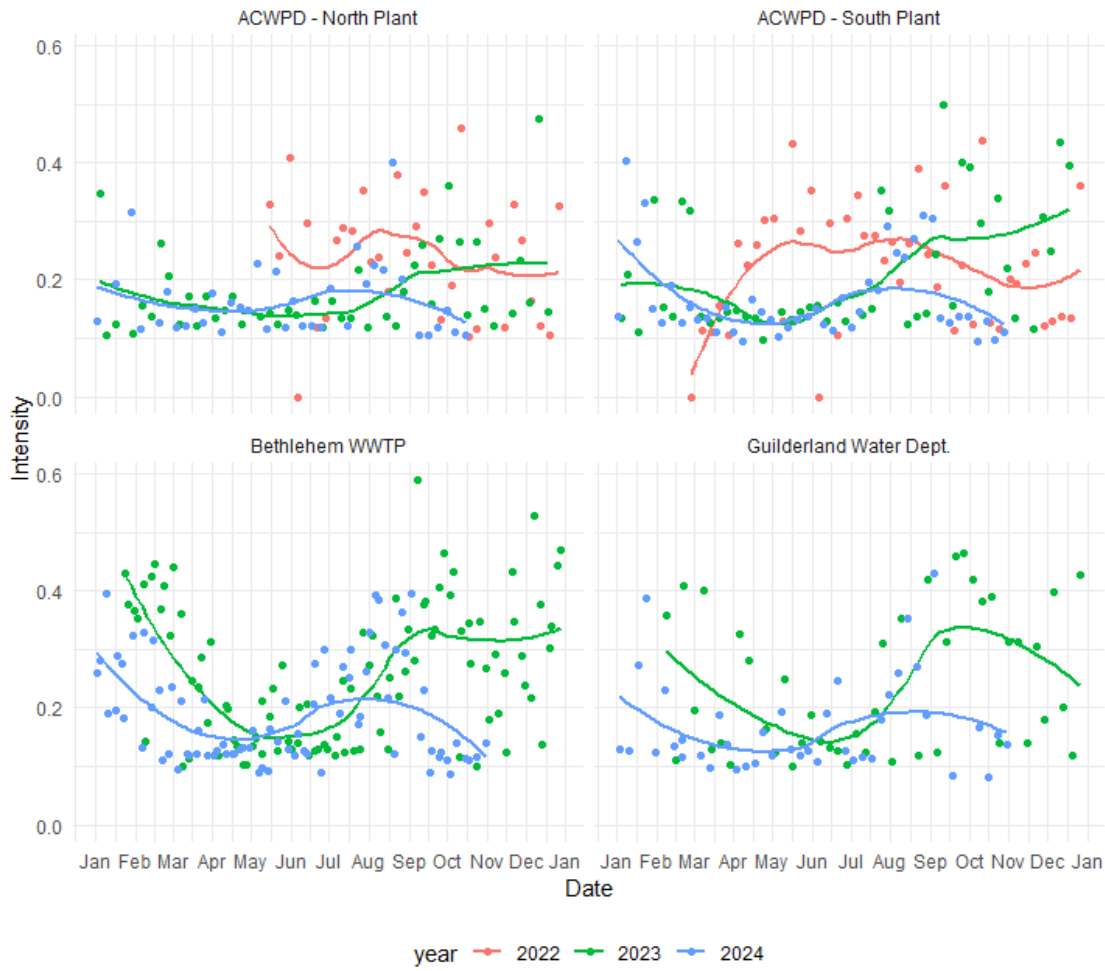
The most recent sample from Town of Bethlehem on October 31, 2024, had a detection level of "Detected, <LOQ" suggesting daily case incidence of 10 to 50 cases per 100,000 people.

The most recent sample from Town of Guilderland on October 30, 2024, had a detection level of "Detected, <LOQ" suggesting daily case incidence of 10 to 50 cases per 100,000 people.



Average intensity (population weighted) for all Albany WWTP's over the last 12 months.

### Trend lines by Site and Year

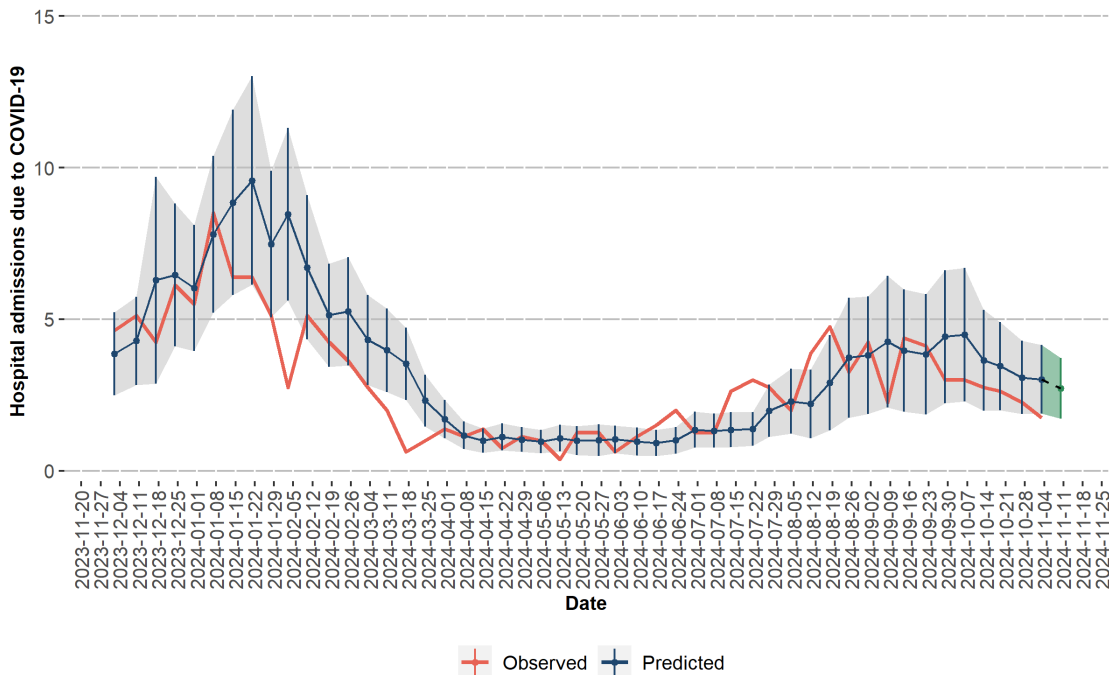


This figure shows an annual comparison of SARS-CoV-2 intensity. Smoothed trend lines and wastewater samples (dots) are shown. The recent trend is lower than year over year values.

## Albany County COVID-19 in-patient hospitalization trend

Predicted 7-day average in-patient hospitalizations in the next 10 days: **2.71\***

**9.97 percent decrease** from previous week's prediction



\* 0.89 Per 100,000 population

This figure shows predicted new in-patient hospital admissions due to COVID-19 for your county. Predictions are calculated from a generalized linear mixed model that fits wastewater data with a ten-day lag, log transformed active case numbers, along with several covariates including population over 50 years old, estimated asthma and cardiovascular disease rate for the county, and county social vulnerability from the CDC social vulnerability index.

The new model also includes a regional average for SARS-CoV-2 intensity detection for the past 90 days indicative of the overall state of transmission for a region. This model makes predictions with new data for future hospital admissions and provides uncertainty around the prediction in the form of the 95% confidence interval (the light grey and green band around the predictions). Past predictions are in blue with the current prediction in light green. The red line is actual hospital admissions from the Department of Health HERDS or Health Electronic Response System data. These data are up-to-date for most counties. We will update these data and the models as new data are provided. Estimated new COVID-19 hospitalizations are predictions only and come with several uncertainties including whether new variants have arisen, what the current immunization state of the county is (including booster and bivalent shots or immunity from previous infection), and other factors not captured in the model such as intervention behaviors such as masking. Week to week predictions will vary in their accuracy and the width of the confidence interval around the prediction due to changes in the data. Week to week predictions will vary in their accuracy and the width of the confidence interval around the prediction due to changes in the data.

**Last 6 Weeks Albany County Sewersheds:**  
Variants found from weeks beginning Sun, Sep 08, 24 to Sun, Oct 06, 24

Label	Sewershed	Variants Found
Variant of concern	South Plant - City of Albany	JN.1.11.1; KP.3.1.1
Variant of interest	South Plant - City of Albany	KP.2.15; LB.1
Variant under monitoring	South Plant - City of Albany	KV.2
Variant of concern	Town of Bethlehem	JN.1.16; KP.3.1.1; XDP
Variant under monitoring	Town of Bethlehem	KP.3.1.1

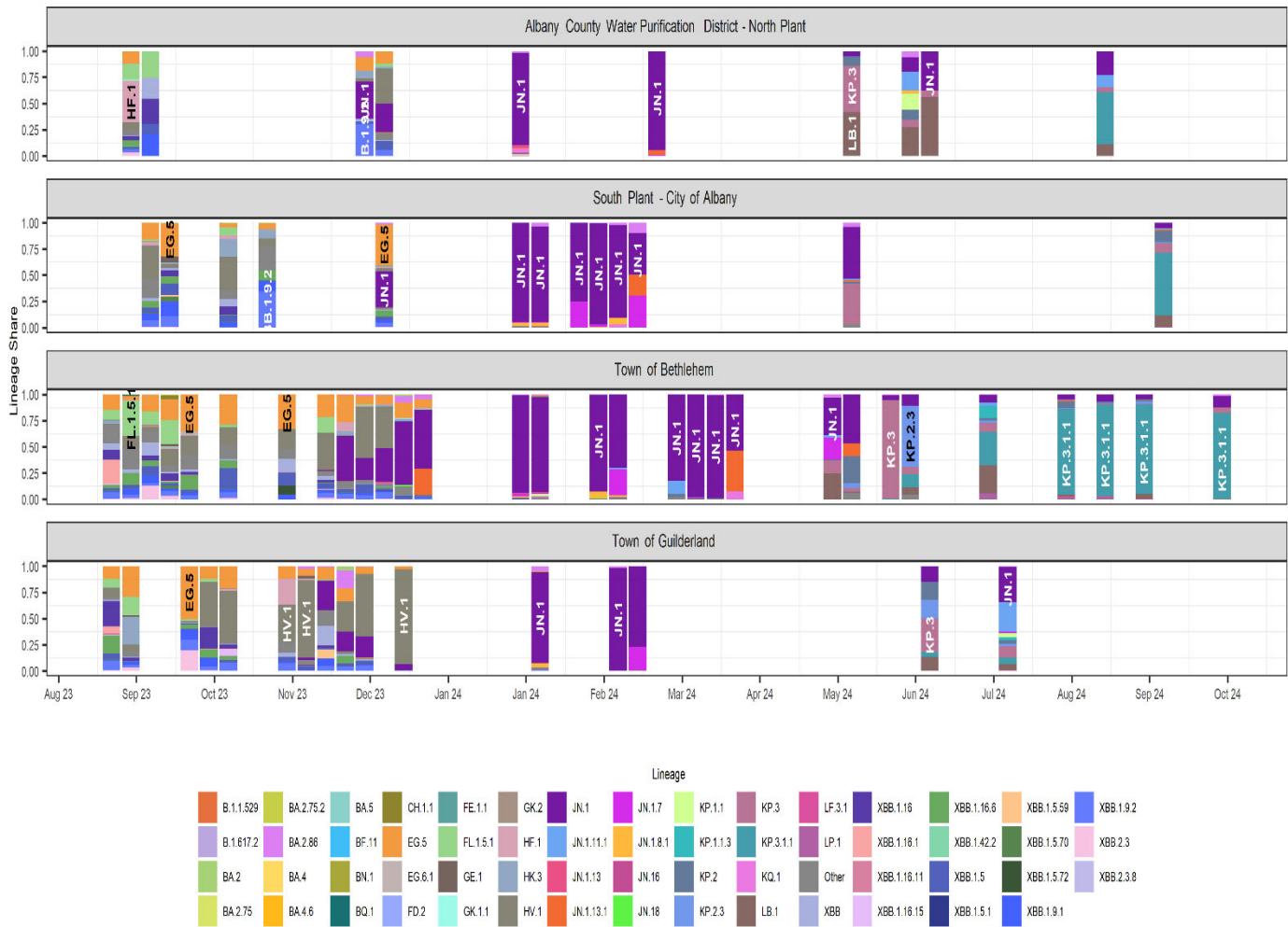
Variants found throughout state from 2024-09-08 to 2024-10-20: BA.2.86, JN.1, JN.1.11.1, JN.1.13.1, JN.1.16, JN.1.16.1, JN.1.18, JN.1.4.3, JN.1.7, JN.1.8.1, KP.1.1, KP.1.1.3, KP.1.2, KP.2, KP.2.15, KP.2.3, KP.3, KP.3.1.1, KP.4.1, KQ.1, KS.1, KV.2, KW.1.1, LB.1, LF.3.1, LP.1, XDP, XDV.1

**County level variants under monitoring** This table shows variants being monitored by various public health organizations. Variant name, classification, sewershed presence, and date range are shown. Each variant is shown in the footnotes. Variant classification data sourced from [CDC Nowcast](#) and the [WHO](#) - please visit for more information. For more information about monitoring status of SARS-CoV-2 variants, please visit [ECDC](#) and [WHO](#).



## SARS-CoV-2 Genetic Sequencing in 2024

### Sewersheds in Albany County

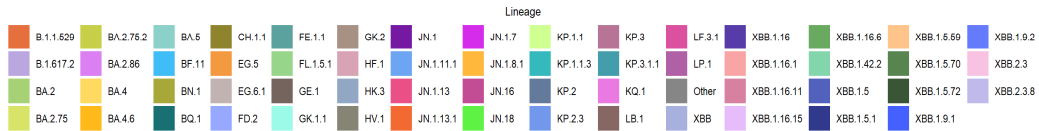
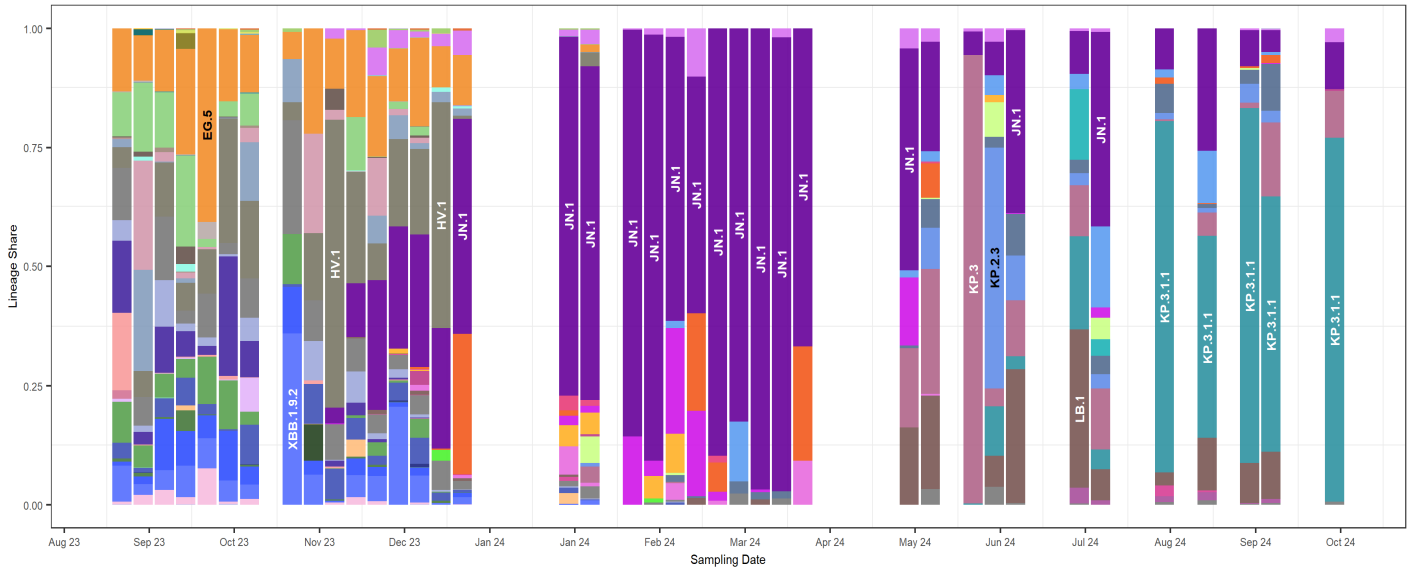


### Sewershed level of SARS-CoV-2 genetic sequencing throughout time

Each bar shows the relative abundance of SARS-CoV-2 lineages during a sample collection date. Lineages with an abundance of at least 20% are labeled on the bar sections with the lineage name. The color of the bar corresponds to lineage. See the legend for more information regarding lineages.

## SARS-CoV-2 Genetic Sequencing in 2024

Albany County Aggregation



### County aggregation of SARS-CoV-2 genetic sequencing throughout time

Each bar shows the relative abundance of SARS-CoV-2 lineages per sample collection date. Lineages with an abundance of at least 20% are labeled on the bar sections with the lineage name. The color of the bar corresponds to lineage. See the legend for more information regarding lineages.