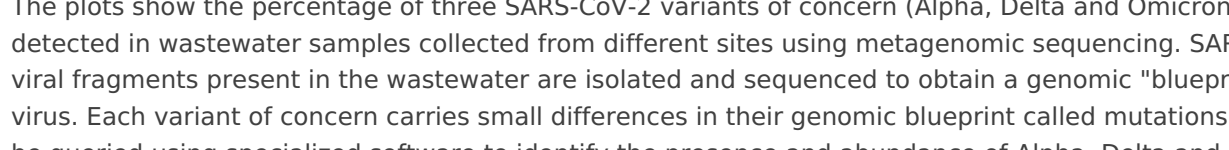


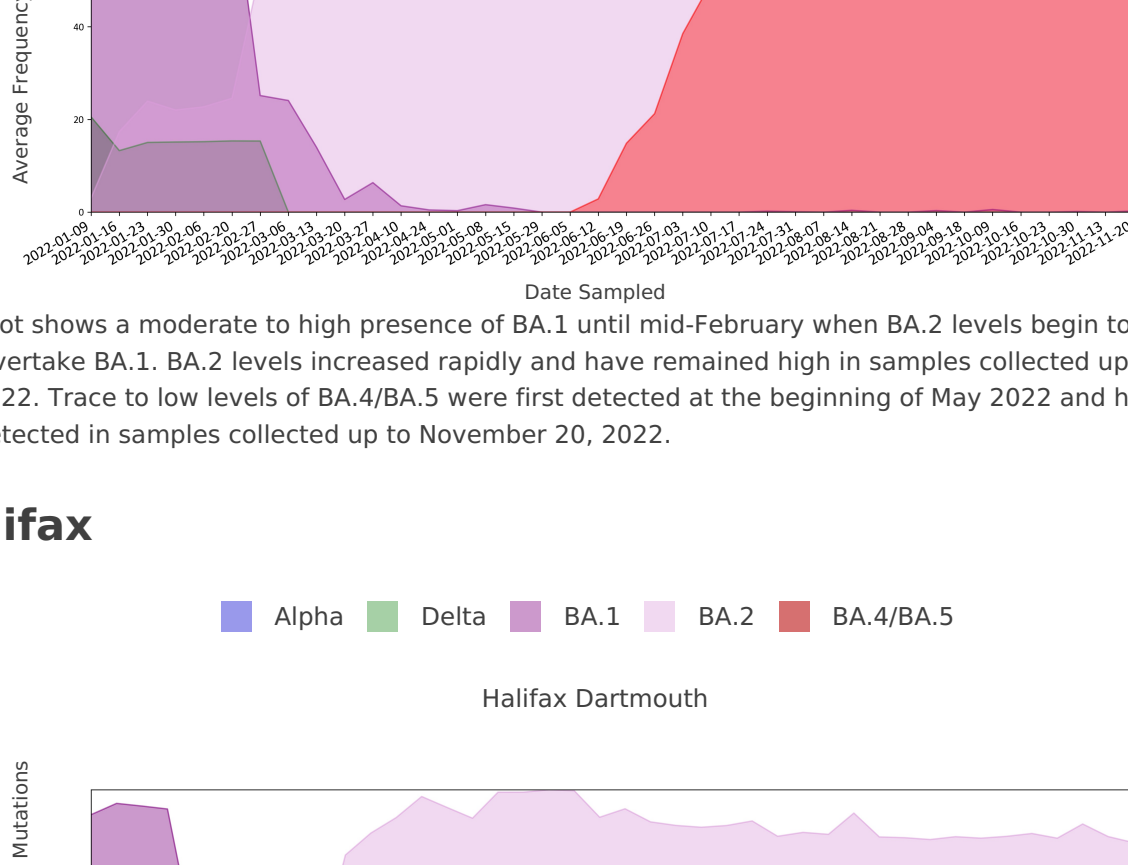
# Wastewater Sequencing Trend Report: Detection of SARS-CoV-2 Variants of Concern by Metagenomic Sequencing



## Longitudinal wastewater sequencing data ending 2022-11-20

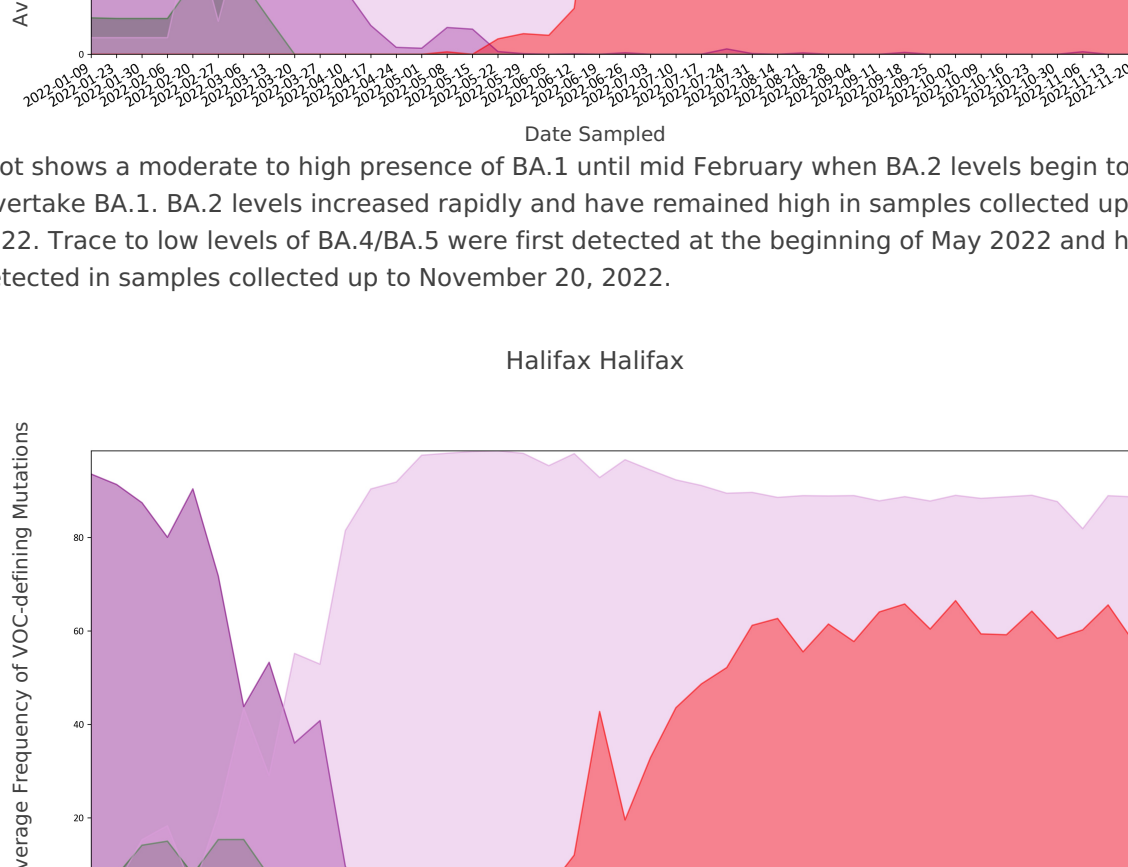
The plots show the percentage of three SARS-CoV-2 variants of concern (Alpha, Delta and Omicron) detected in wastewater samples collected from different sites using metagenomic sequencing. SARS-CoV-2 viral fragments present in the wastewater are isolated and sequenced to obtain a genomic "blueprint" of the virus. Each variant of concern carries small differences in their genomic blueprint called mutations that can be queried using specialized software to identify the presence and abundance of Alpha, Delta and Omicron (BA.1, BA.2 and BA.4 or BA.5) present in the wastewater sample. The shaded areas in the plot show Delta in green, BA.1 in dark purple, BA.2 in light purple, BA.4 or BA.5 in red and where applicable, Alpha in blue.

### Edmonton

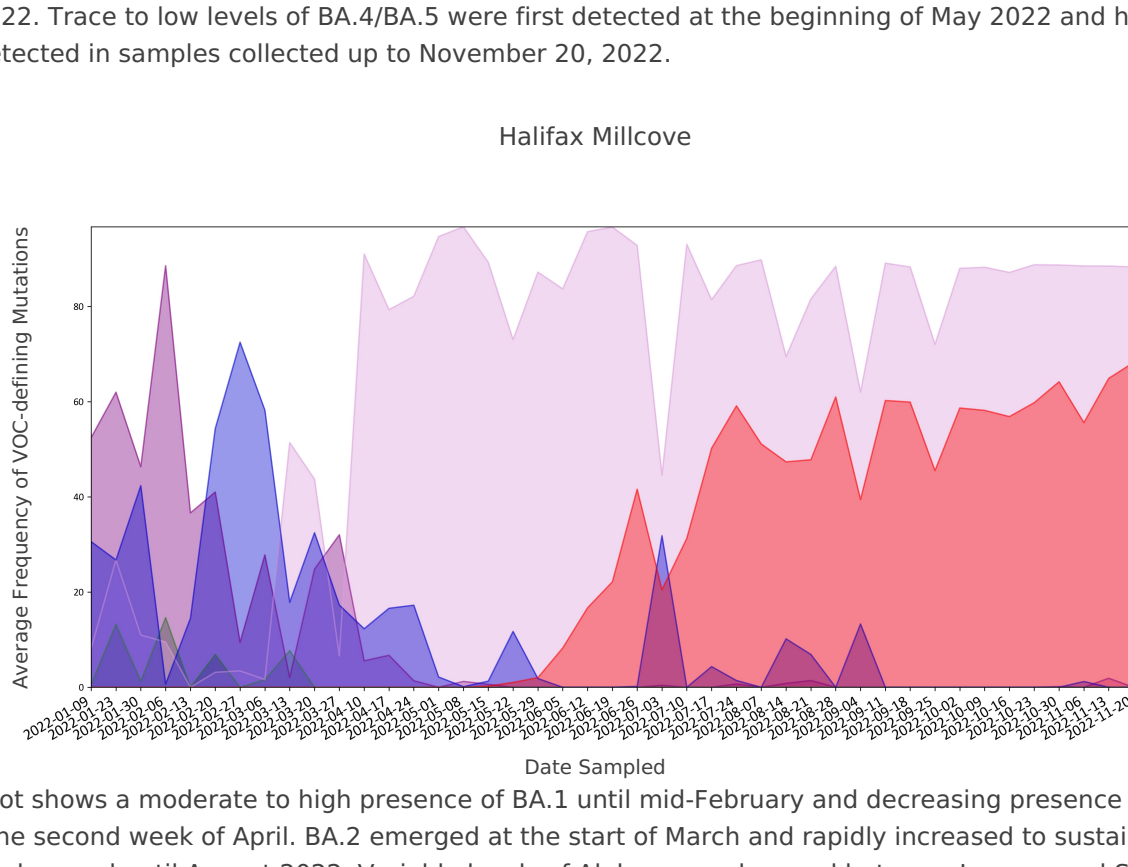


The plot shows a moderate to high presence of BA.1 until mid-February when BA.2 levels began to increase and overtake BA.1. BA.2 levels increased rapidly and have remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.

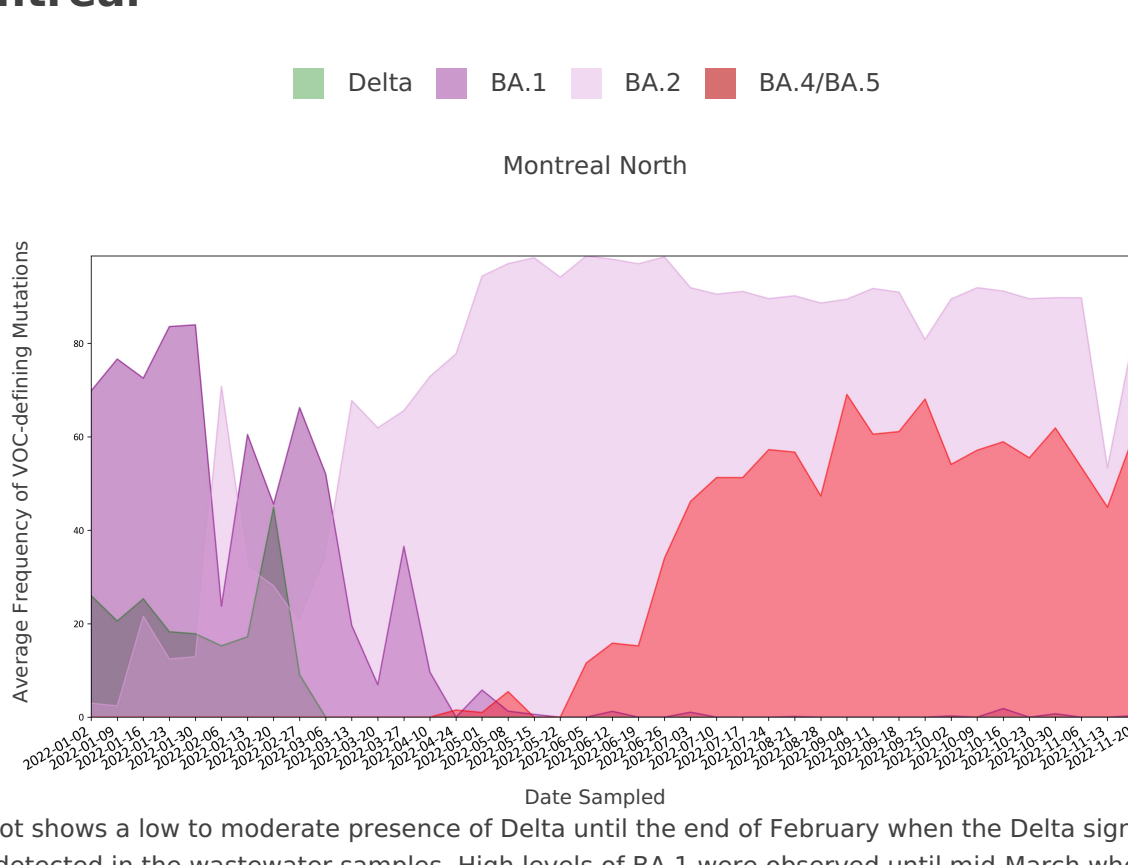
### Halifax



The plot shows a moderate to high presence of BA.1 until mid-February when BA.2 levels began to increase and overtake BA.1. BA.2 levels increased rapidly and have remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.

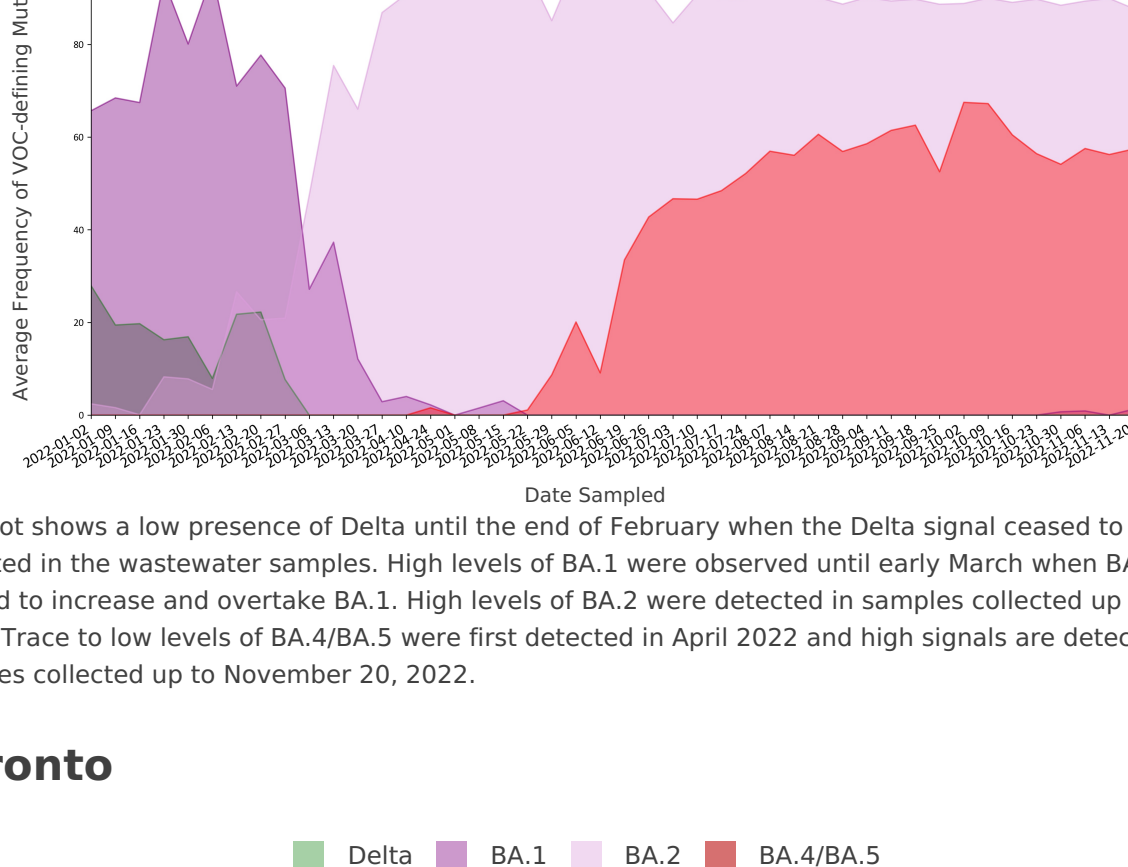


The plot shows a moderate to high presence of BA.1 until mid-February when BA.2 levels began to increase and overtake BA.1. BA.2 levels increased rapidly and have remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.

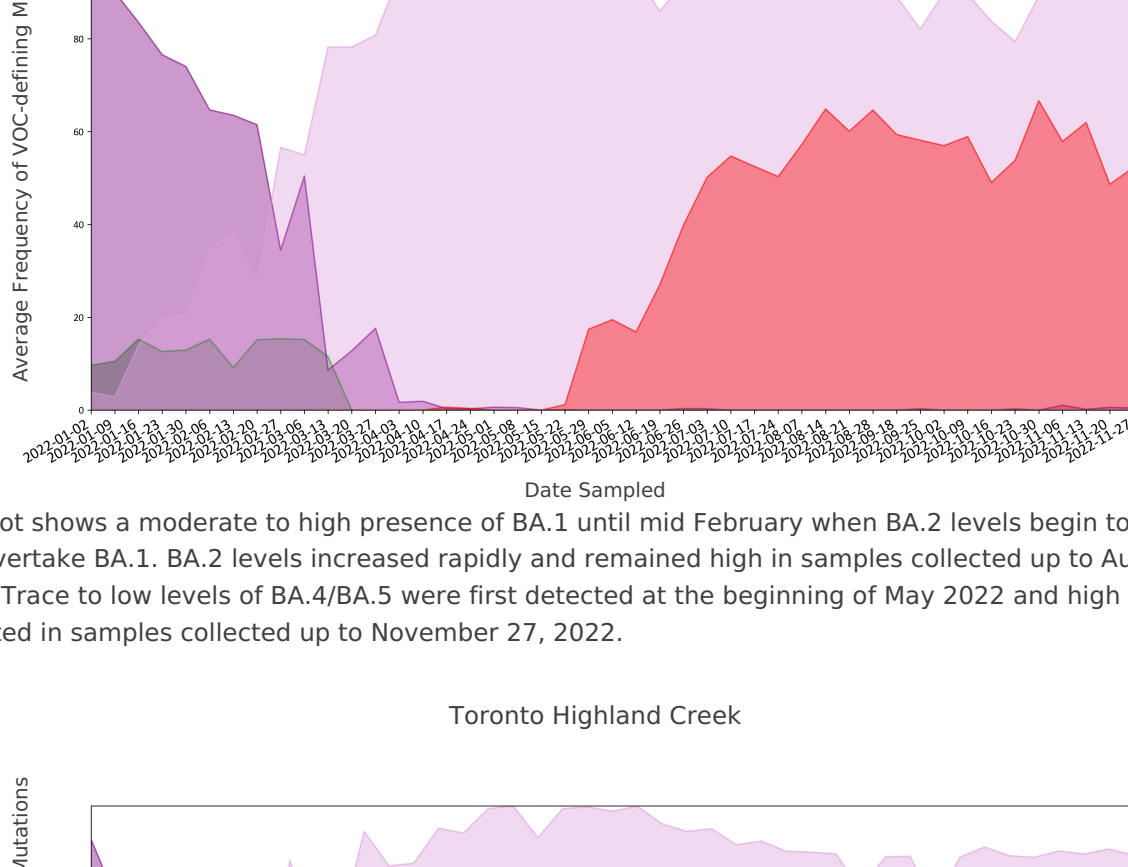


The plot shows a moderate to high presence of BA.1 until mid-February and decreasing presence of BA.1 until the second week of April. BA.2 emerged at the start of March and rapidly increased to sustained high levels observed until August 2022. Variable levels of Alpha were observed between January and September at which point levels began to drop off to a nil-trace level of presence. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.

### Montreal

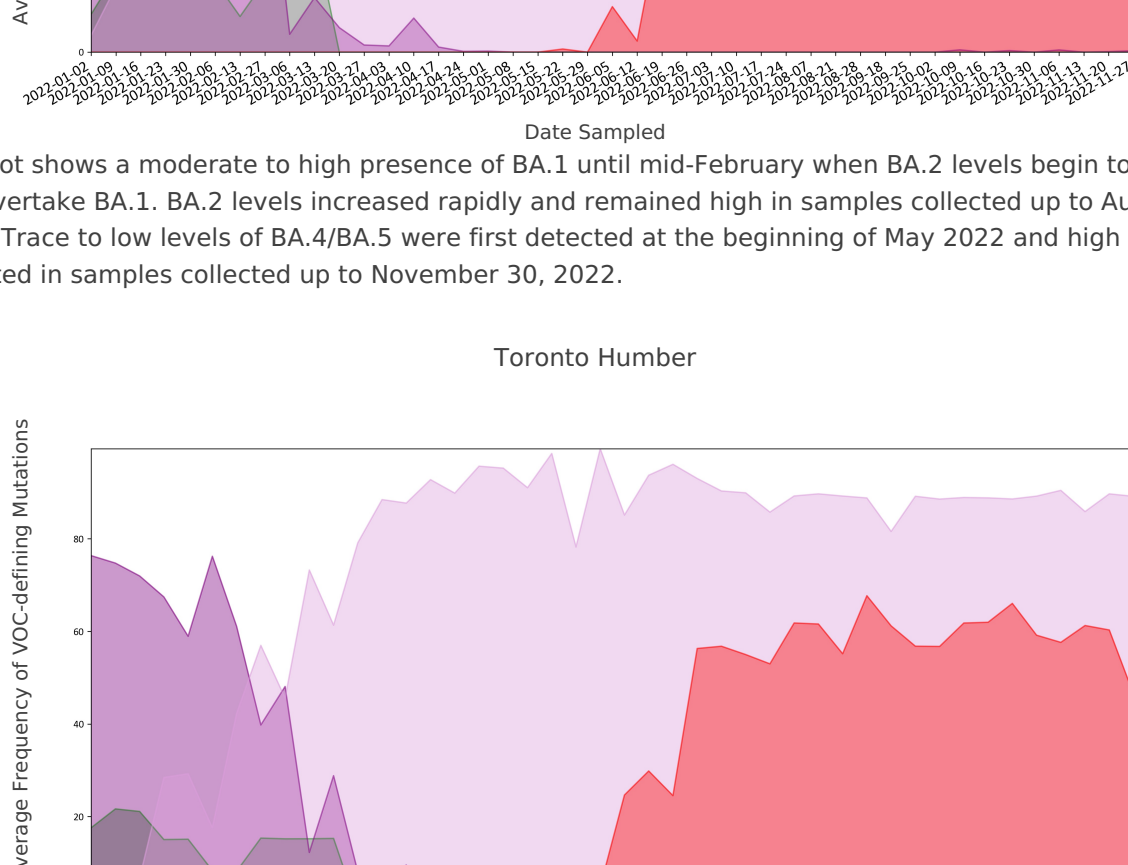


The plot shows a low to moderate presence of Delta until the end of February when the Delta signal ceased to be detected in the wastewater samples. High levels of BA.1 were observed until mid-March when BA.2 levels started to increase and overtake BA.1. High levels of BA.2 were detected in samples collected until June 2022. Trace to low levels of BA.4/BA.5 were first detected in April 2022 and high signals are detected in samples collected up to November 20, 2022.

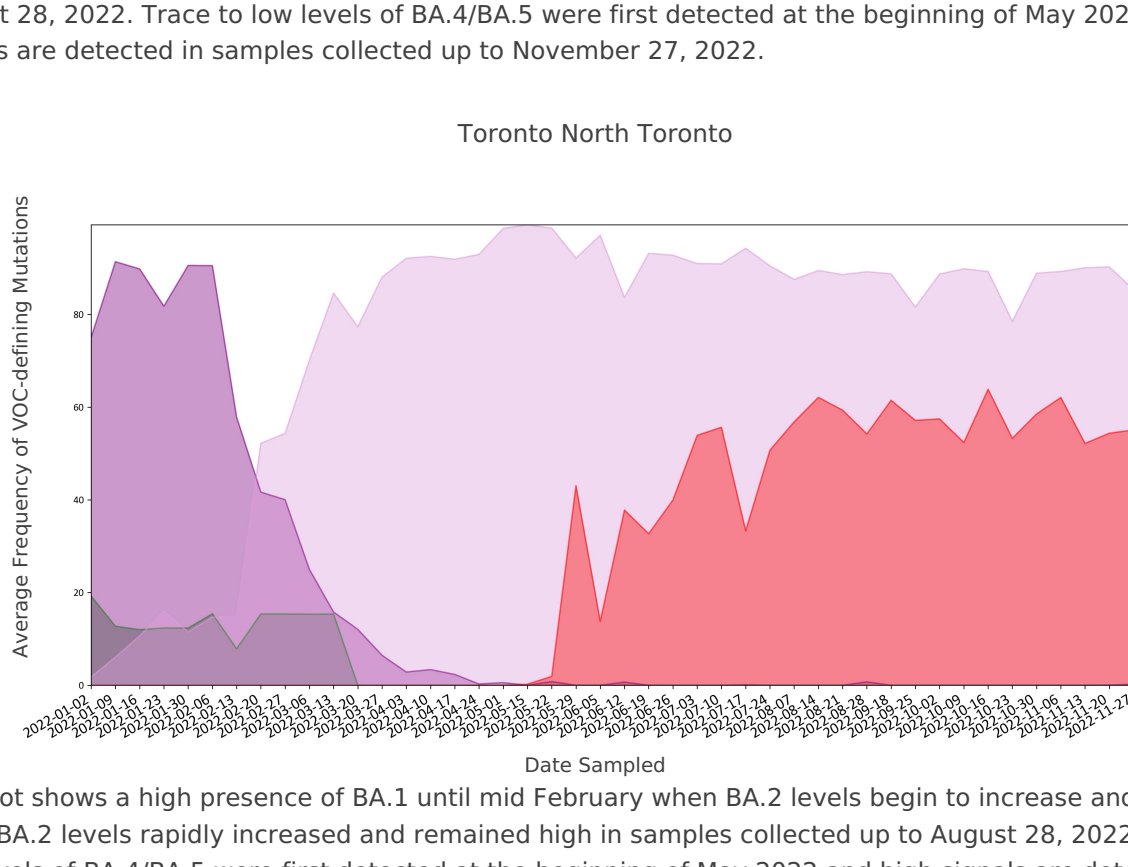


The plot shows a low presence of Delta until the end of February when the Delta signal ceased to be detected in the wastewater samples. High levels of BA.1 were observed until early March when BA.2 levels started to increase and overtake BA.1. High levels of BA.2 were detected in samples collected up to June 2022. Trace to low levels of BA.4/BA.5 were first detected in April 2022 and high signals are detected in samples collected up to November 20, 2022.

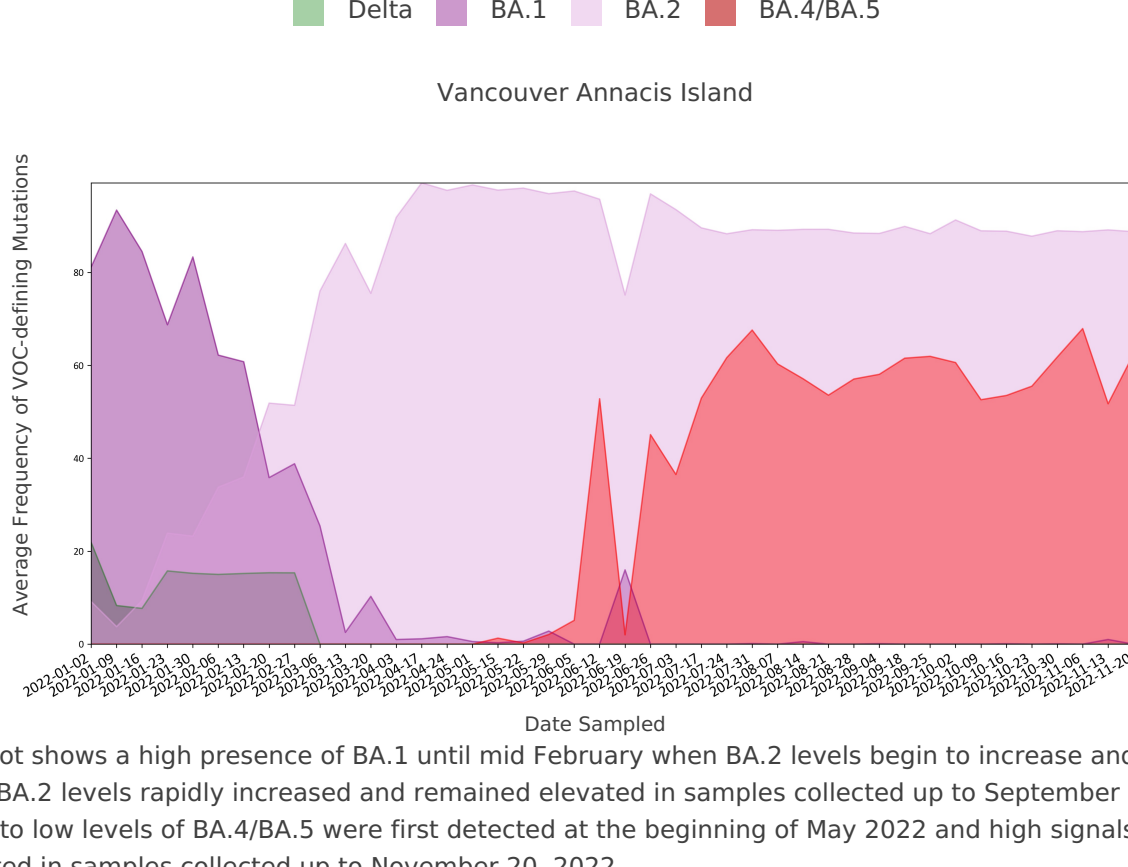
### Toronto



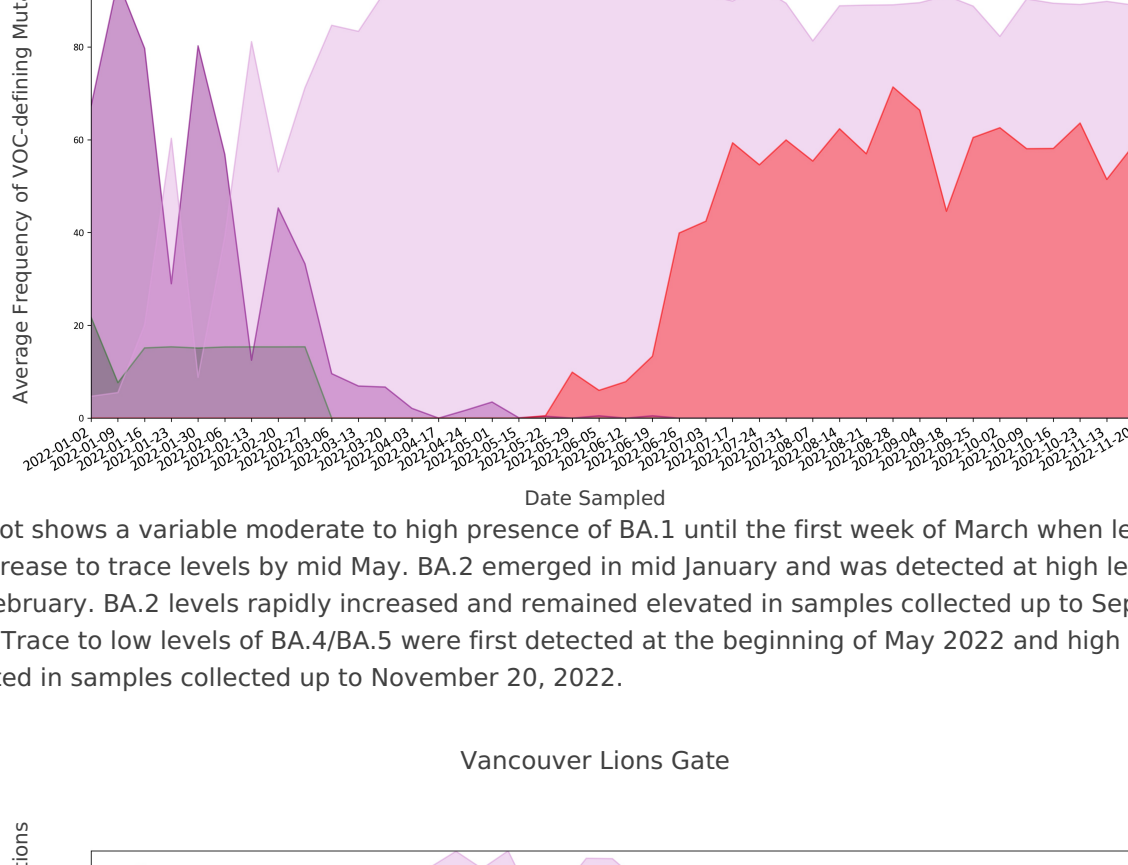
The plot shows a moderate to high presence of BA.1 until mid-February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 27, 2022.



The plot shows a moderate to high presence of BA.1 until mid-February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 30, 2022.



The plot shows a moderate to high presence of BA.1 until the beginning of March when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 27, 2022.

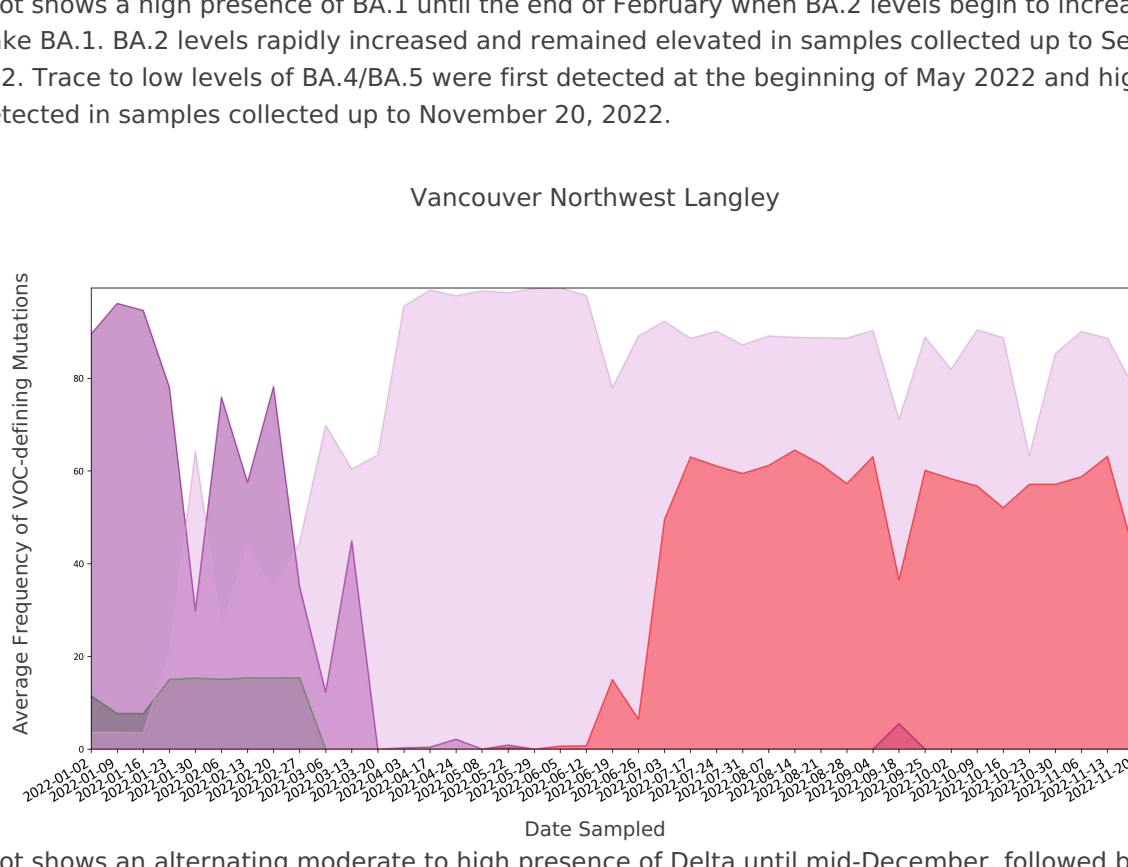


The plot shows a high presence of BA.1 until mid-February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels rapidly increased and remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 30, 2022.

### Vancouver



The plot shows a high presence of BA.1 until mid-February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels rapidly increased and remained elevated in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.



The plot shows a moderate to high presence of BA.1 until the first week of March when levels began to decrease to trace levels by mid-May. BA.2 emerged in mid-May and was detected at high levels by mid-February. BA.2 levels rapidly increased and remained elevated in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.



The plot shows a high presence of BA.1 until mid-February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels rapidly increased and remained elevated in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.



The plot shows an alternating moderate to high presence of Delta until mid-December, followed by a rapid decrease in presence. This decrease in Delta coincided with an emerging presence of Omicron. Omicron was first detected in wastewater samples collected from this site on December 5 and has since remained at a high level. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to November 20, 2022.