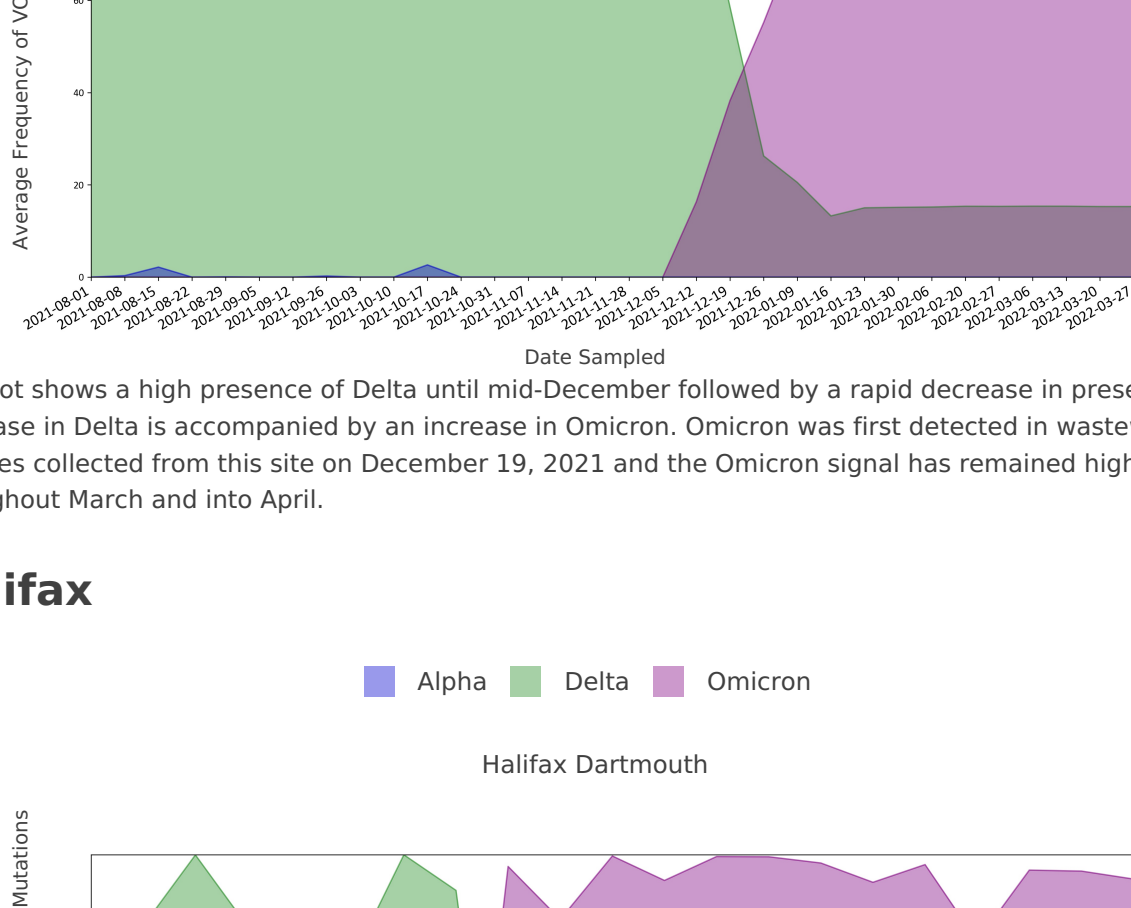


Wastewater Sequencing Trend Report: Detection of SARS-CoV-2 Variants of Concern by Metagenomic Sequencing

Longitudinal wastewater sequencing data ending 2022-04-20

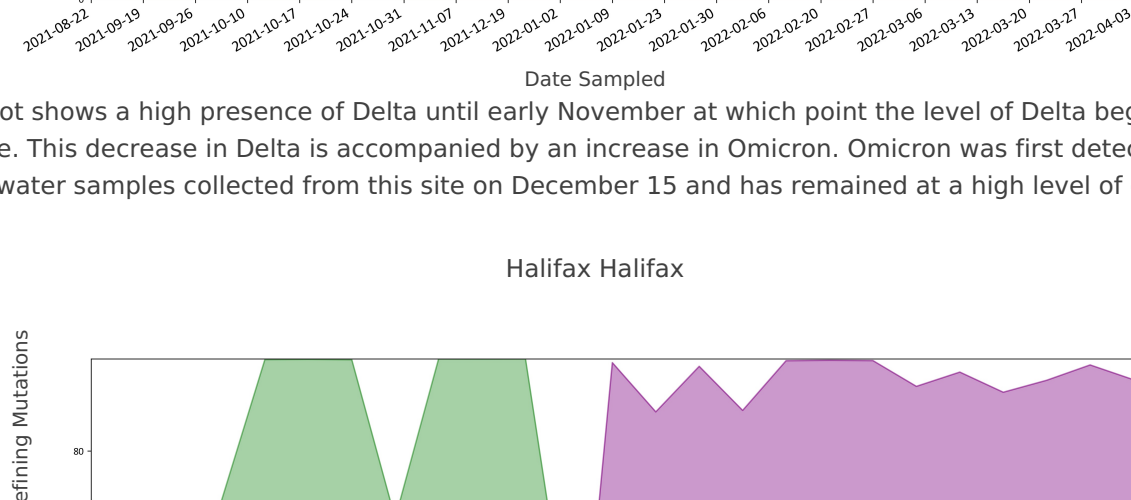
The plots show the percentage of three SARS-CoV-2 variants of concern (Alpha, Delta and Omicron) detected in wastewater samples collected from different sites using metagenomic sequencing. SARS-CoV-2 viral fragments present in the wastewater are isolated and sequenced to obtain a genomic "blueprint" 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 present in the wastewater sample. The shaded areas in the plot show Delta in green, Omicron in purple and where applicable, Alpha in blue.

Edmonton

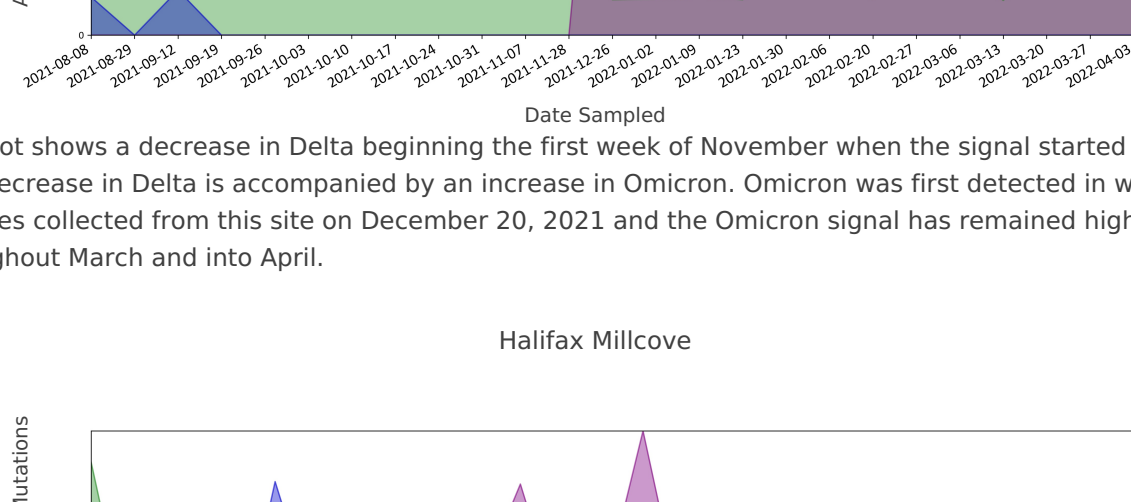


The plot shows a high presence of Delta until mid-December followed by a rapid decrease in presence. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected in wastewater samples collected from this site on December 19, 2021 and the Omicron signal has remained high throughout March and into April.

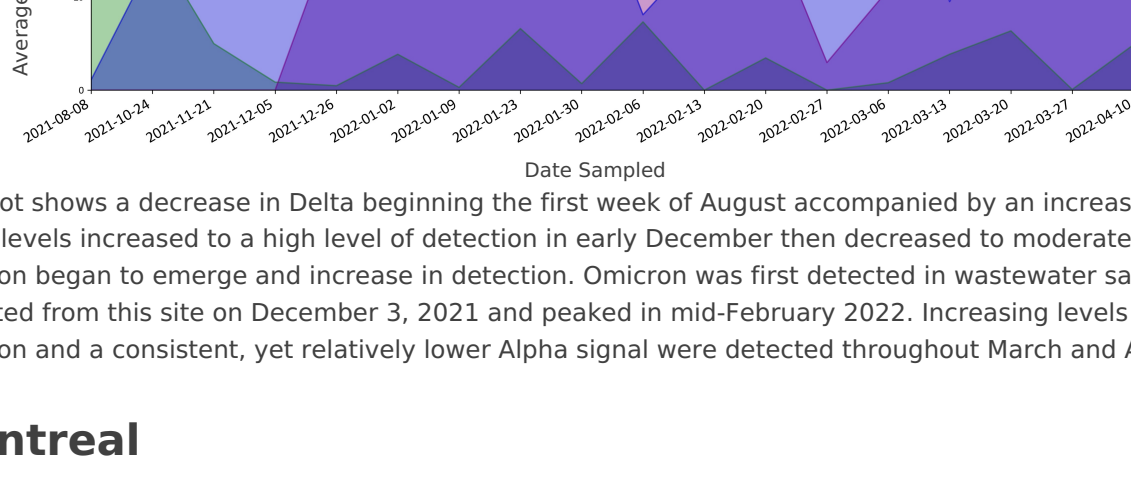
Halifax



The plot shows a high presence of Delta until early November at which point the level of Delta began to decline. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected in wastewater samples collected from this site on December 15, 2021 and has remained at a high level of detection.

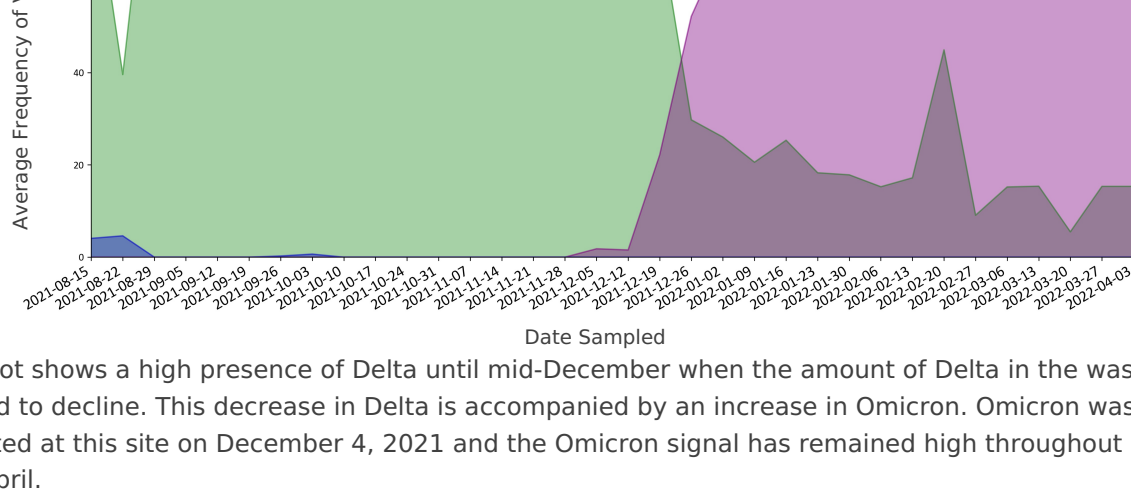


The plot shows a decrease in Delta beginning the first week of November when the signal started to decline. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected in wastewater samples collected from this site on December 20, 2021 and the Omicron signal has remained high throughout March and into April.

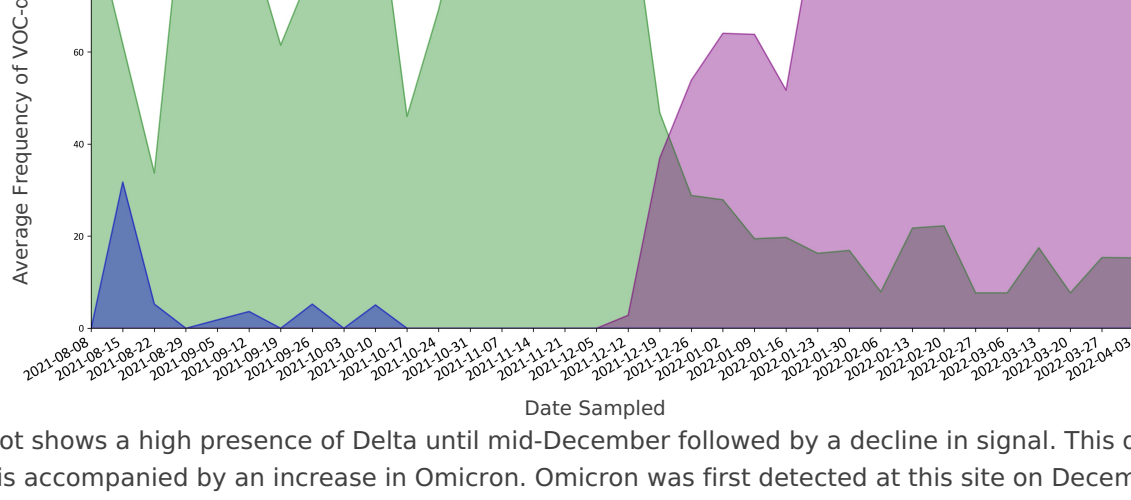


The plot shows a decrease in Delta beginning the first week of August accompanied by an increase in Alpha. Alpha levels increased to a high level of detection in early December then decreased to moderate levels as Omicron began to emerge and increase in detection. Omicron was first detected in wastewater samples collected from this site on December 3, 2021, and peaked in mid-February 2022. Increasing levels of Omicron and a consistent, yet relatively lower Alpha signal were detected throughout March and April.

Montreal

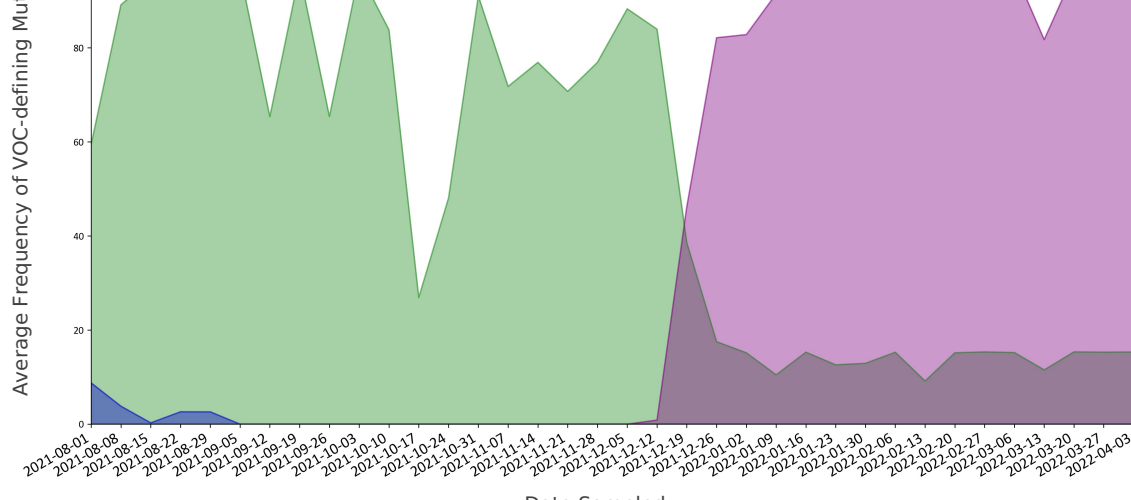


The plot shows a high presence of Delta until mid-December when the amount of Delta in the wastewater started to decline. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected at this site on December 4, 2021 and the Omicron signal has remained high throughout March and into April.

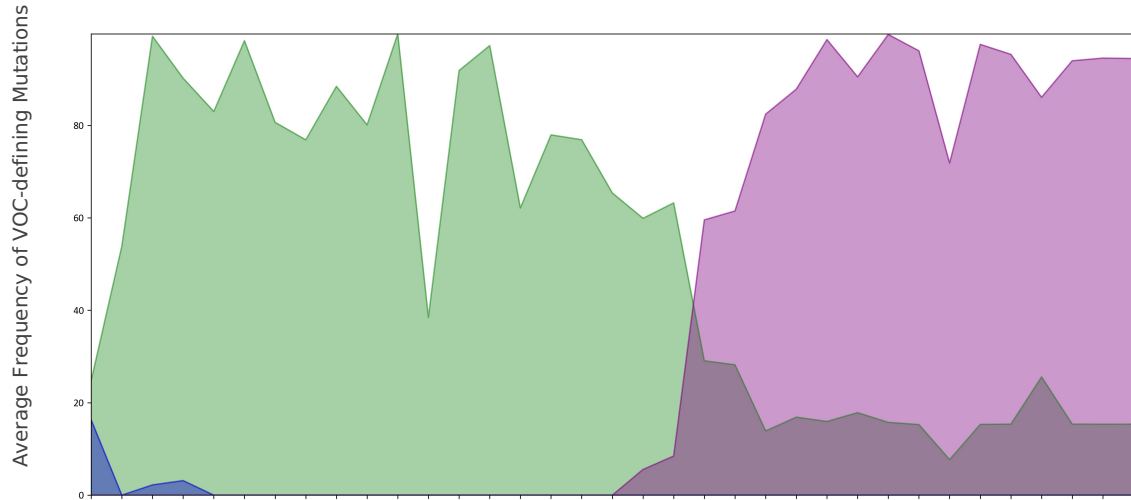


The plot shows a high presence of Delta until mid-December followed by a decline in signal. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected at this site on December 11, 2021 and the Omicron signal has remained high throughout March and into April.

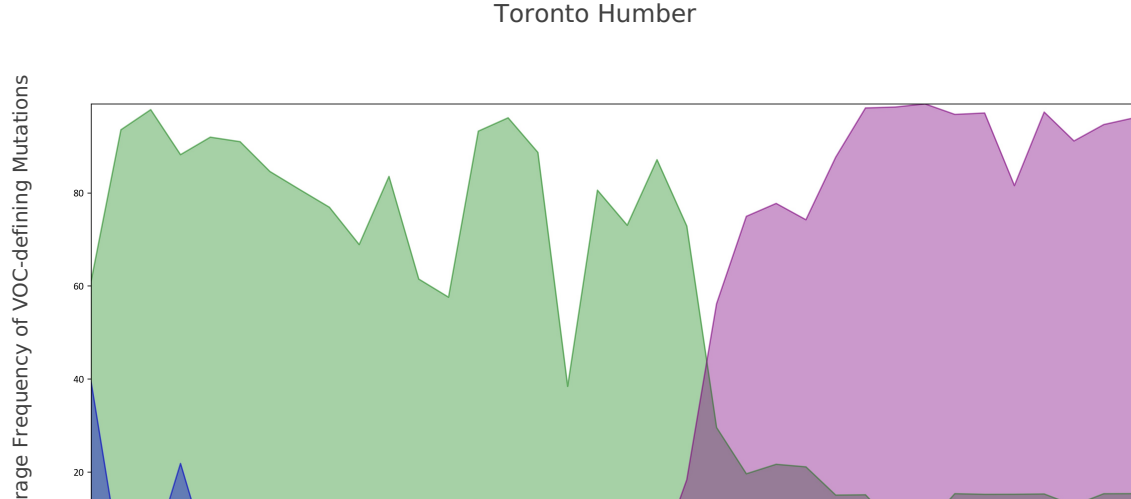
Toronto



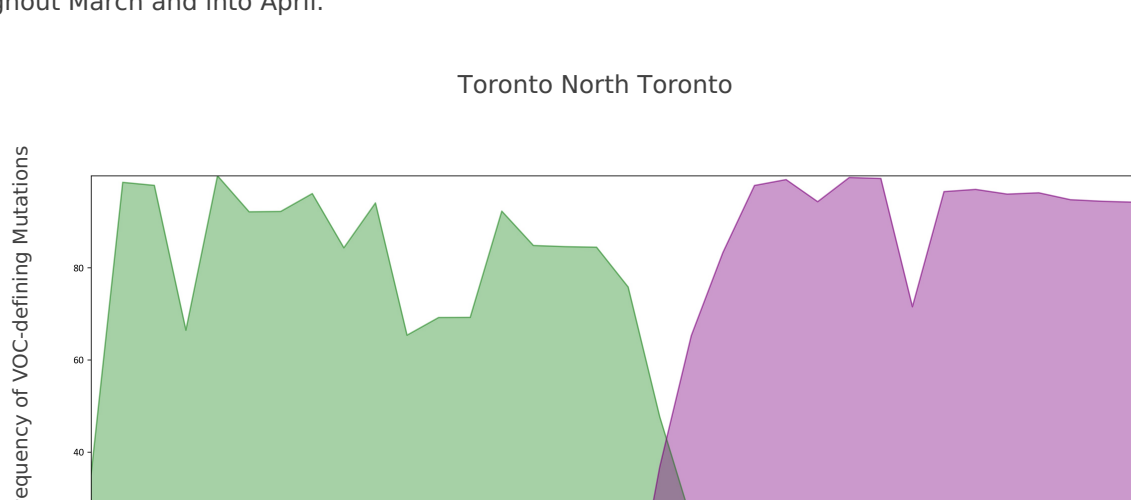
The plot shows a high presence of Delta until mid-December, followed by a rapid decrease in presence. This decrease in Delta is accompanied by a sharp increase in Omicron where it has remained at a high level. Omicron was first detected in wastewater samples collected from this site on December 12, 2021 and the Omicron signal has remained high throughout March and into April.



The plot shows a high presence of Delta until mid-December, followed by a rapid decrease in presence. This decrease in Delta is accompanied by a sharp rise of Omicron. Omicron was first detected in wastewater samples collected from this site on December 5, 2021 and the Omicron signal has remained elevated throughout March and into April.

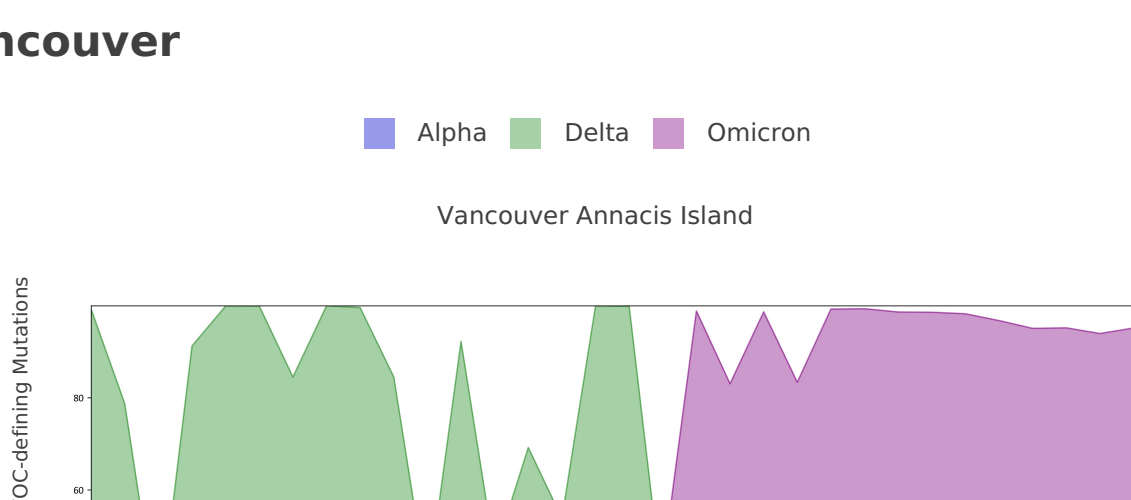


The plot shows a high presence of Delta until mid-December, followed by a rapid decrease in presence. The decrease in Delta is accompanied by a sharp rise of Omicron. Omicron was first detected in wastewater samples collected from this site on December 7, 2021 and Omicron levels have remained elevated throughout March and into April.

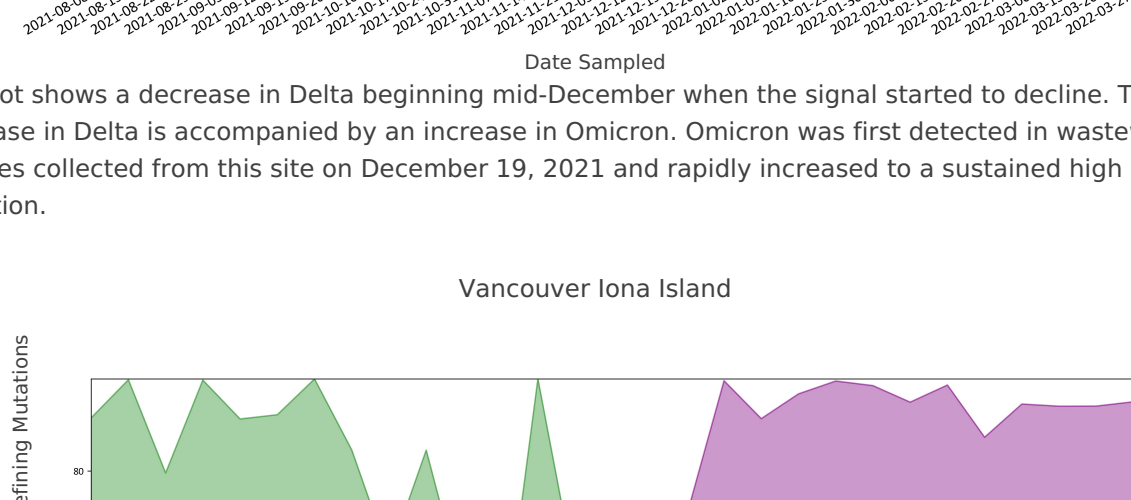


The plot shows a high presence of Delta until mid-December, followed by a rapid decrease in presence. This decrease in Delta is accompanied by a sharp rise in Omicron. Omicron was first detected in wastewater samples collected from this site on December 14, 2021 and the Omicron signal has remained very high throughout March and into April.

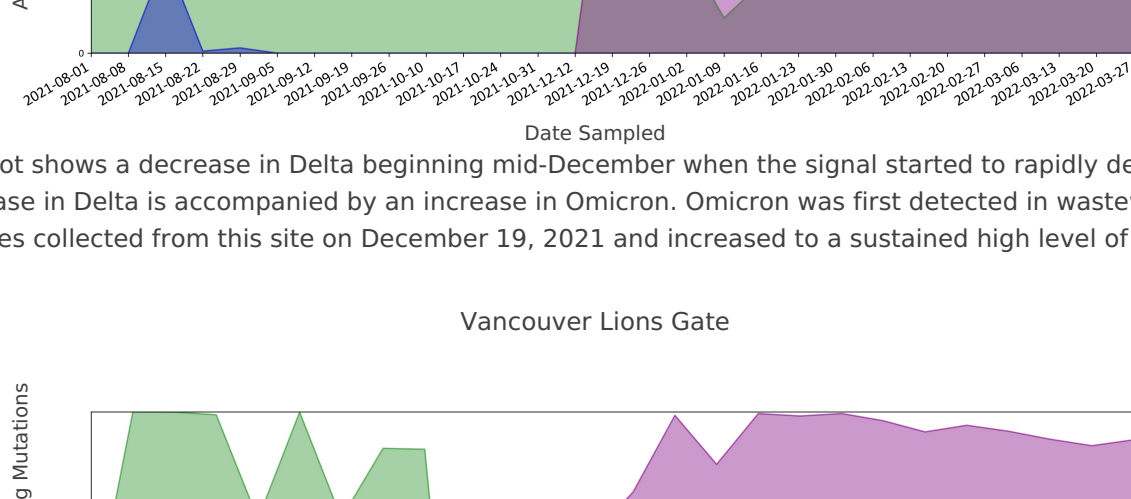
Vancouver



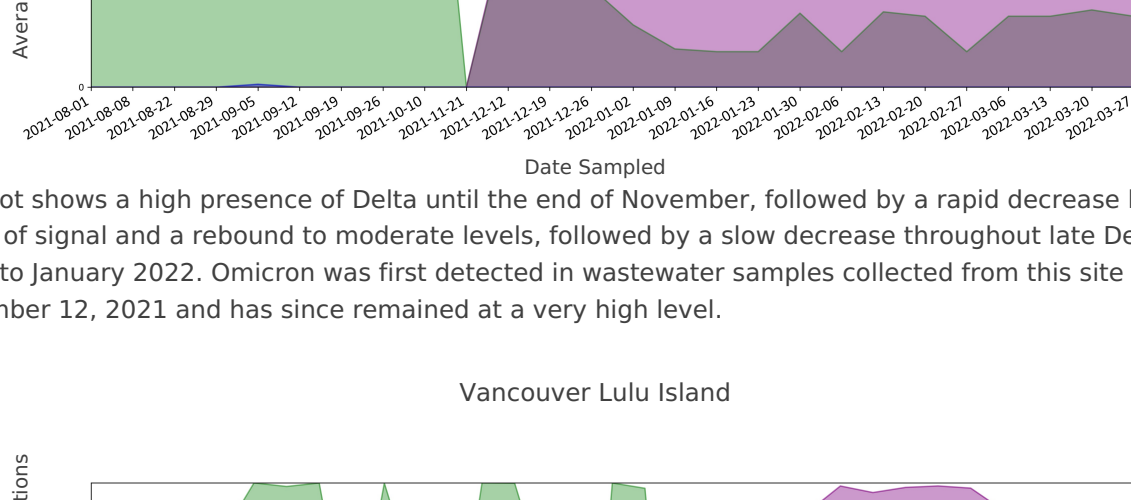
The plot shows a decrease in Delta beginning mid-December when the signal started to decline. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected in wastewater samples collected from this site on December 19, 2021 and rapidly increased to a sustained high level of detection.



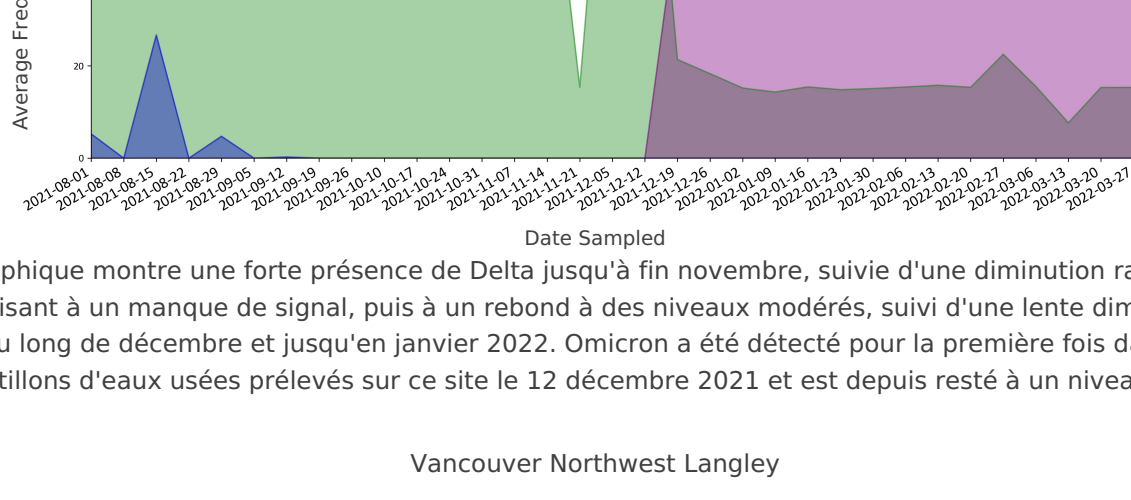
The plot shows a decrease in Delta beginning mid-December when the signal started to rapidly decline. This decrease in Delta is accompanied by an increase in Omicron. Omicron was first detected in wastewater samples collected from this site on December 19, 2021 and increased to a sustained high level of detection.



The plot shows a high presence of Delta until the end of November, followed by a rapid decrease leading to a lack of signal and a rebound to moderate levels, followed by a slow decrease throughout late December and into January 2022. Omicron was first detected in wastewater samples collected from this site on December 12, 2021 and has since remained at a very high level.



Le graphique montre une forte présence de Delta jusqu'à fin novembre, suivie d'une diminution rapide conduisant à un manque de signal, puis à un rebond à des niveaux modérés, suivi d'une lente diminution tout au long de décembre et jusqu'en janvier 2022. Omicron a été détecté pour la première fois dans des échantillons d'eaux usées prélevés sur ce site le 12 décembre 2021 et est depuis resté à un niveau élevé.



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 emergent presence of Omicron. Omicron was first detected in wastewater samples collected from this site on December 5, 2021 and has since remained at a very high level.