

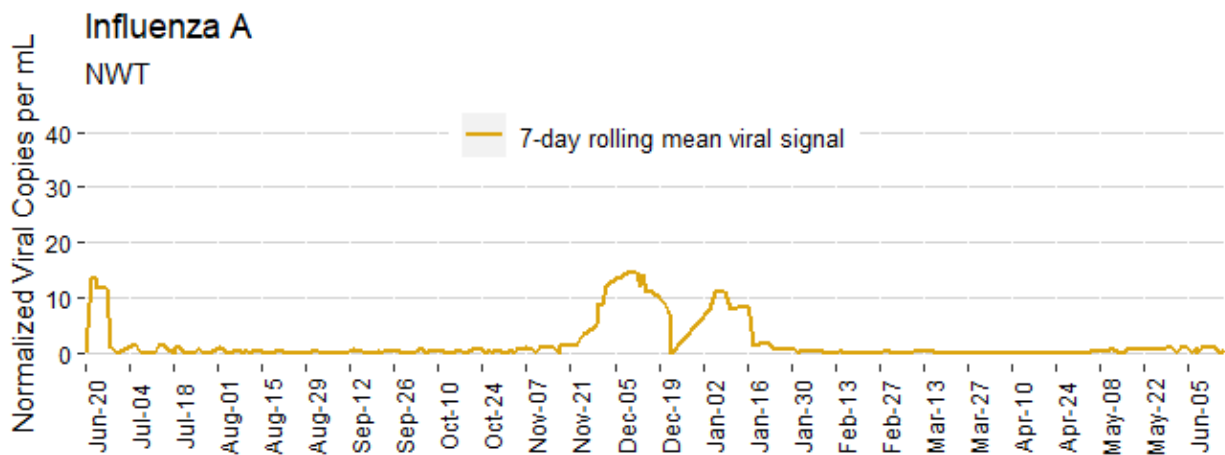
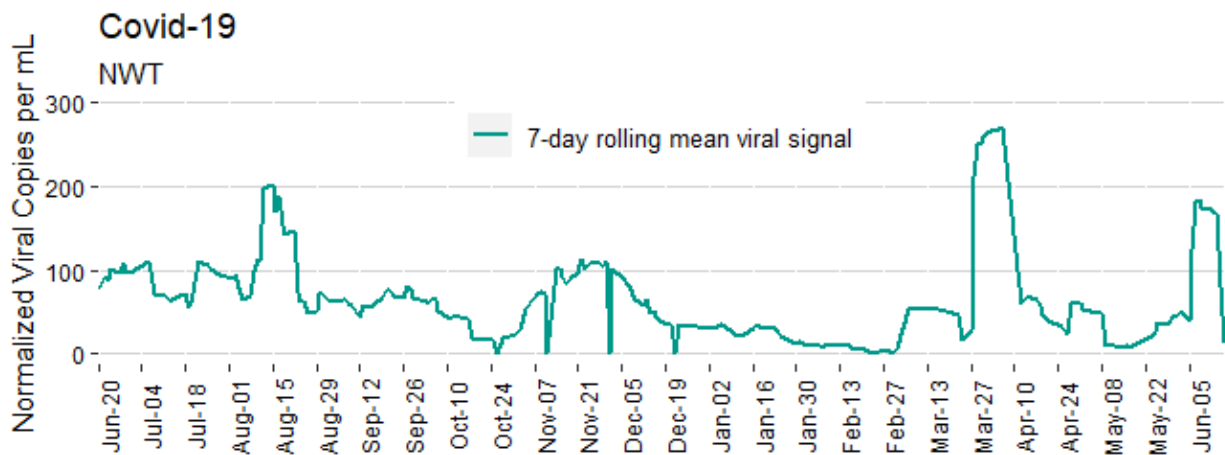


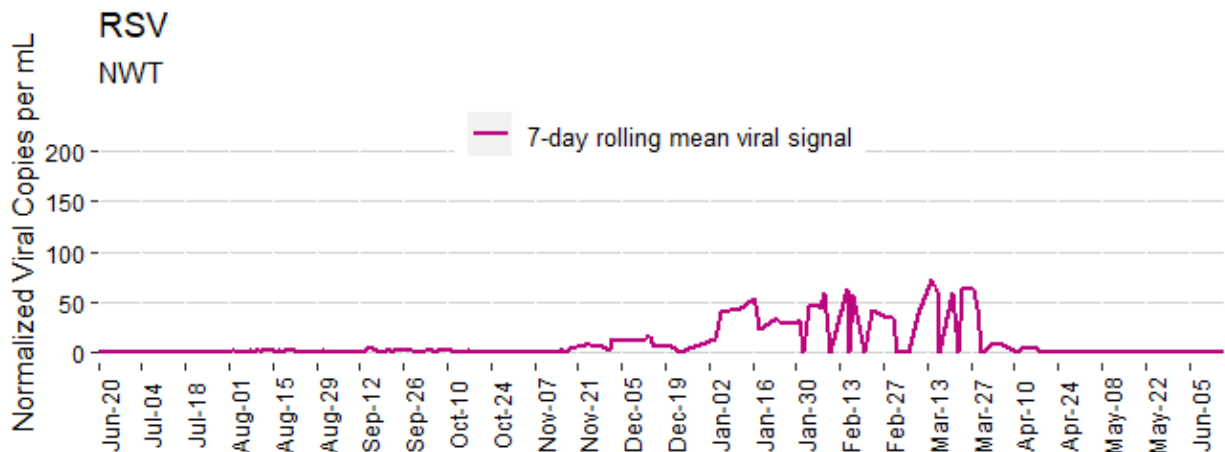
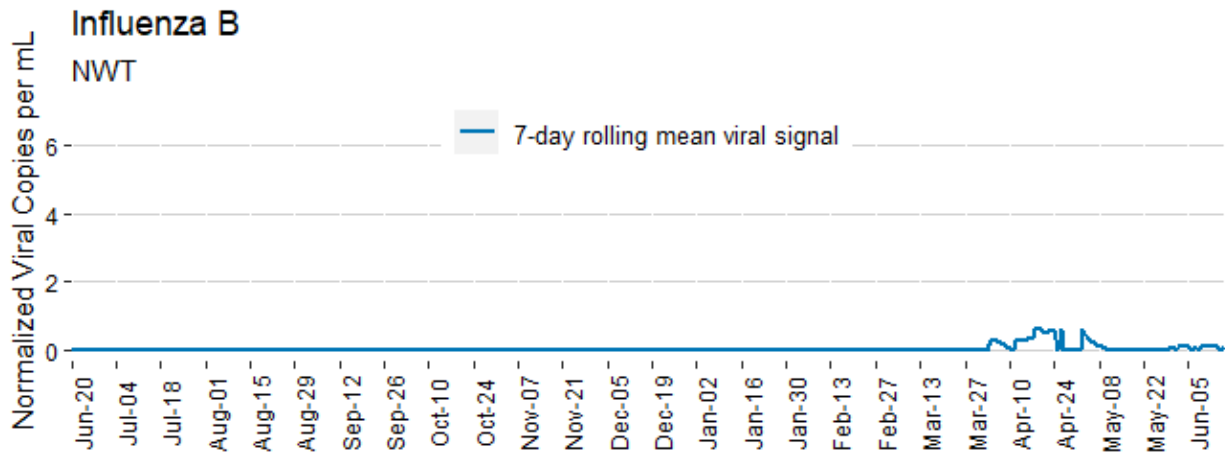
## NWT Wastewater Monitoring Report

Office of the Chief Public Health Officer

2023-06-20

### Northwest Territories



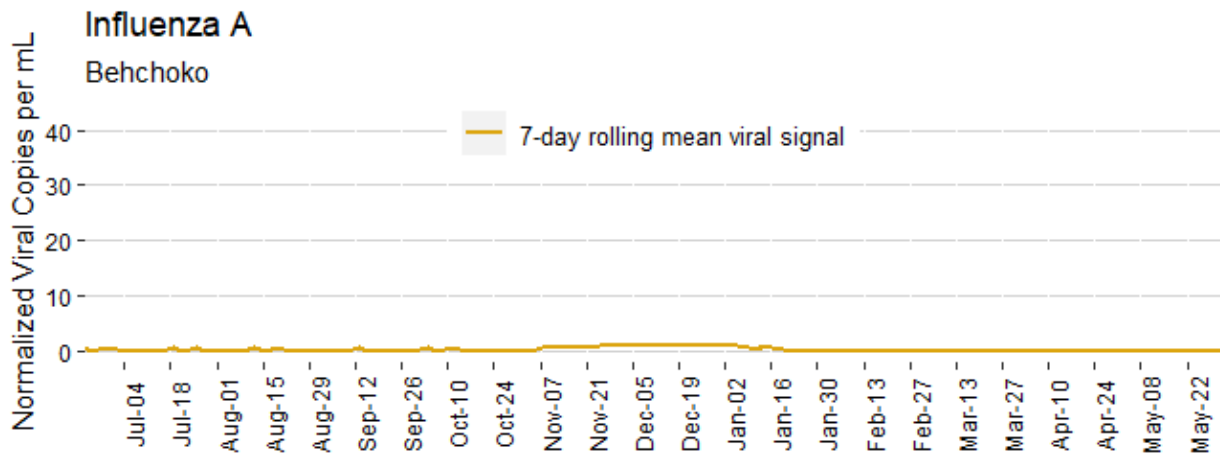
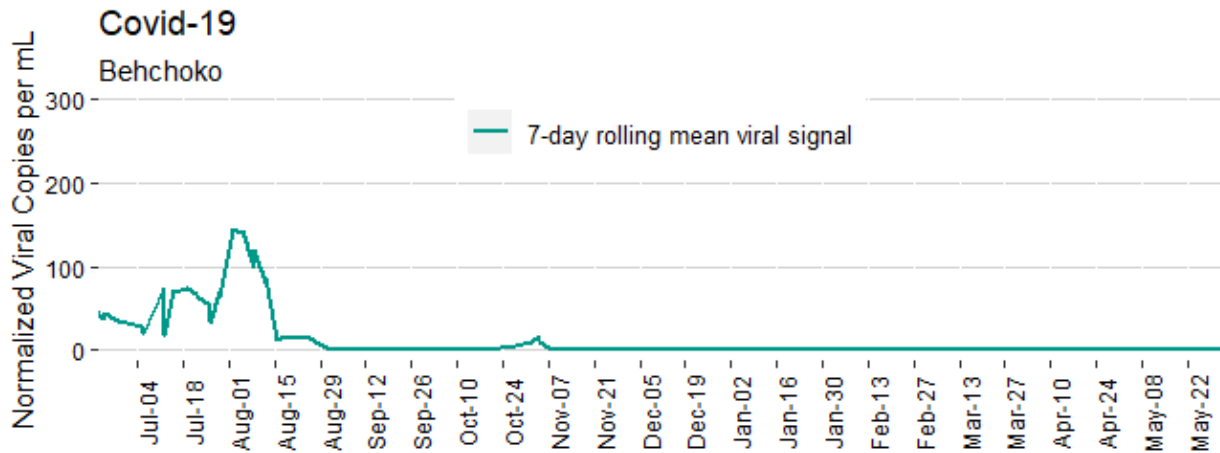


Wastewater is handled in the NWT in one of two ways. Some communities have traditional piped or plumbed sewage systems (e.g., Yellowknife, and Inuvik). For some communities an internal tank in homes holds wastewater until a truck collects and delivers to the communities' wastewater treatment location. In communities using trucked wastewater systems, there can be uneven collecting or discharge of wastewater which can result in results that can be hard to follow. To address these spikes in results, a method to address these has been used.<sup>1</sup>

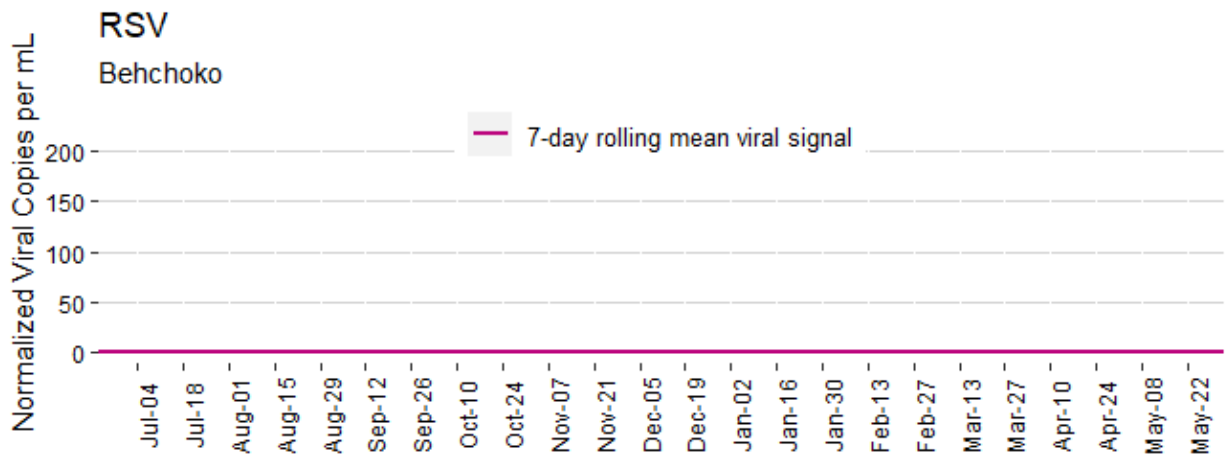
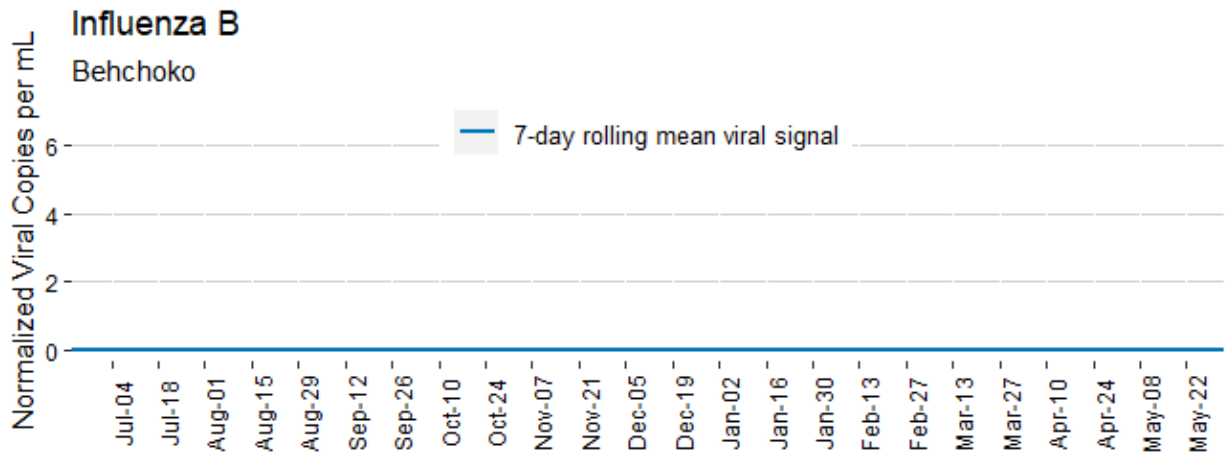
<sup>1</sup> Active lift stations refer to communities in the NWT providing wastewater data to the GNWT. Currently these communities are Yellowknife, Behchokò, Norman Wells, Fort Smith, Fort Simpson, and Inuvik. Due to the sporadic nature of wastewater, modified z score was used to analyze outlier strength. Consider the following equation,



## Behchoko

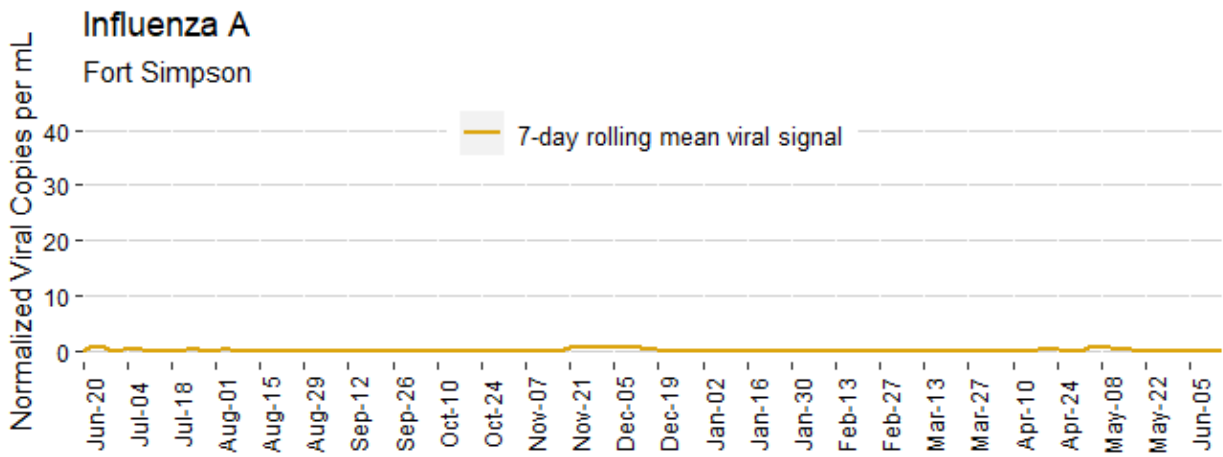
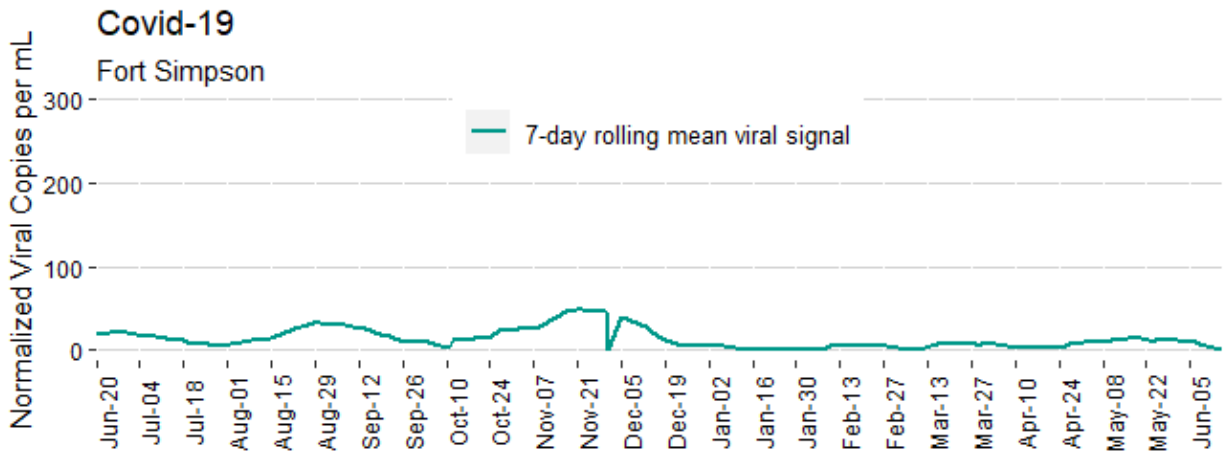


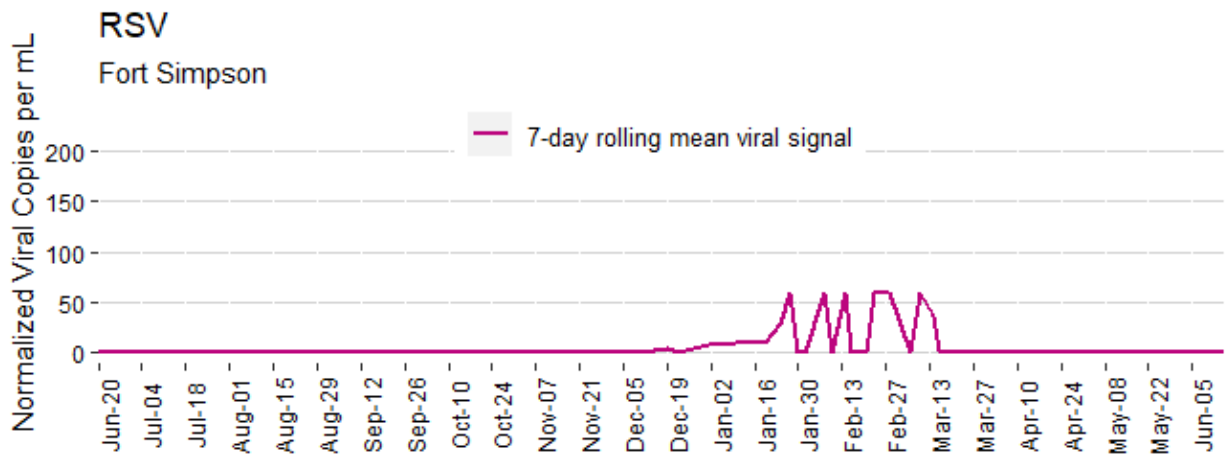
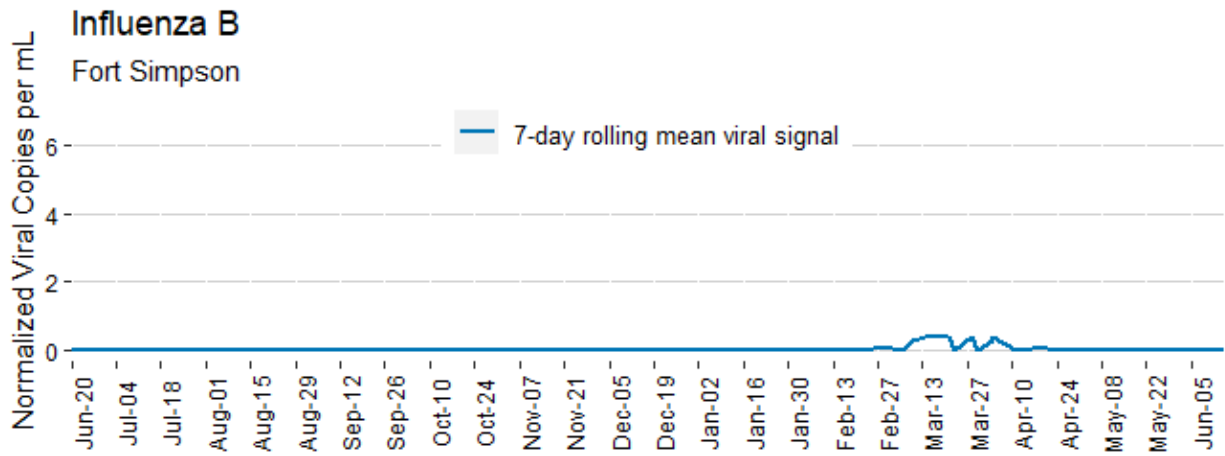
where  $x$  is equal to the daily viral shed in  $cp/ml$ :  $ModZ = (x - median(x))/sqrt(x)$ . From there we calculated the standard deviation (SD) and filtered out data  $\pm 2$  SD units. This allows us to portray the viral shed copies in a more clear and concise way. Once the outliers were removed, a rolling 7-day average was applied.





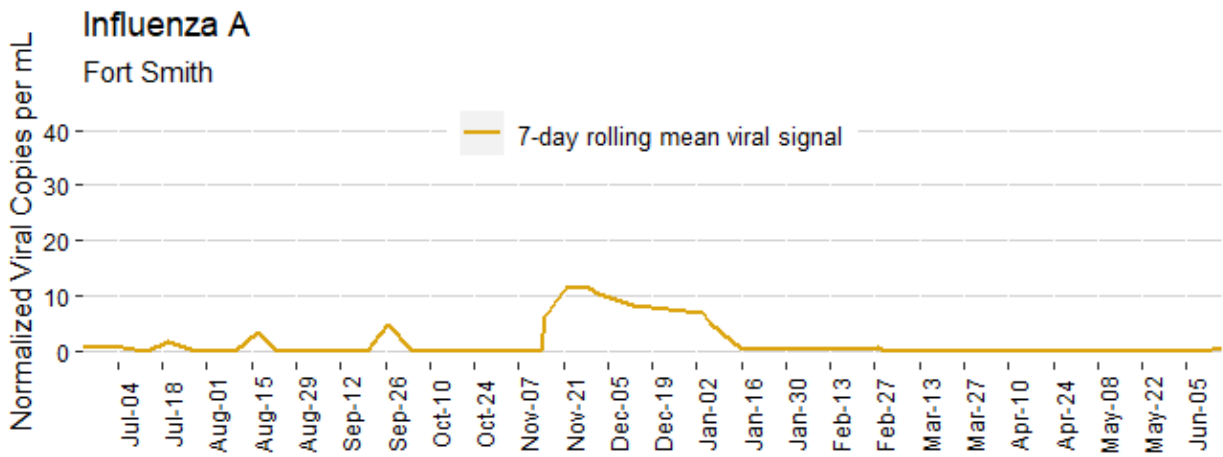
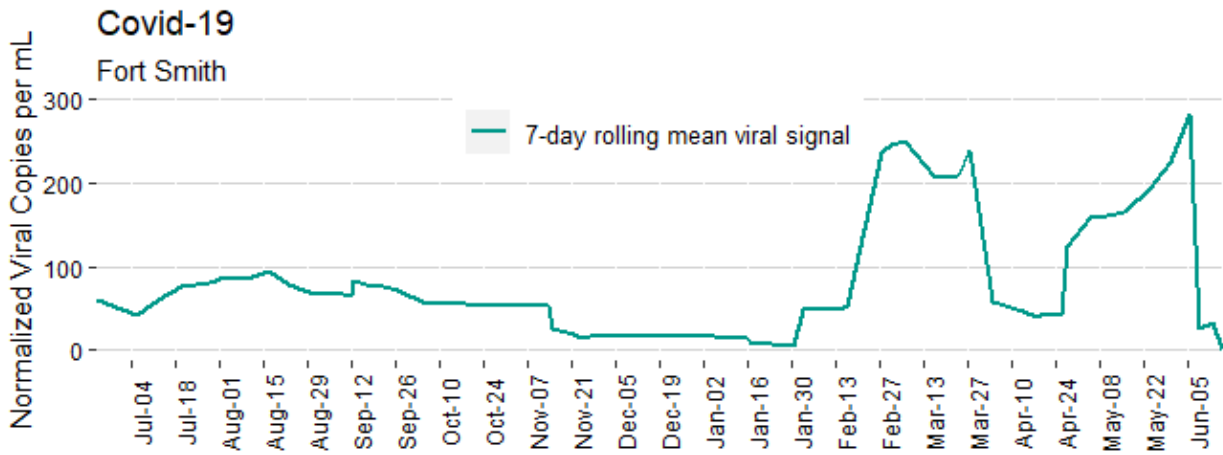
## Fort Simpson

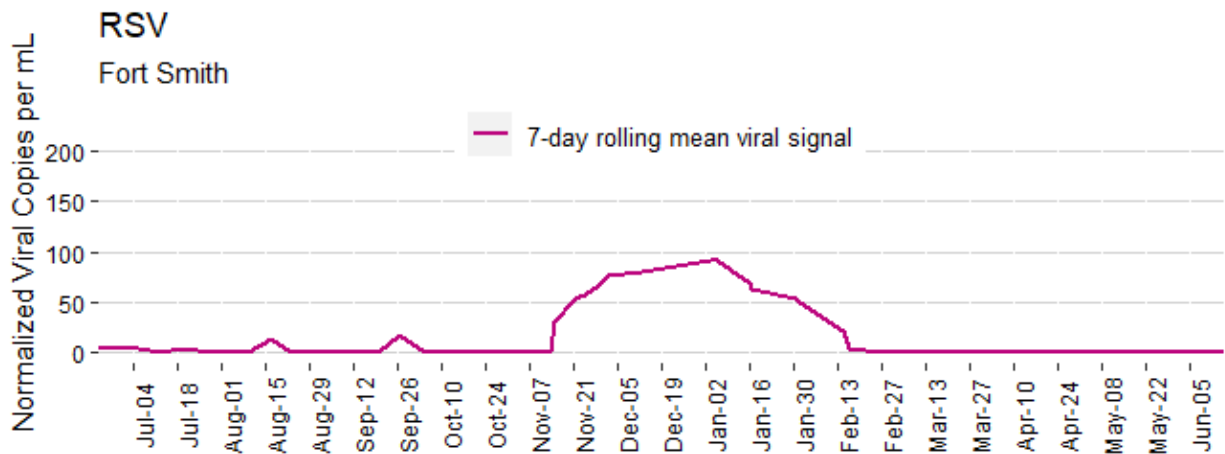
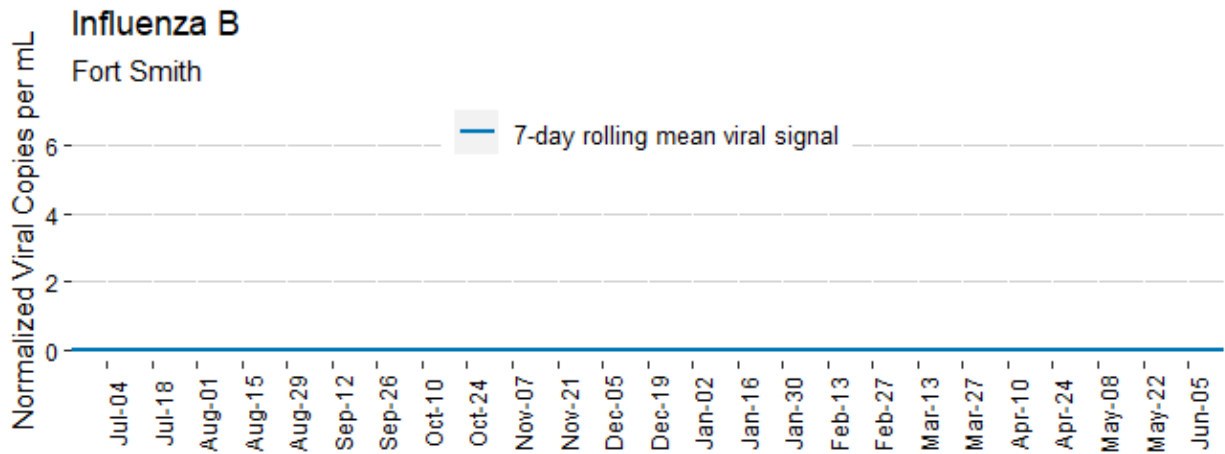






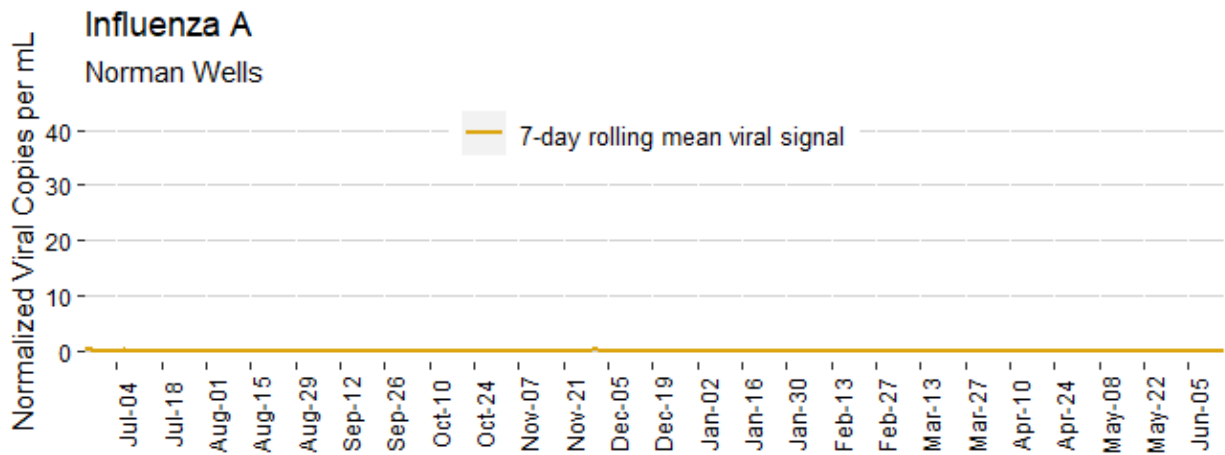
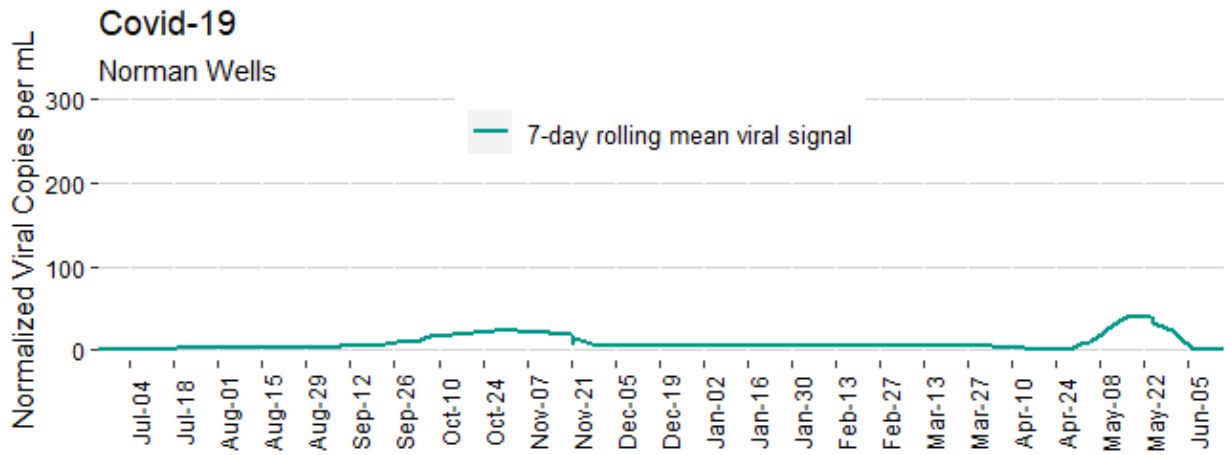
## Fort Smith

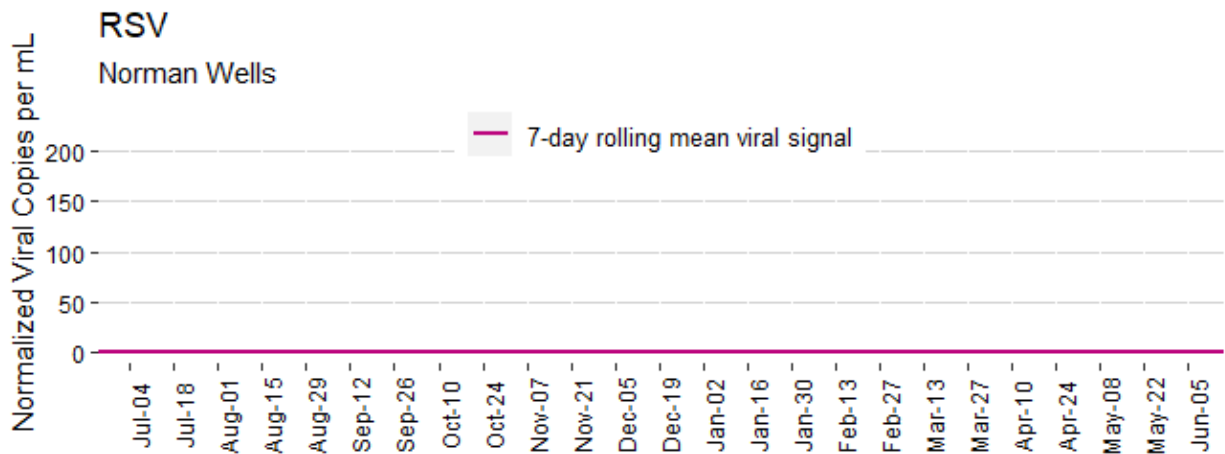
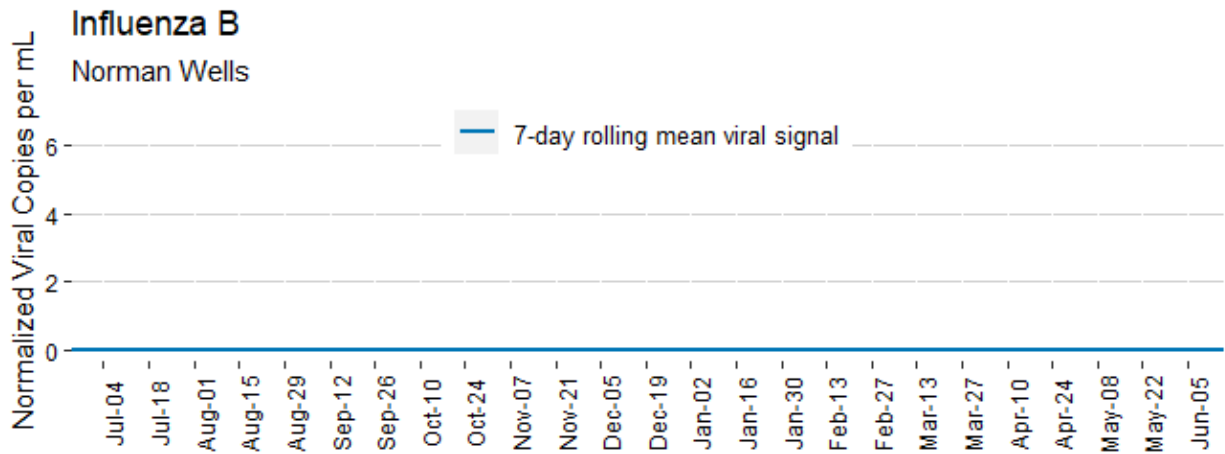






## Norman Wells







## Yellowknife

