Portsmouth, NH Peirce Island Wastewater Treatment Facility
SARS-CoV-2 Biomarker Results Summary

Report Date: August 25, 2022; Sampled by: Kathy Sanborn, August 23, 2022
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Dates Sampled for this Monitoring Period:

Tuesday, August 23, 2022*
Tuesday, August 16, 2022
Tuesday, August 9, 2022
Tuesday, August 2, 2022
Tuesday, July 26, 2022
Tuesday, July 19, 2022
Tuesday, July 12, 2022
Tuesday, July 5, 2022

*New samples since last report

Method: A 24-hour flow weighted composite sample was taken from August 22-23, 2022. This sample was preprocessed and extracted using a solids separation, Ceres Nanoscience viral concentration, and Kingfisher extraction approach. Two viral markers (N1 and N2) were quantified via Bio-Rad QX200 ddPCR.

Results: Both the SARS-CoV-2 N1 and N2 viral biomarkers were detected in the composite sample taken August 22-23, 2022 (Table 1). Biomarker values increased about 60% from last week, indicating continued, fluctuating SARS-CoV-2 viral presence within the community served by the treatment facility. Of the facilities monitored to date this week in the NH wastewater surveillance program, Peirce Island is among the highest (Figure 1).

Table 1: Sample date and biomarker results. "BDL" represents values below the quantified limits of instrument detection of 172 copies/100 mL wastewater.

	SARS-CoV-2 Biomarkers	
Sample Date	N1 copies/100mL	N2 copies/100mL
08/23/2022*	1,227	1,408
08/16/2022	784	894
08/09/2022	2,165	2,408
08/02/2022	343	501
07/26/2022	348	450
07/19/2022	1,395	1,715
07/12/2022	1,465	1,555
07/05/2022	668	896

*New samples since last report

For more detailed information regarding local, county, and statewide COVID-19 infections, please refer to the data reported through the New Hampshire Division of Health and Human Services website https://www.covid19.nh.gov/dashboard.

Since June 6, 2022, the minimum values for SARS-CoV-2 measured in New Hampshire were below analytical detection limits (BDL) while the maximum reported N1 and N2 values across 12 reporting facilities have been 4,651 and 4,939 copies/100 ml wastewater, respectively. For the week to date of August 22, the maximum values measured at four reporting facilities are 1,290 and 1,408 copies/100 ml wastewater for N1 and N2, respectively.

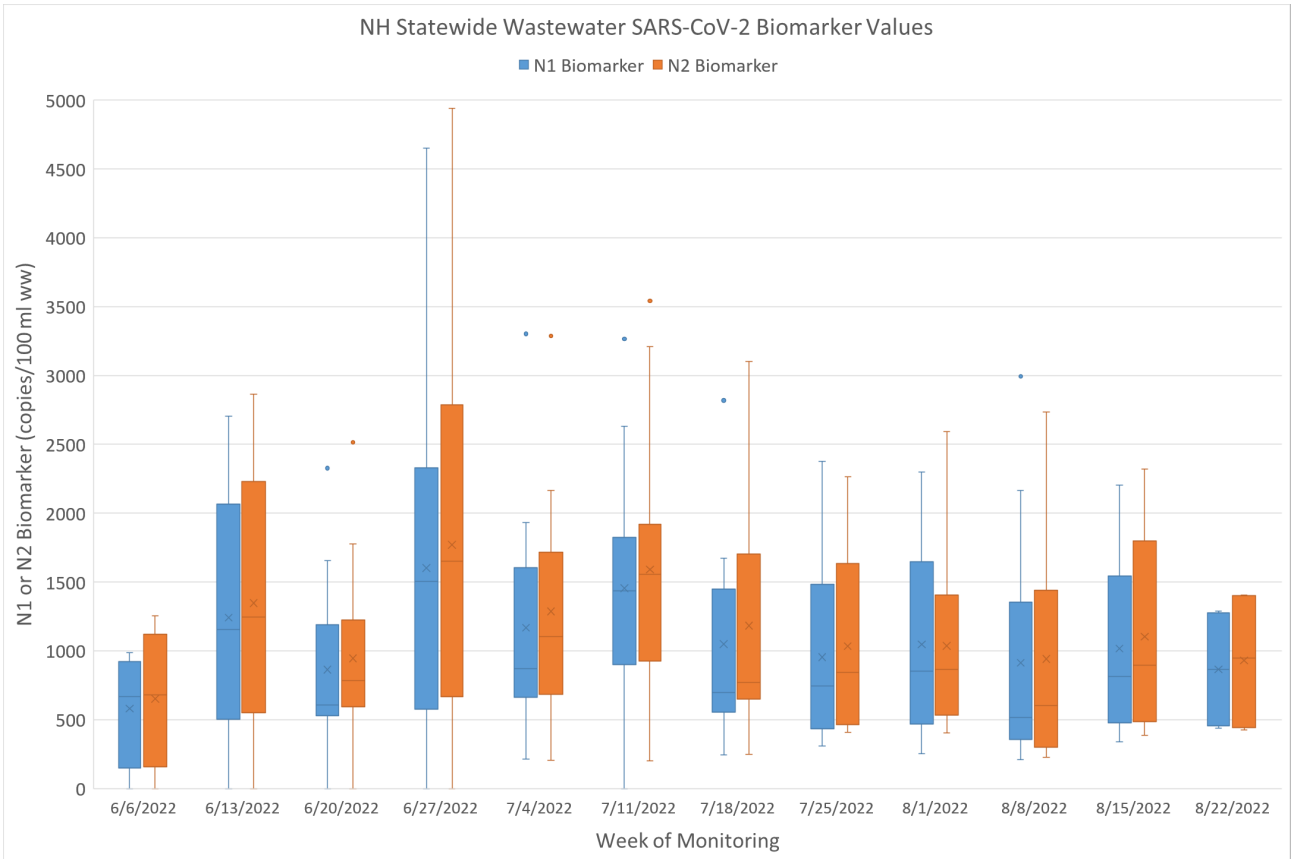

Figure 1. Range of SARS-CoV-2 biomarker values measured at participating wastewater facilities since the NH wastewater surveillance program began in early June 2022.