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

Report Date: September 5, 2022; Sampled by: Kathy Sanborn
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Dates Sampled for this Monitoring Period:

Tuesday, August 30, 2022*
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 composite sample was taken on the date shown above. 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 SARS-CoV-2 N1 and N2 viral biomarkers were detected (LOD=172 copies/100 ml) for this sample at the levels reported in Table 1. The range of SARS-CoV-2 viral biomarker values for all wastewater facilities participating in the NH surveillance program this week are shown in 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
08/30/2022*	3,752	3,867
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 reporting facilities have been 12,332 and 12,703 copies/100 ml wastewater, respectively. For the 15 participating facilities the week of August 29, the maximum values measured are 12,332 and 12,703 copies/100 ml wastewater for N1 and N2, respectively.

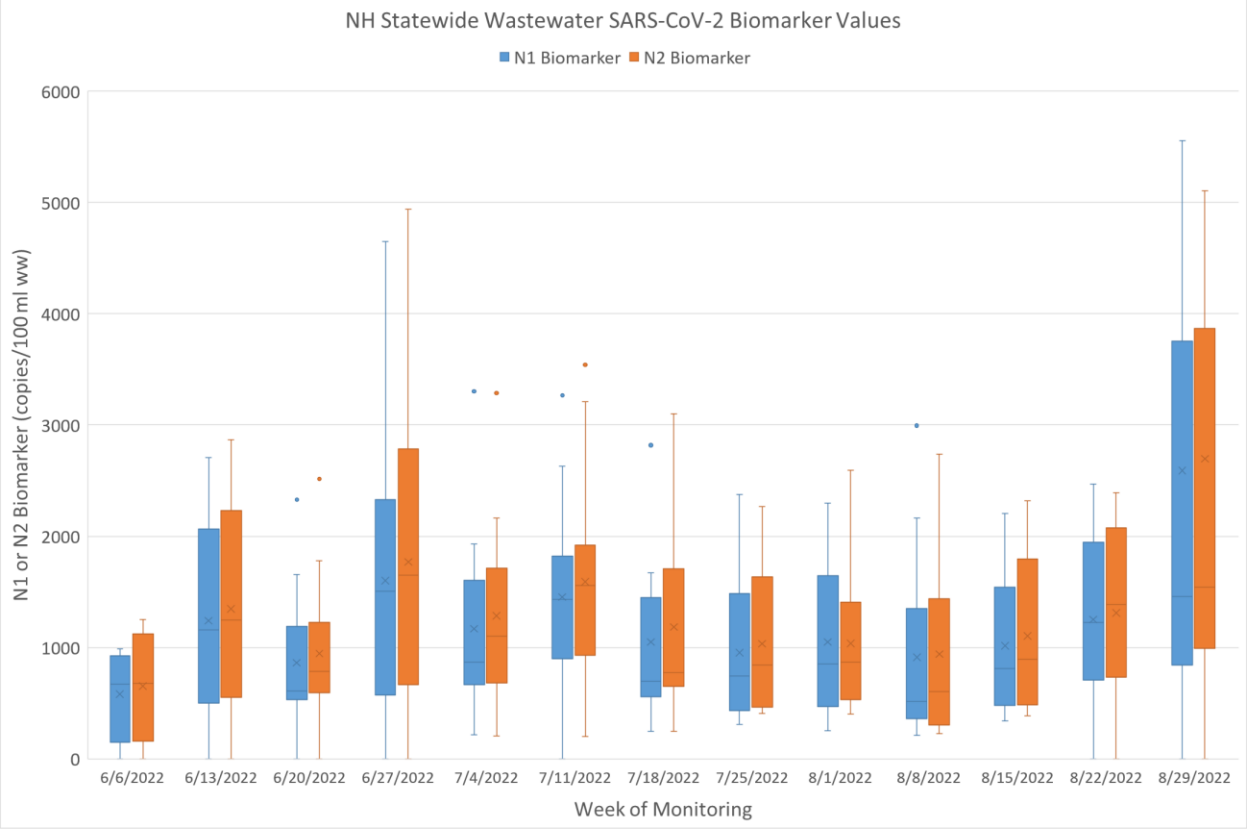

Figure 1. Range of SARS-CoV-2 biomarker values measured at participating wastewater facilities since the NH wastewater surveillance program began in early June 2022.