

Yarmouth, Maine, SARS-CoV-2 (COVID-19) Wastewater Testing Results — November 1, 2023

Summary

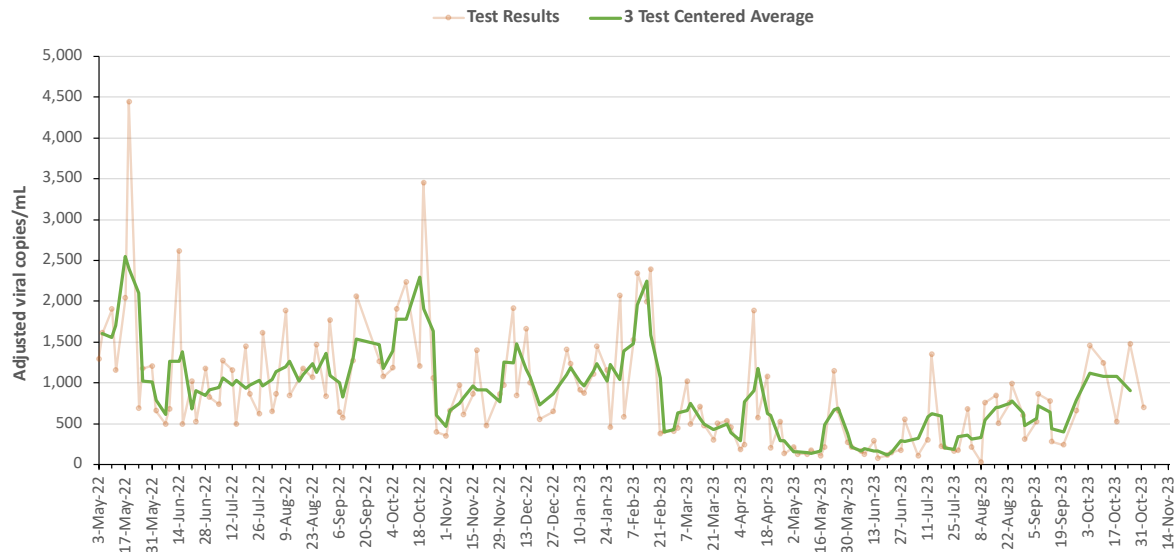
- We are in a period of transition from lower wastewater viral levels during the summer (May through July) to gradually increasing levels since August with occasional dips. This is consistent with past years, as people spend more time inside during the Fall as the weather cools. Viral transmission is more likely inside.
- During October, wastewater levels of SARS-CoV-2 fluctuated, but were higher overall than during September.
- Surprisingly, from October 2–29, 2023, Maine CDC reported 41 cases of COVID-19 for Yarmouth, an average of 10 cases per week, which is a marked increase from the average of 1.7 cases per week reported since early February 2023. It is notable that twenty-four of these 41 cases were reported during the week ending on October 22 and represent 21% of the 116 cases reported for all of Cumberland County for that week. It is unlikely that Yarmouth had this many cases during that one week and it may be an artifact of reporting or analysis. We have given this some thought and may ask Maine CDC their views.
- Elsewhere in Maine, reported COVID-19 case rates during October were highest in Aroostook County and lowest in Piscataquis County. Cumberland County's case rate was slightly higher than the overall statewide rate.
- COVID-19 related hospitalization rates in Maine gradually increased during October and were highest among people 70 years of age and older.
- Although wastewater levels of SARS-CoV-2 and reported COVID cases were higher during October 2023 in Yarmouth than during the summer, the increased levels weren't as high as seen in previous spikes, and hospitalizations in Maine and Cumberland County remained low compared to October 2022. Based on these observations, we are keeping the COVID-O-Meter at the Low level.



Wastewater Results for SARS-CoV-2

- From May 2022 to mid-September 2023 Yarmouth wastewater samples were collected twice weekly and tested at Biobot Analytics in Massachusetts. Since mid-September 2023 testing has occurred once a week while federal testing contracts are on hold pending a contract dispute. Meanwhile, Biobot has continued to provide this weekly testing for free in the interim.
- Viral levels during October fluctuated between 523 and 1,481 copies/mL. The overall trend during October was relatively flat, but at a higher level than during September. (Figure, Table).
- The average October wastewater viral level of 1,177 copies/mL was higher than the viral averages for July through September; these levels were 365, 571, and 560 copies/mL, respectively.
- Notably, Yarmouth's October viral level trend differed from those seen in Portland's and Brunswick's wastewater samples. In contrast to Yarmouth's relatively flat trend, viral levels at Brunswick's and Portland's (East End) wastewater treatment facilities decreased by half during October with most of the decrease during the first half of the month.

Figure. Results of weekly Wastewater Testing for SARS-CoV-2 for Yarmouth, Maine, from May 3, 2022, through November 1, 2023.



COVID-19 Case Reports and Hospitalizations

- Cases of COVID-19 for Yarmouth averaged 10 cases per week for October 2–October 29, 2023, with a total of 41 cases reported to Maine CDC for this period. This is a marked increase from the average of 1.7 cases per week reported since early February 2023. *Comment:* Twenty-four of these 41 cases were reported during the week ending on October 22 and represent 21% of the 116 cases reported for all of Cumberland County during this week. It is unlikely that Yarmouth had this many cases during this week and such a high proportion of Cumberland County cases, and the report of 24 cases during this week may be an artifact of reporting or analysis.
- The total number and weekly average of case reports for Yarmouth during October were higher than those reported during any of the months since January 2023. (These 8 months had a monthly average of 7 cases and an average of less than 2 cases per week.)
- Elsewhere in Maine, reported COVID-19 case rates during October were highest in Aroostook County and lowest in Piscataquis County. Cumberland County’s case rate was slightly higher than the overall statewide rate.
- Although COVID-19 related hospitalization rates in Maine fluctuated during October and gradually increased toward the end of the month, they were much lower than rates were during October 2022 and most of winter 2023.
- COVID-19 related hospitalization rates and deaths are much higher among people 70 years of age and older than any other age group (almost 10 times higher).
- *Comment:* Reported case counts are likely to be lower than the actual number of cases due to reduced testing and increased self-testing (home testing), which is not reported to Maine CDC. Anecdotally, we hear that many in the community are using home testing and management.

We recommend that the Yarmouth Community continue to exercise caution:

- Get vaccinated and boosted. An updated monovalent booster based on the recently circulating variant (XBB.1.5) is now available in Maine. Appointments for vaccination with the updated booster are available at pharmacies in Yarmouth. The Yarmouth Public Health Council (formerly Yarmouth Community Coronavirus Task Force) is organizing a vaccination event for December 3, 2023, which will include children and adults.
- With the public health emergency lifted and low COVID-19 case counts and deaths, it is left to individuals to decide what exposures and risks are acceptable. In some situations, individuals may want the lowest

risk, while others may feel socialization is their highest priority. Note: persons who are immune compromised due to medical conditions or medical treatments should take particular care, as should those around them. To be cautious, when gathering with people at higher risk, test with a rapid antigen test.

- At a minimum, any time you have symptoms, isolate yourself from people and use a rapid antigen test for 2 days in a row to determine if you have COVID.
- If you test positive for COVID or believe you have a COVID infection, discuss the value of therapeutics with your doctor. These medications can shorten the course and severity of the illness and likely reduce transmission to others. In addition, tell the people you have been in contact with for 2 days prior to your positive test that they may have been exposed.
- If you have COVID, leave isolation only after you have a negative rapid antigen test.
- If you want the lowest risk of transmission,
 - Avoid crowded indoor spaces;
 - Consider wearing a mask in indoor public places, particularly if you are unvaccinated, 60 years of age or older, or immunocompromised; and
 - When indoors, ensure that there is good ventilation (air exchange).

The Yarmouth Wastewater Testing Team will continue to evaluate the testing results from the weekly samples. If there are significant changes, we will notify community members via the Yarmouth Public Health Council website (Be Well Yarmouth), the Yarmouth Community Coronavirus Task Force (YCCTF) Facebook site, and the Yarmouth Community Network Facebook sites.

Notes & Acknowledgement

Yarmouth's wastewater testing program for SARS-CoV-2 is currently collecting and testing one 24-hour composite wastewater sample each week. Samples are collected from 7 am Tuesday to 7 am Wednesday. Samples are sent to Biobot Analytics in Cambridge, Massachusetts for free testing.

The results of wastewater testing for Yarmouth and other locations in Maine are posted on the Maine CDC website: <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/coronavirus/wastewater-reports.shtml>. An overview of COVID-19 wastewater monitoring in the United States with graphs of testing data for the U.S. and selected U.S. counties, including 14 counties in Maine, is available from Biobot: <https://biobot.io/data/#county-25025>.

We would like to thank Chris Cline and Yarmouth Wastewater Treatment Facility staff for collecting the wastewater samples twice a week and Steve Johnson, Yarmouth's Town Engineer, for overseeing the wastewater testing program.

Table. Results of US CDC–Biobot wastewater testing for SARS-CoV-2 for Yarmouth, Maine, May 3, 2022–November 1, 2023

Sample Submission date†	EVC‡	Sample Submission date†	EVC‡	Sample Submission date†	EVC‡	Sample Submission date†	EVC‡
3 May 2022	1,292	29 Sept	1,078	28 Feb	413	18 Jul	227
5 May	1,612	4 Oct	1,186	2 Mar	453	20 Jul	218
10 May	1,903	6 Oct	1,906	7 Mar	1,026	25 Jul	172
12 May	1,156	11 Oct	2,236	9 Mar	498	27 Jul	176
17 May	2,047	18 Oct	1,204	14 Mar	716	1 Aug	687
19 May	4,447	20 Oct	3,452	16 Mar	483	3 Aug	215
24 May	692	25 Oct	1,065	21 Mar	308	8 Aug	29
26 May	1,174	27 Oct	398	23 Mar	504	10 Aug	759
31 May	1,207	1 Nov	353	28 Mar	538	16 Aug	848
2 June	660	3 Nov	667	30 Mar	462	17 Aug	512
7 June	499	8 Nov	975	4 Apr	184	23 Aug	757
9 June	684	10 Nov	617	6 Apr	248	24 Aug	992
14 June	2,619	15 Nov	865	11 Apr	1,887	30 Aug	603
16 June	502	17 Nov	1,398	13 Apr	571	31 Aug	311
21 June	1,022	22 Nov*	477	18 Apr	1,084	6 Sep	523
23 June	527	29 Nov	868	20 Apr	211	7 Sep	866
28 June	1,180	1 Dec	976	25 Apr	528	13 Sep	780
5 July	738	6 Dec	1,912	27 Apr	134	14 Sep	283
7 July	1,271	8 Dec	851	2 May	219	20 Sep	244
12 July	1,162	13 Dec	1,661	4 May	129	27 Sep	660
14 July	497	15 Dec	1,000	9 May	130	4 Oct	1,459
19 July	1,448	20 Dec*	556	11 May	179	11 Oct	1,246
21 July	864	27 Dec*	648	16 May	111	18 Oct	523
26 July	621	3 Jan 2023	1,409	18 May	213	25 Oct	1,481
28 July	1,616	5 Jan	1,237	23 May	1,145	1 Nov	703
2 Aug	652	10 Jan	915	25 May	659		
4 Aug	863	12 Jan	873	30 May	275		
9 Aug	1,887	17 Jan	1,114	1 Jun	212		
11 Aug	850	19 Jan	1,448	6 Jun	166		
16 Aug	1,052	24 Jan	1,158	8 Jun	133		
18 Aug	1,180	26 Jan	458	13 Jun	291		
25 Aug	1,468	31 Jan	2,072	15 Jun	81		
30 Aug	841	2 Feb	588	20 Jun	118		
1 Sept	1,775	7 Feb	1,524	22 Jun	151		
6 Sept	642	9 Feb	2,340	27 Jun	179		
8 Sept	578	14 Feb	1,993	29 Jun	554		
13 Sept	1,275	16 Feb	2,394	6 Jul	109		
15 Sept	2,063	21 Feb	377	11 Jul	307		
27 Sept	1,270	23 Feb	410	13 Jul	1,350		

† 24-hour influent wastewater samples are collected proportional to flow from 7am on day 1 to 7am on day 2. Day 2 is the sample submission date.

‡ EVC (Effective virus concentration expressed as copies/mL) is derived by adjusting the raw virus concentration to account for dilution and other factors.

*There was no testing on November 24, December 22, December 29, 2022, and July 4, 2023, due to holidays.