



Wastewater Epidemiology COVID-19 Report

Updated: 21-Dec-2023 | **Data Complete Through:** 17-Dec-2023

✉ wastewater@bphc.org



Boston Public
Health Commission

Report Contents



Summary

- Neighborhood Levels and Trends
- Citywide Overview and Trends
- BPHC Trend Overview by Neighborhood
- Citywide Percent Variant Lineages

Detailed Results

- Neighborhood Levels and Data Table
- Results by Neighborhood
 - Allston/Brighton
 - Back Bay
 - Charlestown
 - Dorchester
 - East Boston
 - Hyde Park
 - Jamaica Plain
 - Mattapan
 - Roslindale/West Roxbury
 - Roxbury
 - South Boston

Additional Information

- Site Status and Details
- Level and Trend Category Definitions
- Recommendations and Resources by Level

Level: **Very High**

Level: **High**

Level: **Moderate**

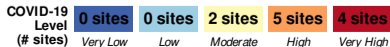
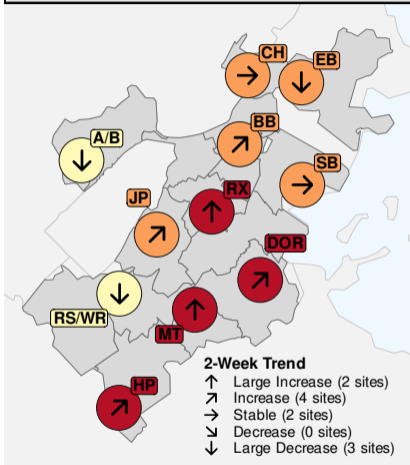
Level: **Low**

Level: **Very Low**

Neighborhood Levels and Trends



COVID-19 Wastewater Levels & Trends (17-Dec-2023)



BOSTON CITYWIDE COVID-19 LEVEL & TRENDS

COVID-19 LEVEL

Very High

1,864 copies/mL
samples through 17-Dec-2023

2-WEEK TRENDS



Increase
+351 copies/mL (+23%)

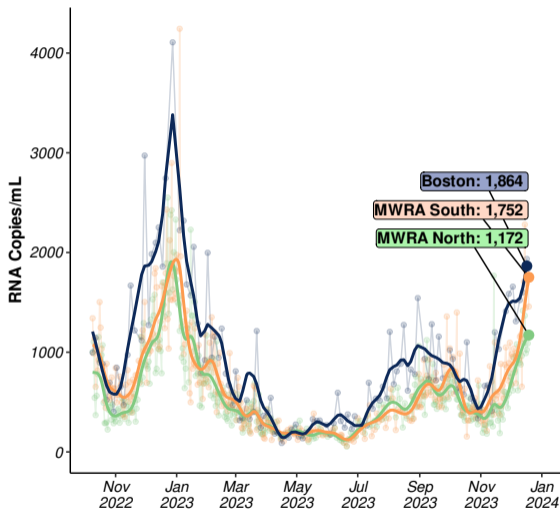
NEIGHBORHOOD SITES COVID-19 LEVEL & TRENDS

Level	Neighborhood/Site	Trend
Very High	Mattapan (MT)	↑ Large Increase
	Roxbury (RX)	↑ Large Increase
	Dorchester (DOR)	↗ Increase
	Hyde Park (HP)	↗ Increase
High	Jamaica Plain (JP)	↗ Increase
	Back Bay (BB)	↗ Increase
	South Boston (SB)	→ Stable
	Charlestown (CH)	→ Stable
	East Boston (EB)	↓ Large Decrease
Moderate	Allston/Brighton (A/B)	↓ Large Decrease
	Roslindale/West Roxbury (RS/WR)	↓ Large Decrease

For additional details see:

- [Results by Neighborhood](#)
- [Detailed Neighborhood Levels and Trends Table](#)
- [Trend and Level Category Definitions](#)

Citywide Overview and Trends



CITYWIDE
AVERAGE

1,864
RNA copies/mL

RANGE ACROSS 11
NEIGHBORHOOD SITES

814-3,278
RNA copies/mL

Data through: 17-Dec-2023

2-WEEK TRENDS

Boston
Increasing

+23%
over the past 14 days

MWRA North
Increasing

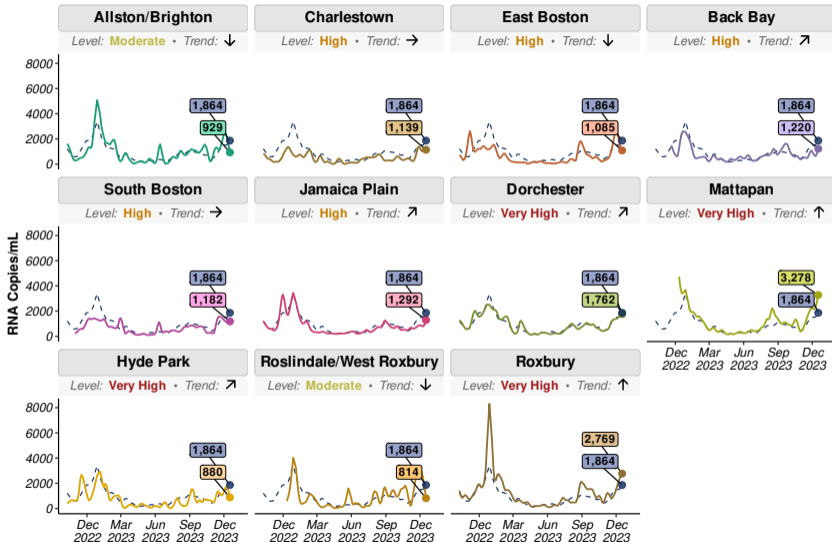
+43%
over the past 14 days

MWRA South
Increasing

+90%
over the past 14 days

Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (BPHC); 19-Dec-2023 (MWRA) | MWRA Data: <https://www.mwra.com/biobot/biobotdata.htm>

BPHC Trend Overview by Neighborhood

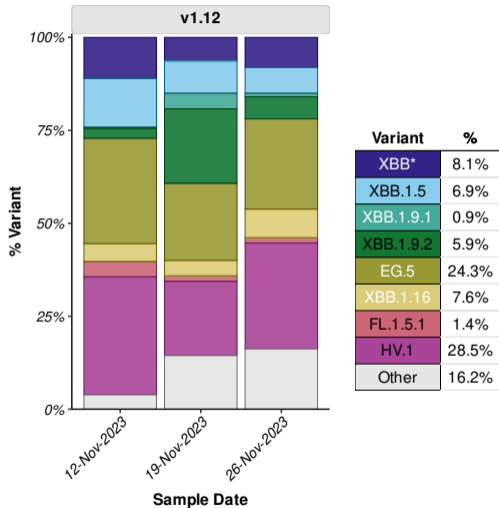


For each neighborhood, colored line and text box shows the smoothed trend and most recent value in that neighborhood;

The dotted blue line and dark blue text box in each panel shows the trend and most recent value across all Boston sites weighted by population.

To see details and interpretation of these results for an individual neighborhood see [Results by Neighborhood](#).

Citywide Percent Variant Lineages



Average variant percentage across all BPHC sites weighted by population size | Table shows variant percentages for samples collected the week of 26-Nov-2023 (most recent available data); Variant results are reported weekly with a 3-week lag due to laboratory processing and analysis.

Sequencing Analysis Protocol Version: v1.12 (04-Dec-2023):

- *XBB includes all XBB sublineages aside from those specifically reported
- "Other variants" contains all variants not explicitly quantified.

Version Changes: Added: • HV.1

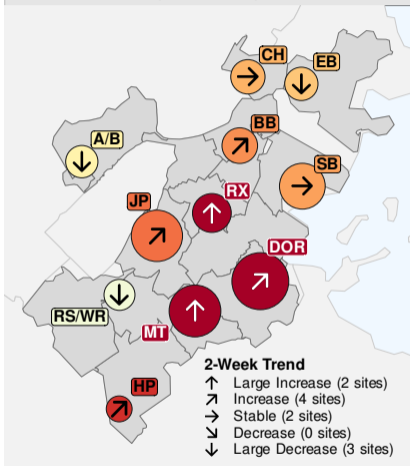
For Additional Info See:

<https://www.biobot.io/covid19-variants-report-notes/>

Neighborhood Levels and Data Table



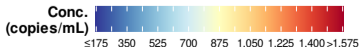
COVID-19 Wastewater Levels & Trends
(17-Dec-2023)



NH	COVID-19 Wastewater Levels		2-Week Trends		
	Conc. (copies/mL)	Level	Trend	Diff. (copies/mL)	% Change
BOSTON	1,864	Very High	Increase	+351	+23%
MT	3,278	Very High	Large Increase	+1,104	+51%
RX	2,769	Very High	Large Increase	+1,062	+62%
DOR	1,762	Very High	Increase	+358	+26%
HP	1,447	Very High	Increase	+281	+24%
JP	1,292	High	Increase	+416	+47%
BB	1,220	High	Increase	+323	+36%
SB	1,182	High	Stable	-44	-4%
CH	1,139	High	Stable	-10	-1%
EB	1,085	High	Large Decrease	-1,588	-59%
A/B	929	Moderate	Large Decrease	-1,587	-63%
RS/WR	814	Moderate	Large Decrease	-2,224	-73%

Concentration Levels: Very High: >1,400 copies/mL; High: 1,050-1,400 copies/mL; Moderate: 700-1,050 copies/mL; Low: 350-700 copies/mL; Very Low: ≤350 copies/mL

2-Week Trend Categories: Large Increase: >+500 copies/mL; Increase: +150 to +500 copies/mL; Stable: -150 to +150 copies/mL; Decrease: -500 to -150 copies/mL; Large Decrease: ≤-500 copies/mL



Results by Neighborhood



- Allston-Brighton (A/B)
- Back Bay (BB)
- Charlestown (CH)
- Dorchester (DOR)
- East Boston (EB)
- Hyde Park (HP)
- Jamaica Plain (JP)
- Mattapan (MT)
- Roslindale/West Roxbury (RS/WR)
- Roxbury (RX)
- South Boston (SB)

Allston/Brighton

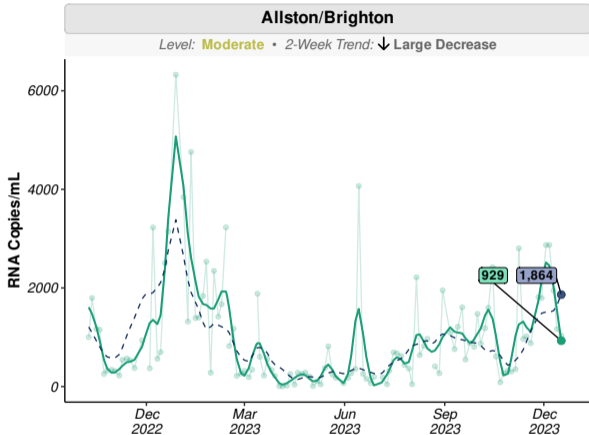


Level: **Moderate**

- Average value in **A/B** over the past week: **929** copies/mL.
- This value is **moderate** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: **↓ Large Decrease**

- Over the past two weeks, values in **A/B** are **decreasing**.
- Change compared to two weeks ago: **-1,587** copies/mL (**-63%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (A/B);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Back Bay

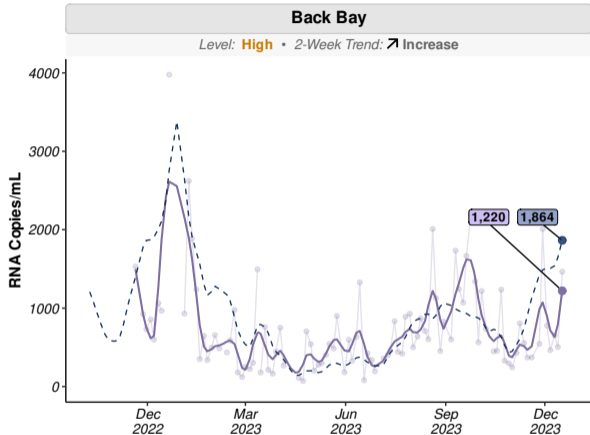


Level: **High**

- Average value in **BB** over the past week: **1,220** copies/mL.
- This value is **high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: ↗ **Increase**

- Over the past two weeks, values in **BB** are **increasing**.
- Change compared to two weeks ago: **+323** copies/mL (**+36%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (BB);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Charlestown

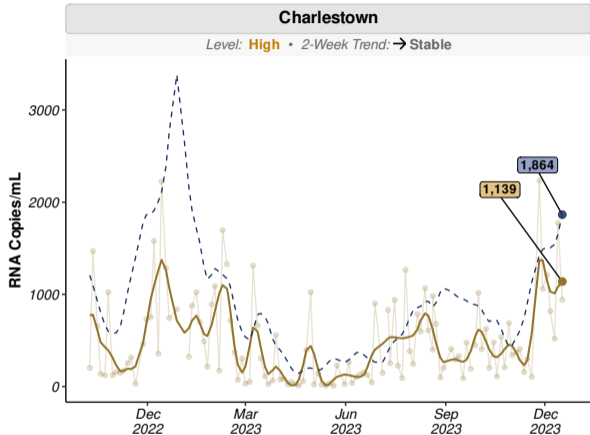


Level: **High**

- Average value in **CH** over the past week: **1,139** copies/mL.
- This value is **high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: → **Stable**

- Over the past two weeks, values in **CH** are **stable**.
- Change compared to two weeks ago: **-10** copies/mL (-1%).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (CH);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Dorchester

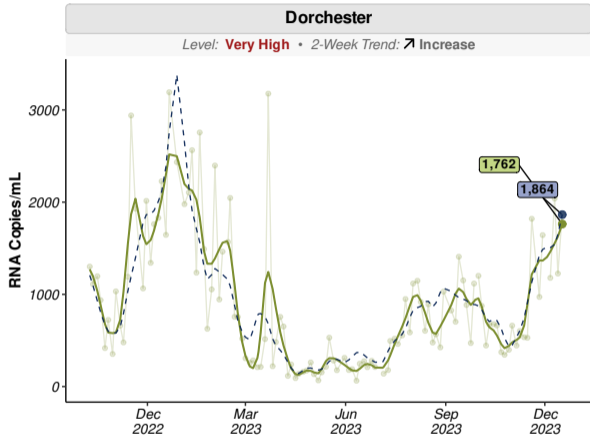


Level: **Very High**

- Average value in **DOR** over the past week: **1,762** copies/mL.
- This value is **very high** compared to past values and **similar** than the citywide average (**1,864** copies/mL).

Trend: **↗ Increase**

- Over the past two weeks, values in **DOR** are **increasing**.
- Change compared to two weeks ago: **+358** copies/mL (**+26%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (DOR);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

East Boston

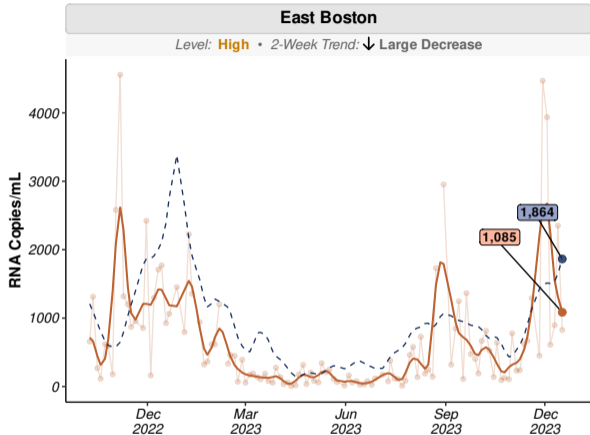


Level: **High**

- Average value in **EB** over the past week: **1,085** copies/mL.
- This value is **high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: **↓ Large Decrease**

- Over the past two weeks, values in **EB** are **decreasing**.
- Change compared to two weeks ago: **-1,588** copies/mL (**-59%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (EB);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Hyde Park

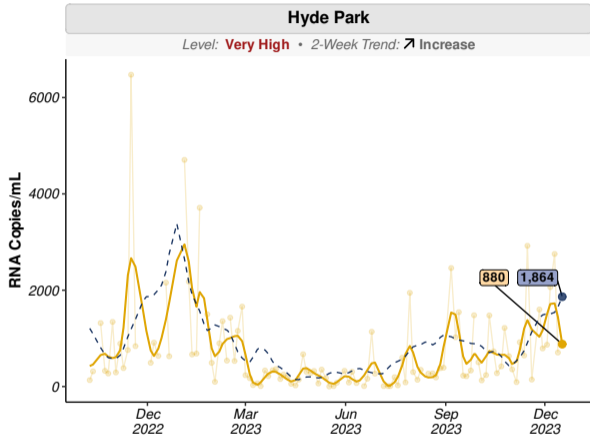


Level: **Very High**

- Average value in **HP** over the past week: **1,447** copies/mL.
- This value is **very high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: ↗ **Increase**

- Over the past two weeks, values in **HP** are **increasing**.
- Change compared to two weeks ago: **+281** copies/mL (**+24%**).



Updated: 21-Dec-2023 | Samples through: 13-Dec-2023 (HP);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Jamaica Plain

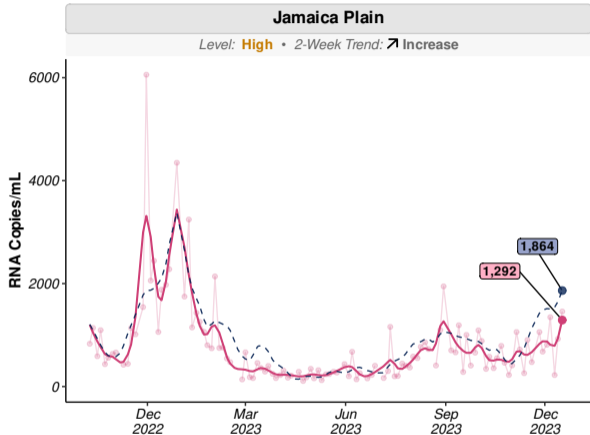


Level: **High**

- Average value in **JP** over the past week: **1,292** copies/mL.
- This value is **high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: ↗ **Increase**

- Over the past two weeks, values in **JP** are **increasing**.
- Change compared to two weeks ago: **+416** copies/mL (**+47%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (JP);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Mattapan

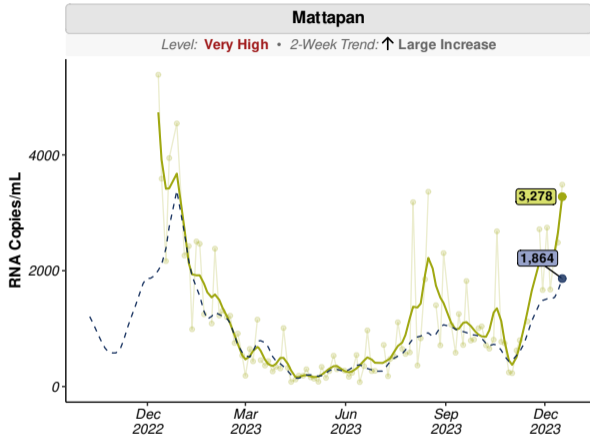


Level: **Very High**

- Average value in **MT** over the past week: **3,278** copies/mL.
- This value is **very high** compared to past values and **higher** than the citywide average (**1,864** copies/mL).

Trend: **↑ Large Increase**

- Over the past two weeks, values in **MT** are **increasing**.
- Change compared to two weeks ago: **+1,104** copies/mL (**+51%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (MT);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Roslindale/West Roxbury

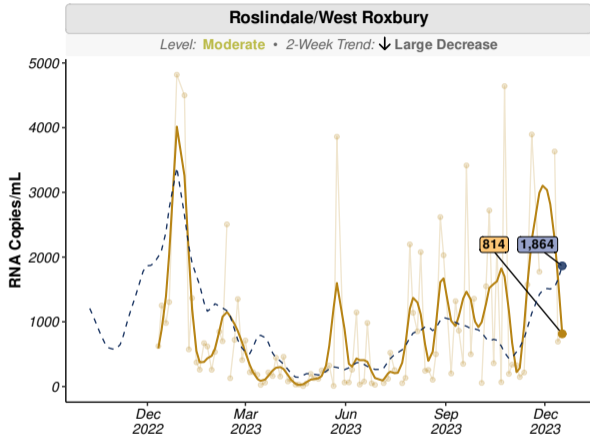


Level: **Moderate**

- Average value in **RS/WR** over the past week: **814** copies/mL.
- This value is **moderate** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: **↓ Large Decrease**

- Over the past two weeks, values in **RS/WR** are **decreasing**.
- Change compared to two weeks ago: **-2,224** copies/mL (**-73%**).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (RS/WR);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Roxbury

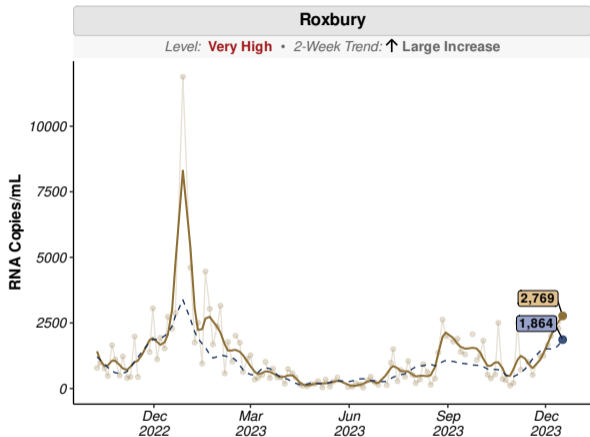


Level: **Very High**

- Average value in **RX** over the past week: **2,769** copies/mL.
- This value is **very high** compared to past values and **higher** than the citywide average (**1,864** copies/mL).

Trend: **↑ Large Increase**

- Over the past two weeks, values in **RX** are **increasing**.
- Change compared to two weeks ago: **+1,062** copies/mL (+62%).



Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (RX);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

South Boston

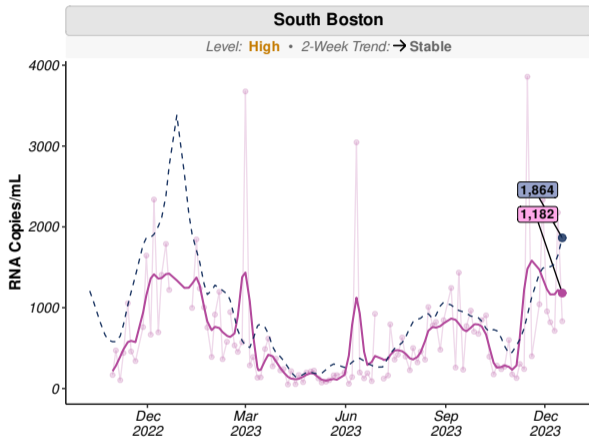


Level: **High**

- Average value in **SB** over the past week: **1,182** copies/mL.
- This value is **high** compared to past values and **lower** than the citywide average (**1,864** copies/mL).

Trend: → **Stable**

- Over the past two weeks, values in **SB** are **stable**.
- Change compared to two weeks ago: **-44** copies/mL (**-4%**).



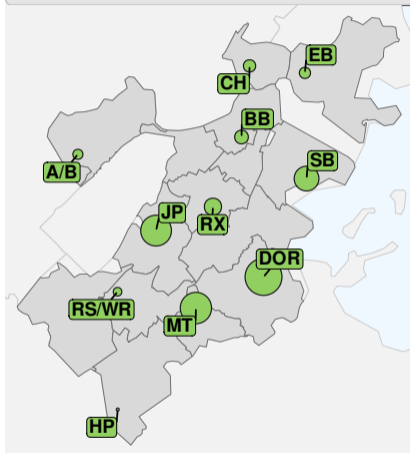
Updated: 21-Dec-2023 | Samples through: 17-Dec-2023 (SB);

See [recommended actions and resources](#) based on levels and trends in this neighborhood.

Site Status and Details



Status of Sampling Sites (22-Dec-2023)



#	Neighborhood	Date Site Confirmed	Site Status	Pop. Covered	% Neighborhood Covered
01	A/B	02-Oct-2022	Active	2,684	4.0%
02	CH	02-Oct-2022	Active	3,736	18.3%
03	EB	02-Oct-2022	Active	3,178	6.3%
04	BB	20-Nov-2022	Active	4,551	8.1%
05	SB	30-Oct-2022	Active	14,962	35.8%
07	JP	02-Oct-2022	Active	23,573	56.9%
08	DOR	02-Oct-2022	Active	34,562	23.8%
09	MT	11-Dec-2022	Active	24,441	80.5%
10	HP	02-Oct-2022	Active	1,262	3.5%
11	RS/WR	11-Dec-2022	Active	2,165	3.5%
12	RX	02-Oct-2022	Active	7,036	16.5%

Site Status
(N=11) **a** Active
(n=11)

Level and Trend Category Definitions



Concentration Levels

Concentration Level	Concentration Value (Copies/mL)
Very High	>1,400
High	1,050-1,400
Moderate	700-1,050
Low	350-700
Very Low	≤350

2-Week Trend Categories

	Trend Category	Trend Value (Copies/mL)
↑	Large Increase	>+500
↗	Increase	+150 to +500
→	Stable	-150 to +150
↘	Decrease	-500 to -150
↓	Large Decrease	≤-500

Level: **Very High**



Wastewater viral levels in your neighborhood indicate **very high risk** of COVID-19 infection.

Based on this level, BPHC urgently recommends the following practices to prevent COVID-19 in your community:

- Wear a [high-quality mask or respirator](#)
- If you are at [high risk of getting very sick](#), consider limiting non-essential indoor activities in public where you could be exposed.
- If you have close contact with someone at [high risk of getting very sick](#), consider self-testing to detect infection before contact, and consider wearing a high-quality mask when indoors with them
- Stay up-to-date on [vaccinations](#).
- Seek testing and possible treatment if you get sick
- Stay home when sick and avoid contact with others who are sick
- Improve [indoor airflow and ventilation](#)
- Wash your hands often and cover coughs and sneezes
- Follow CDC recommendations for [isolation](#) if you have COVID-19 and for [what to do if you are exposed](#) to someone with COVID-19

RESOURCES

- Find a [vaccination clinic](#) in your neighborhood
- Find a [testing site](#) or pickup a [free at-home test kit](#) in your neighborhood
- Find [treatment](#) for COVID-19 including [free telehealth](#) and [in home treatment](#).
- Call or visit the [Mayor's Health Line](#)
- Learn more about COVID-19 and find additional resources: [COVID-19: Know the Facts Find the Truth](#)

Level: High



Wastewater viral levels in your neighborhood indicate **high risk** of COVID-19 infection.

Based on this level, BPHC strongly recommends the following practices to prevent COVID-19 in your community:

- Wear a [high-quality mask or respirator](#)
- If you have close contact with someone at [high risk of getting very sick](#), consider self-testing to detect infection before contact, and consider wearing a high-quality mask when indoors with them
- Stay up-to-date on [vaccinations](#).
- Seek testing and possible treatment if you get sick
- Stay home when sick and avoid contact with others who are sick
- Improve [indoor airflow and ventilation](#)
- Wash your hands often and cover coughs and sneezes
- Follow CDC recommendations for [isolation](#) if you have COVID-19 and for [what to do if you are exposed](#) to someone with COVID-19

RESOURCES

- Find a [vaccination clinic](#) in your neighborhood
- Find a [testing site](#) or pickup a [free at-home test kit](#) in your neighborhood
- Find [treatment](#) for COVID-19 including [free telehealth](#) and [in home treatment](#).
- Call or visit the [Mayor's Health Line](#)
- Learn more about COVID-19 and find additional resources: [COVID-19: Know the Facts Find the Truth](#)



Level: Moderate

Wastewater viral levels in your neighborhood indicate **moderate risk** of COVID-19 infection.

Based on this level, BPHC recommends the following practices to prevent COVID-19 in your community:

- If you are at [high risk of getting very sick](#), wear a [high-quality mask or respirator](#) in public indoor spaces
- If you have close contact with someone at [high risk of getting very sick](#), consider self-testing to detect infection before contact, and consider wearing a high-quality mask when indoors with them
- Stay up-to-date on [vaccinations](#).
- Seek testing and possible treatment if you get sick
- Stay home when sick and avoid contact with others who are sick
- Improve [indoor airflow and ventilation](#)
- Wash your hands often and cover coughs and sneezes
- Follow CDC recommendations for [isolation](#) if you have COVID-19 and for [what to do if you are exposed](#) to someone with COVID-19

RESOURCES

- Find a [vaccination clinic](#) in your neighborhood
- Find a [testing site](#) or pickup a [free at-home test kit](#) in your neighborhood
- Find [treatment](#) for COVID-19 including [free telehealth](#) and [in home treatment](#).
- Call or visit the [Mayor's Health Line](#)
- Learn more about COVID-19 and find additional resources: [COVID-19: Know the Facts Find the Truth](#)

Level: **Low**



Wastewater viral levels in your neighborhood indicate **low risk** of COVID-19 infection.

Based on this level, BPHC recommends the following practices to prevent COVID-19 in your community:

- **Continue to monitor wastewater levels and trends**
- Stay up-to-date on [vaccinations](#).
- Seek testing and possible treatment if you get sick
- Stay home when sick and avoid contact with others who are sick
- Improve [indoor airflow and ventilation](#)
- Wash your hands often and cover coughs and sneezes
- Follow CDC recommendations for [isolation](#) if you have COVID-19 and for [what to do if you are exposed](#) to someone with COVID-19

RESOURCES

- Find a [vaccination clinic](#) in your neighborhood
- Find a [testing site](#) or pickup a [free at-home test kit](#) in your neighborhood
- Find [treatment](#) for COVID-19 including [free telehealth](#) and [in home treatment](#).
- Call or visit the [Mayor's Health Line](#)
- Learn more about COVID-19 and find additional resources: [COVID-19: Know the Facts Find the Truth](#)



Level: **Very Low**

Wastewater viral levels in your neighborhood indicate **very low risk** of COVID-19 infection.

Based on this level, BPHC recommends the following practices to prevent COVID-19 in your community:

- **Continue to monitor wastewater levels and trends**
- Stay up-to-date on [vaccinations](#).
- Seek testing and possible treatment if you get sick
- Stay home when sick and avoid contact with others who are sick
- Improve [indoor airflow and ventilation](#)
- Wash your hands often and cover coughs and sneezes
- Follow CDC recommendations for [isolation](#) if you have COVID-19 and for [what to do if you are exposed](#) to someone with COVID-19

RESOURCES

- Find a [vaccination clinic](#) in your neighborhood
- Find a [testing site](#) or pickup a [free at-home test kit](#) in your neighborhood
- Find [treatment](#) for COVID-19 including [free telehealth](#) and [in home treatment](#).
- Call or visit the [Mayor's Health Line](#)
- Learn more about COVID-19 and find additional resources: [COVID-19: Know the Facts Find the Truth](#)