

## Save the Harbor/Save the Bay Metropolitan Region's Public Beaches Red Flag Accuracy

Released: July 30, 2022 | Prepared by Caroline Adamson

Beach	Overall Red Flag Accuracy for 2020-2021 Beach Seasons	2021 total postings	2021 Accuracy	2020 total postings	2020 Accuracy
Nahant	0%	5	0%	1	0%
King's	29%	57	25%	59	34%
Revere	no postings	0	n.p.	0	n.p.
Short	0%	2	0%	0	n.p.
Winthrop	no postings	0	n.p.	0	n.p.
Constitution	15%	18	17%	2	0%
Carson	25%	4	25%	0	n.p.
M St	33%	3	33%	0	n.p.
City Point	0%	2	0%	0	n.p.
Pleasure Bay	0%	2	0%	0	n.p.
Malibu	27%	43	35%	23	13%
Savin Hill	20%	14	21%	1	0%
Tenean	41%	52	54%	50	28%
Wollaston	25%	42	36%	38	13%
Nantasket	no postings	0	n.p.	0	n.p.
<b>All Beaches</b>	<b>29%</b>	<b>244</b>	<b>33%</b>	<b>174</b>	<b>24%</b>

Chris Van Buskirk | May 28, 2022

## Is the water at your beach safe? New report card finds issues with protocols used for water quality flags at Boston Harbor beaches



Nahant Beach on the North Shore. The long, narrow beach opens up at low tide into a wide plane of shallow water and shimmering sand.

A new water quality report card for Boston Harbor beaches released Saturday points to accuracy issues with protocols the state uses to advise beachgoers on whether beach water is safe to swim in — even as most public swimming spots scored high marks in 2021.

Save the Harbor/Save the Bay's 2022 Metropolitan Beaches Water Quality Report card found the overall water quality safety rating for beaches managed by the Department of Conservation and Recreation in the Boston Harbor region was 86%, down from 93% in 2020. The six-year average safety rating (2016-2021) for the beaches was 92%, according to the scorecard.

The scorecard covers Pleasure Bay, City Point, Nantasket, M Street, Carson, Revere, Winthrop, Constitution, Nahant, Short, Wollaston, Savin Hill, Malibu, King's, and Tenean beaches. Pleasure Bay scored highest with a 100% six-year average water quality rating while Tenean found itself at the bottom of the list with a 77% six-year average.

But there's an issue with water evaluation protocols the Department of Public Health uses that help inform water quality postings and flags, Save the Harbor/Save the Bay contends.

The Department of Conservation and Recreation uses a color-coded flag system to indicate the water quality of public swimming beaches based on data from the Department of Public Health. Blue flags mean clean water and red flags advise people to stay out of the water.

Save the Harbor/Save the Bay Executive Director Chris Mancini said the organization

looked at Constitution Beach in East Boston, where 75% of red flags in 2021 and 100% of red flags in 2020 were incorrect.

Red flags are posted based on water quality sampling, which takes a whole day to process, Mancini said. That means that a red flag today is based on the previous day's data, he said.

"If it rains on Monday, and I take a water quality test on Monday and then on Tuesday, I get the result and it says the water is dirty," Mancini told MassLive. "I post the red flag on Tuesday but I had a blue flag up on Monday when it was actually dirty. And I have a red flag up on Tuesday when it might be clean or might be dirty."

A spokesperson for the Department of Public Health said the department's standards for evaluating water quality are based on federal criteria for measuring specific bacteria in samples of water.

"When the bacteria levels exceed these standards, DPH regulations requires that a beach operator 'post' a warning to alert the public to the possible risks of illness due to swimming," the DPH spokesperson said.

Whenever water quality is unsafe, a beach operator must post signs at the entrance to the beach stating "WARNING! NO SWIMMING, SWIMMING MAY CAUSE ILLNESS," according to the DPH.

"DPH as an agency does not operate any beaches and does not have any 'flagging protocols' to indicate when a beach is posted," the DPH spokesperson said, referring additional

questions about the flagging system to the Department of Conservation and Recreation.

Department of Conservation and Recreation spokesperson Ryan Hutton said the agency's coastal and inland beaches are some of the cleanest in the country and the department is "proud to safeguard these invaluable natural resources." Officials at the department are still reviewing the water quality report card.

"Additionally, the Baker-Polito Administration is working to direct nearly \$270 million in funding through the FORWARD Act and other legislation to improve water quality throughout the state," Hutton said, referring to legislation that created a water pollution abatement fund and allocated money for water and sewer infrastructure projects.

The Department of Conservation and recreation conducts required DPH weekly water quality testing at all agency-managed waterfronts from the week before Memorial Day to Labor Day, according to the agency. Daily testing occurs after June 11 at Lynn Shore, Constitution, Wollaston, Tenean, and Malibu beaches.

Save the Harbor/Save the Bay Strategy and Communications Director Bruce Berman said there's a simple fix to the flagging issue.

"Simply installing an accurate and accessible rain gauge and making the information available online in real-time with a QR code would provide better information," he said. "We can — and should — do better than the current system, which relies on yesterday's results which are a terrible predictor of today's water quality."

Mancini said a rain gauge could help improve accuracy because historical data shows when there is more rain in a specific location, bacteria can spike. Staff located at beaches could post a water quality advisory flag based on how much water is collected in a rain gauge, Mancini said.

"So again, because the flags are so inaccurate right now — 75% of the time last year, 100% of the time the year before — we think doing modeling and using the rain as a predictor can help us be more accurate," Mancini said.

The DPH spokesperson said the department maintains "a near real-time" public website that displays marine water quality testing results.

"Laboratories that test the water daily at the marine beaches enter testing results directly into a secure part of the website and the website identifies samples that exceed established standards," the spokesperson said. "The website is updated twice daily for the public and includes simple text that is available for browser-based translation technology."



Chirs Van Buskirk | July 30, 2022

## **‘Better off flipping a coin’: Beach advocacy organization wants state review of water quality flagging accuracy for ocean beaches**

A beach advocacy organization is calling on Massachusetts Health and Human Services Secretary Marylou Sudders to direct the state Department of Public Health to review water quality flagging accuracy for all ocean beaches in the state, arguing the system used to broadcast if water is safe to swim in is “fundamentally flawed.”

Save the Harbor/Save the Bay, an organization focused on metropolitan beaches in the greater Boston area, argues accuracy is flawed and needs to be “fixed” because flags are based on water quality results from the day before.

“It appears as if you would be better off flipping a coin than believing a red flag on our ocean beaches,” Save the Harbor/Save the Bay Executive Director Chris Mancini said in a statement earlier this week. “The results are not surprising, but they are very disappointing. For example, half-way through the summer, 100% of the required postings and corresponding red flags on Constitution Beach in East Boston have been wrong.”

Operators of ocean beaches in Massachusetts, in some cases the Department of Conservation and Recreation, oversee water quality tests that are sent off to labs and processed over the course of 24 hours.

Those results are then used to inform water quality flags — red means stay out of the water, blue means clean water. The water quality testing criteria is approved by the

Department of Public Health, and results are posted on their website that DPH has said is “near real-time.”

In a statement to MassLive, a spokesperson for the Department of Public Health said the agency is responsible for issuing permits to operate beaches at state property and provides training to local health departments. It is the responsibility of the beach operator “to ensure that day-to-day operation is conducted.”

“Under the regulations both state and local beach operators are required to regularly monitor water quality and notify DPH immediately when the water is unsafe for swimming,” DPH said. “The regulations require that the notification be immediately followed by, or conducted concurrently with, the physical posting of signs at the beach that warn visitors that the water is unsafe for swimming.

Save the Harbor/Save the Bay reviewed postings for all 15 public beaches in the greater Boston area and found the accuracy ranged from 0% to 46% between 2016 and 2021, “and we expect that the same is true for all ocean beaches in Massachusetts,” their statement said.

DCR officials previously told MassLive that the agency conducts required weekly water quality testing at all of their managed waterfronts from the week before Memorial Day to Labor Day. Daily testing, DCR spokesperson Ryan Hutton said, starts after June 11 at Lynn Shore, Constitution, Wollaston, Tenean and Malibu beaches.

“The Massachusetts Department of Conservation and Recreation’s coastal and inland beaches have been, and continue to be, some of the cleanest beaches in the country, and the agency is proud to safeguard these,” Hutton said in a May statement to MassLive.

A DPH spokesperson previously told MassLive that standards for evaluating water quality are based on U.S. Environmental Protection Agency criteria “for measuring laboratory determined enumeration of specific bacteria in samples of water.”

“When the bacteria levels exceed these standards, DPH regulations requires that a beach operator ‘post’ a warning to alert the public to the possible risks of illness due to swimming,” the department has said. “DPH as an agency does not operate any beaches and does not have any ‘flagging protocols’ to indicate when a beach is posted.”

Save the Harbor Policy Assistant Caroline Adamson said an analysis of data dating back to 2016 suggests “precautionary postings” based on the previous day’s rainfall are more than twice as accurate.

“Though [DPH] recently called the postings ‘near real time,’ under the current posting protocol for the Metropolitan Beaches, and most of the Commonwealth’s other ocean beaches, results are posted at least a full day after the samples are taken, so they are always at least 24 hours old and out of date,” the organization said.

## Opinion | Beach flags flunk the accuracy test

By Chris Mancini



A red flag warning of unsafe water quality for swimmers at Malibu Beach in Dorchester in June 2020. Photo by Bill Forry

The current posting system for Massachusetts ocean beaches is fundamentally flawed and needs to be fixed

Last week, Save the Harbor/Save the Bay issued a report on beach postings on the Metropolitan Region’s ocean beaches owned by the Commonwealth and managed by DCR. Based on our review of 2020-2021 data from 15 beaches from Nahant to Nantasket, on average 80 percent of the postings and corresponding red flags were wrong.

On the Dorchester beaches, posting accuracy was under 30 percent, a failing grade by any standard. It appears as if you would be better off flipping a coin than believing a red flag on our ocean beaches.

The study, conducted by our Director of Strategy & Communications Bruce Berman and Policy Assistant Caroline Adamson, focused on the Metropolitan Region’s public beaches. However, our analysis suggests that this is a statewide problem, affecting nearly every ocean beach in Massachusetts.

The first step towards solving a problem is to acknowledge that you have one. Unfortunately, the Department of Public

Health (DPH) seems to have buried their heads in the sand, recently calling beach postings “near real time” though results are always at least 24 hours old and out of date. To suggest that posting outdated results that are nearly always wrong protects the public health is inaccurate and misleading.

This situation is made worse by the fact that DPH’s water quality website, maintained by their Bureau of Environmental Health (BEH) is only available in English, and the site has not been updated since 2001, despite repeated requests from the Metropolitan Beaches Commission and Save the Harbor. This is particularly important for Environmental Justice communities in Boston and elsewhere.

For many of our ocean beaches, there may be a better way. For example, our preliminary analysis of the data for Constitution Beach in East Boston suggests that “precautionary postings” based on the previous day’s rainfall are more than twice as accurate as the required postings.

That’s one reason we have called on Health and Human Services Secretary Marylou Sudders to instruct the DPH to

conduct a comprehensive review of posting accuracy on our ocean beaches. We are also calling on DPH and the BEH to update and translate their website, as nearly every other state agency has done, and make information about water quality on the Metropolitan Beaches available to all the region’s residents, no matter what language they speak.

In his very first order in the Boston Harbor Cleanup case, the late U.S. District Court Judge A. David Mazzone said: “The law secures to the people the right to clean water.” Inaccurate postings like these rob people of their right to enjoy the benefits of our great public investment in the Boston Harbor cleanup.

Unless or until every beach is safe for swimming every day, we are going to need posts and flags to inform and protect the public. Until we fix the current posting and flagging system, both DPH and DCR need to tell the truth about the accuracy of beach postings and flags. You might as well flip a coin.

Chris Mancini is the executive director of Save the Harbor/Save the Bay.

Beach	Overall Posting Accuracy for 2020-2021 Beach Seasons	2021 total postings	2021 Accuracy	2020 total postings	2020 Accuracy
Nahant	0%	5	0%	1	0%
King's	29%	57	25%	59	34%
Revere	no postings	0	n.p.	0	n.p.
Short	0%	2	0%	0	n.p.
Winthrop	no postings	0	n.p.	0	n.p.
Constitution	15%	18	17%	2	0%
Carson	25%	4	25%	0	n.p.
M St	33%	3	33%	0	n.p.
City Point	0%	2	0%	0	n.p.
Pleasure Bay	0%	2	0%	0	n.p.
Malibu	27%	43	35%	23	13%
Savin Hill	20%	14	21%	1	0%
Tenean	41%	52	54%	50	28%
Wollaston	25%	42	36%	38	13%
Nantasket	no postings	0	n.p.	0	n.p.
<b>All Beaches</b>	<b>29%</b>	<b>244</b>	<b>33%</b>	<b>174</b>	<b>24%</b>