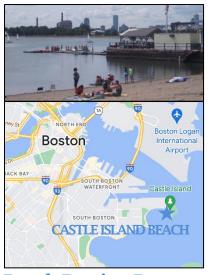
## Water quality at Castle Island Beach meets swimming standards nearly all the time.

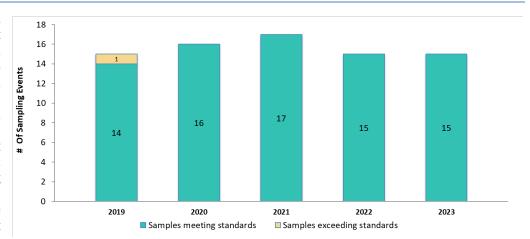




In the last five years, 98% to 100% of water samples have met swimming standards at Castle Island Beach. To meet the standard, a single sample must have *Enterococcus\** levels of less than 104 counts in 100 milliliters (mL) of a beach water sample. Water samples are collected at Castle Island Beach and analyzed in a laboratory to determine the *Enterococcus* counts. Dark teal represents the proportion of samples meeting the standard, 104 counts per 100 mL of water or less; light yellow represents the proportion with higher than 104 counts per 100 mL of water. Small numbers in the charts represent the number of samples collected each year.

## **Beach Posting Program**

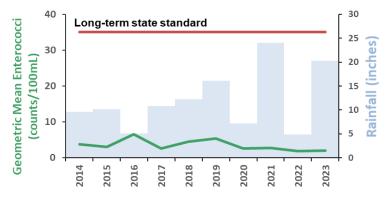
Water quality at Castle Island Beach is monitored throughout the swimming season compliance with Massachusetts Department of Public Health beach testing guidelines, approximately from Memorial Day to Labor Day of each year. The Massachusetts Department of Conservation and Recreation manages the beach posting program at Castle Island Beach, displaying blue flags at the beach when bacteria levels meet single sample limits (less than



104 counts of *Enterococcus* per 100 mL of water), and red flags when bacteria levels fail to meet the limit. Red flags are also flown following extreme weather events. The main source of bacteria at Castle Island Beach in dry weather is from animal waste (usually birds and dogs). After heavy rain, bacteria can also be caused by stormwater runoff.

## **Historical Beach Water Quality and Rainfall**

## Castle Island Beach bacteria counts remain low even in years with more rainfall



Enterococcus is a bacterial indicator of human and animal waste in marine waters, and its presence helps environmental managers determine if conditions may be unsafe for swimming. In addition to the single sample standard above, the Massachusetts Department of Environmental Protection requires that long-term Enterococcus levels are below a long-term standard of 35 counts per 100 mL of water in all recreational swimming areas. Long-term averages at Castle Island Beach have historically been well below this threshold, even in seasons with heavy rain.

<sup>\*</sup> Enterococcus is a bacteria used as an indicator of fecal contamination in ocean water