

California State law requires Local Health Officers to test waters of public beaches or bays for microbiological contaminants and to inform the public when a beach is closed, posted under advisory, or may pose public health risks. The State health standards use fecal indicator bacteria commonly found in human or animal feces that are indicators for other pathogens that could make you sick and may be present in the water. In May 2022, San Diego County became the first Federal and State approved coastal county in the nation to begin using a new droplet digital polymerase chain reaction (ddPCR) testing method that offers more rapid results to inform the public of the water quality conditions within the same day. This method looks for bacterial DNA which has proven to be more precise and protective of public health. The following chart compares the previous culture-based testing method with the new ddPCR method. For up-to-date information on beach water quality visit www.sdbeachinfo.com.

Subject	Previous Culture Based Method	New ddPCR Method
Testing For	Fecal indicator bacteria, which are commonly found in human or animal feces and indicators for pathogens that contaminate water and cause illness.	Fecal indicator bacteria, which are commonly found in human or animal feces and indicators for pathogens that contaminate water and cause illness.
Illness/Disease Risks	gastroenteritis, respiratory disease, fever, rashes, paralysis, meningitis, infections in bloodstream, diarrhea.	gastroenteritis, respiratory disease, fever, rashes, paralysis, meningitis, infections in bloodstream, diarrhea.
Testing Method	Culture water samples to measure the presence of live bacteria growth for three types of fecal indicator bacteria, which indicate that other pathogens may be present that can cause illness.	Amplify DNA in water samples to measure fecal indicator bacteria (live or dead bacteria presence of other pathogens or viruses) which indicate that other pathogens may be present that can cause illness.
Enterococcus Contamination Thresholds (State Health Standards)	If there are more than 104 bacteria per 100 ml, the sample exceeds State health standards and actions such as closures or advisories may be taken.	If there are more than 1,413 DNA copies of bacteria per 100 ml, the sample exceeds State health standards and actions such as closures or advisories may be taken. The ddPCR State health standard threshold value of 1413 DNA copies of bacteria per 100 ml. water is equivalent to the culture State health standard of 104 bacteria per 100 ml. water.
Determination of Contamination Thresholds (State Health Standards)	State Regulations developed by CA Department of Public Health.	State Regulations developed by CA Department of Public Health.
Beach Advisories Issued Health & Safety Code 115875 - 115915	Bacterial Exceedance Advisory is issued when ocean or bay water sample results exceed State health standards due to high bacteria levels. <i>Example of an advisory: Enterococcus test results from a beach show 104 organisms/bacteria per 100 ml, the sample exceeds State health standards, and an advisory is issued.</i>	Bacterial Exceedance Advisory is issued when ocean or bay water sample results exceed State health standards due to high bacteria levels. <i>Example of an advisory: Enterococcus test results from a beach shows 1413 organisms/bacteria per 100 ml, the sample exceeds State health standards, and an advisory is issued.</i>
Beach Closures Issued Health & Safety Code 115875 – 115915	Water contact closure is issued in the event of a known untreated sewage release adjacent to a public beach or a sewage release that is known to have reached the recreational waters. <i>Example of a closure: A sewage release impacts beach water. Enterococcus test results show 104 organisms/bacteria per 100 ml, the sample exceeds State health standards, and a closure is issued.</i>	Water contact closure is issued in the event of a known untreated sewage release adjacent to a public beach or a sewage release that is known to have reached the recreational waters. <i>Example of a closure: A sewage release impacts beach water. Enterococcus test results show 1413 organisms/bacteria per 100 ml, the sample exceeds State health standards, and a closure is issued.</i>
Timing of Results	24 hours/next day	6-10 hours/same day
Testing Frequency (South County Beach Locations)	Daily	Daily
Method Authorization	CA Department of Public Health	United States Environmental Protection Agency CA Department of Public Health
Laboratory Certification Approval	CA Water Board Environmental Laboratory Accreditation Program (ELAP)	CA Water Board Environmental Laboratory Accreditation Program (ELAP)