



Maryland Healthy Beaches

2016 Progress Report

Maryland beaches met water quality requirements and were open for swimming nearly 99 percent of the time last summer. These results show that Marylanders continue to enjoy healthy beaches in their neighborhoods, along the Chesapeake Bay and in Ocean City.

This success was obtained through partnerships between the Maryland Department of the Environment and local jurisdictions that ensure waters are regularly sampled for monitoring and that pollution sources are identified and mitigated or eliminated. Maryland has many programs in place to reduce pollution and protect water quality. Information on beach conditions is available and easily accessible.

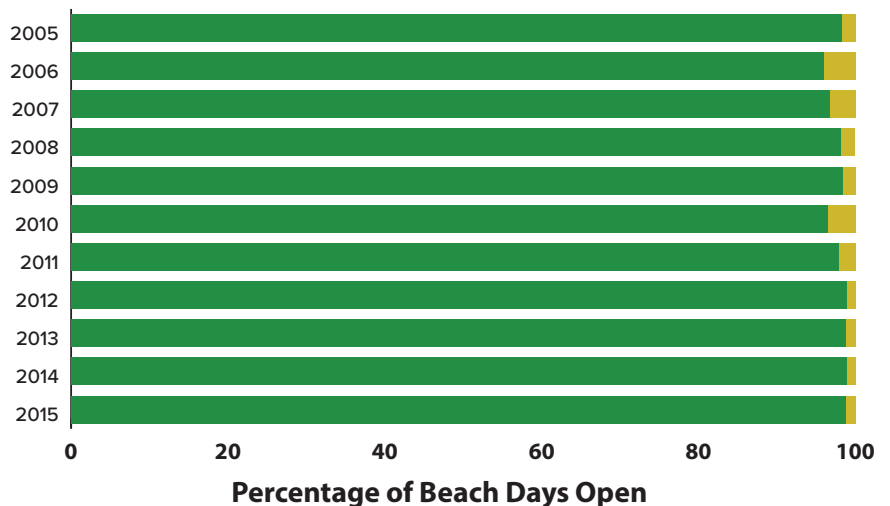
The Department of the Environment is working with Salisbury University and the Delaware Department of Natural Resources on new "source tracking" research to determine whether pollution at selected swimming locations is from humans. This information will help refine our understanding of water conditions at these locations.

Maryland's beach monitoring program supports Maryland tourism and its recreation industry while protecting public health.



Maryland beaches are healthy

The Maryland Department of the Environment tracks the number of days in which a beach is either closed or the subject of a health-based advisory. In 2015, there were a total of 262 such days at Maryland's 186 beaches. Beach days are calculated by multiplying the number of beaches by the number of days they were open during the summer. These numbers show that in 2015 beaches were open with no advisory 98.7 percent of beach days. This marked the fourth straight year that this rate exceeded 98 percent and the 11th consecutive year that the rate was 96 percent or greater. The beaches at Ocean City have never been under a closure or advisory since the current monitoring program began in 2000.



Maryland Beaches Notifications Update

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total # of Beaches	209	210	213	218	210	211	203	203	194	185	186
Total # of Beach Days	20,482	20,580	20,874	21,364	22,050	20,678	19,894	19,894	19,012	18,130	19,530
Beach Days w/ Notification	359	822	690	405	356	733	439	213	256	196	262
% of Days open	98.2	96.0	96.7	98.1	98.4	96.5	97.8	98.9	98.7	98.9	98.7

Beach Days = (Number of beaches)*(Number of Days in Beach Season)

Working together for safe swimming

In October 2000, Congress passed the Beaches Environmental Assessment and Coastal Health (BEACH) Act and provided funding to the U.S. Environmental Protection Agency to improve beach monitoring in coastal states. Maryland's Beaches Program provides local health departments this funding to protect public health using water quality monitoring information and public notification of beach conditions. When water quality thresholds are exceeded, local health departments issue an advisory because there is a potentially elevated health risk to swimmers. If there is a known health risk to swimmers (such

as from a sewage spill), local health departments close the beach.

Water quality is important for the safety and health of swimmers and can deteriorate due to pollution caused by storm water runoff, animal waste, boat discharges, trash, debris, failing septic systems and sewage discharges. Sewage sources include bypasses from sewage pumping stations and sewage spills.

Maryland has policies in place and regulatory guidelines for wastewater systems to minimize

pollution sources and reduce the risk to swimmers. In addition, Maryland requires timely reporting to local health departments and MDE any time there is a sewage spill. This includes a follow-up status report on the problem and corrective actions taken within five days of the spill. The Department of the Environment also prioritizes septic system funding to upgrade systems posing the greatest threat to clean waterways and drinking water. The Department also has programs in place to reduce the effects of polluted stormwater runoff.

Know before you go, safe swimming practices

Maryland and its local jurisdictions continue to make information on beach conditions readily available. Beach advisories and closures are shared with the public through vehicles that include signs, county websites and the Maryland Healthy Beaches (www.MarylandHealthyBeaches.com) website. That website provides color-coded status reports on beaches throughout the state and daily updates on rainfall, which causes runoff and can affect water quality.

Swimmers can also receive information on the status of Maryland beaches through Maryland Healthy Beaches smart phone applications available for Android (Google Play) and iPhone (App Store) and by signing up for email or text

alerts. Tips for healthy swimming practices are available at Maryland's Healthy Beaches Website.

Vibrio are bacteria that occur naturally in brackish water such as the Chesapeake Bay and its tributaries and in salt water, especially during the warmer summer months. Vibrio infections are relatively rare in Maryland and nationwide. However, when Vibrio or other bacteria come into contact with an open wound they can cause serious infections. Vibrio infections can be particularly dangerous for people with liver disease or weakened immune systems. Information is available on the Department's website at mde.maryland.gov/vibrio.

"The Department of the Environment partners with local governments to make a day at the beach a fun and healthy time for Maryland families. Beach conditions are monitored from Western Maryland lakes to the Ocean City surf and everywhere in between, with updated information readily available on the Maryland Healthy Beaches website and through smart phones apps. We also urge everyone to follow the website's do's and don'ts for swimmers to stay healthy and waters to keep clean."

- MDE Secretary Ben Grumbles

Learning more

Statewide, the Department of the Environment works closely with local health departments to determine whether pollution sources are impacting beaches. Human sources of pollution are a particularly high health risk. Typically, when a beach is under advisory due to elevated bacteria levels, the source of the bacteria is not known. The Department is using BEACH Act grant funds to work with Salisbury University and the State of Delaware to determine whether there are any human sources at two beaches -- one in Maryland and one in Delaware. Salisbury University scientists are

using a technology, microbial source tracking, in which genetic markers are analyzed in each water sample to identify the source of bacteria. For this study, the genetic markers being used include human, sea gull, poultry and ruminant (cattle) markers. If there are not human sources at the beach, this study will help to determine what the most likely sources are. Water samples will be collected from these beaches year round. The Department hopes to have more information on the sources at these two beaches by next summer.

For more information, please visit www.mde.maryland.gov