

Just When You Thought It Was Safe to Go Into The Water or Drink It

By Betsy van Die

If you are a beachgoer and love the ocean, you know that the number of shark attacks in the waters off U.S. beaches rose in the summer of 2014. In addition to that frightening reality, there are more routine risks for beachgoers, like getting skin cancer from the sun's rays, and the issue of getting sick from dirty water. It is a fairly common occurrence to hear about closed beaches, with the culprit far more often bacteria and contaminants in the water than something as glamorous as a shark.

The Clean Water Act (CWA), passed in 1948 and amended in 1973, enables the U.S. Environmental Protection Agency (EPA) to regulate discharges of pollutants into waters across the U.S., as well as regulate quality standards for surface waters.

The BEACH Act of 2000 requires the EPA to recommend water quality criteria that states, territories, and tribes can use to govern water quality standards for pathogens and pathogen indicators in their coastal and Great Lakes beaches. The act requires that these parties notify the public when water quality has exceeded acceptable limits set by the EPA. A wealth of information is available on beaches across the U.S. via the EPA's [Beach Advisory and Closing Online Notification](#) database.

Recreational waters at ponds, rivers, streams, lakes and coastal beaches can be polluted by pathogens (bacteria, viruses and protozoans) from fecal contamination. The microorganisms originate from untreated sewer discharges (e.g. sewer overflows or sewage treatment plant malfunctions), failing septic tanks, stormwater, boat waste, pets, wildlife like geese, and farm animals.

Certain types of algae, although a natural phenomena, close down beaches with some frequency and are a major environmental problem. Blue-green algae multiply quickly when the nutrients phosphorous or nitrogen are high, especially in warm, calm waters. About 400,000 Toledo, Ohio residents were without drinking water in late July 2014 when the water source from nearby Lake Erie became contaminated with toxic blue-green algae. It can be deadly to fish and pets and cause liver damage, dizziness, and vomiting in humans. Red algae, and the infamous red tide it causes, are deadly to marine life and animals, but can also cause respiratory problems in humans. In July 2014, the largest red bloom in nearly a decade, started moving inland on the Gulf Coast of Florida. As of November, sea turtles, sharks and fish had been killed and the red bloom looked to be threatening the waters and beaches that fuel Florida's economy.

So what precautions do you need to take to stay water-safe? Check with your local health department and or the EPA about closed beaches before venturing out. And closer to home, if your community issues a warning to boil water or not use it at all, due to stormwater pollutants or anything else, heed this warning. Do not drink or bathe in water that is deemed harmful. It is a good idea to keep gallons of bottled water on hand for emergencies. In non-emergency situations, consider filtering your drinking water – it is less expensive and better for the environment than bottled water.

Sources: EPA, Houston Chronicle, NOAA, The Weather Channel