FACT SHEET

Report on the Second Five-Year Review of EPA's Recreational Water Quality Criteria

May 2023

Every five years, EPA reviews its national recommended water quality criteria for the protection of recreational waterbody uses, as required by the Clean Water Act (CWA). EPA has published a report on its second five-year review of the agency's current Recreational Water Quality Criteria (RWQC) recommendations. Each five-year review includes an assessment of the new science since the agency's previous review of the RWQC. An important goal of the review is to determine whether revisions to the current recommended RWQC are necessary. Based on the scientific advances since the last five-year review, EPA has determined that there is a need to revise its recommended RWQC.

What are recreational water quality criteria?

People can get sick by swimming and doing other recreational activities in water bodies with elevated levels of certain microscopic organisms, such as certain bacteria and viruses, and toxins associated with such organisms. In cases where it's not feasible to measure such microscopic organisms, EPA uses a substitute or "indicator" species which is likely to be present in the same water conditions. Under the CWA, EPA develops recommended RWQC that identify levels of indicator organisms and toxins in water bodies at or below which human health is protected. Tribal and state governments can consider EPA's recommended criteria when setting their own water quality standards for lakes, rivers, and beach waters to protect public health. Once the standards have been approved by EPA, states and authorized Tribes can use the standards to protect and restore their recreational waters. For example, they can be used as the basis for developing wastewater discharge limits for pollutants (i.e., National Pollutant Discharge Elimination System permits) and to develop restoration plans for water bodies that are not attaining their water quality standards for designated recreational uses.

History of EPA's recommended RWQC

EPA's public health protection efforts for recreational waters focus on protecting swimmers from getting sick in water bodies affected by waste from people and other animals, and from waters with unsafe levels of toxins often associated with cyanobacterial harmful algal blooms (called "cyanotoxins").

EPA's current (2012) recommended RWQC for the bacterial indicators *E. coli* and enterococci are based on studies that showed a link between illnesses in swimmers and the levels of those indicators in recreational waters. These recommended RWQC apply to both fresh and marine waters. To enhance public health protection, especially at beaches, the 2012 RWQC also included tools to measure contaminant levels, including a rapid, sensitive test method called quantitative polymerase chain reaction (qPCR). In 2019, EPA issued additional recommended RWQC for two cyanotoxins. For more details on the 2012 and 2019 criteria, see: https://www.epa.gov/wqc/recreational-water-quality-criteria-and-methods.

What are EPA's findings in the second Five-Year Review?

Based on the review of the updated science since the last review, EPA is making three recommendations to improve the public health protection of its RWQC:

1) EPA plans to develop new qPCR-based RWQC that better protect the health of young children, the most sensitive age group to the risks of swimming in contaminated waters;
2) EPA plans to expand its recommended RWQC, which are currently limited to bacteria and their toxins, by developing RWQC to protect people from exposure to viruses as well; and
3) EPA plans to explore new methods to more precisely determine whether a waterbody is contaminated with human feces, as this type of contamination presents the greatest risk of illness in recreational waters.

What are EPA's next steps?

The agency is initiating a plan to implement the three recommendations of the second five-year review. EPA is also considering the research needs described in the five-year review report as it prioritizes future agency research, with the goal of further improving public health protection for people recreating in beach waters.

While EPA updates its recommended criteria, what can Tribes and states do to improve public health protection in their recreational waters?

While EPA works to develop updated national recommended RWQC, the agency encourages Tribes and states, especially those with beach advisory programs, to begin using or expanding their use of qPCR methods. Studies examined in this five-year review show a more consistent link between qPCR results and illnesses in recreational waters than the current methods being used by most Tribes and states. Using qPCR will also allow Tribes and states to notify the public about the water quality at local beaches faster. For more information on qPCR methods see: https://www.epa.gov/water-research/development-and-validation-same-day-monitoring-methods-recreational-water.

Where can I find more information?

Contact Susan Euling at (202) 566-2717 or euling.susan@epa.gov. To access the *Report on the Second Five-year Review of the Recreational Water Quality Criteria*, visit EPA's website at: https://www.epa.gov/wqc/five-year-reviews-epas-rwqc.