

Overview

The Virginia Department of Environmental Quality monitors bacteria to determine the overall quality of water bodies for recreational uses. The Virginia State Water Control Board adopted updates to the recreational bacteria water quality standards in 2018, requiring DEQ to change its monitoring strategies and assessment methodologies.



Why does DEQ monitor for bacteria?

DEQ provides the public with a big picture view of the state of Virginia's waterways, including bacteria pollution. DEQ's bacteria monitoring program is designed to determine the general health of Virginia's streams and to identify recreational waters with too much bacteria. Once these waters are identified, DEQ works to determine and address pollution sources through clean-up studies and implementation plans. DEQ's bacteria monitoring program does not provide a real-time indication of swimming conditions for the public. For more information on swimming safely in natural waters, please visit the Virginia Department of Health website.

What are the updates to the water quality standards?

In 2018, the Virginia State Water Control Board adopted nationally recommended bacteria criteria published by the Environmental Protection Agency (EPA). Periodically, EPA reviews all of its recommended water quality criteria so that they reflect the best available science. The set of procedures that DEQ uses to monitor and assess recreational waters has been revised to reflect the updated standards. Details of the new standards can be on DEQ's Water Quality Standards webpage.

How will DEQ adapt to the changes in the standards?

More frequent monitoring will be necessary to assess waters for the updated standard. Since this high frequency bacteria monitoring cannot be performed everywhere, DEQ will focus resources on recreational waters. About 50 publicly-accessible recreation sites across the state will be visited every year for **high frequency monitoring**. As a result, the number of waters assessed for bacteria levels will go down. However, the level of detail in the evaluation of these waters will increase. At these high frequency monitoring sites, bacteria will be monitored weekly, with a minimum of 10 samples collected over a 90-day period between April and October. These sites may be revisited for a second 90-day period in the following few years depending on resources and other high frequency monitoring priorities. DEQ has also updated the assessment process to reflect the new bacteria standards. The revised process can be found under Part IV Rule 3 of the [2022 Water Quality Assessment Guidance Manual](#). For more information on water quality assessments, please visit DEQ's Water Quality Assessments webpage.

Low frequency monitoring will continue in instances where long-term data records have been collected. These include trend sites, ambient monitoring sites and Chesapeake Bay monitoring. In addition, the agency will continue collecting low frequency bacteria data in waters with watershed cleanup plans to develop datasets used in model calibration and to determine progress toward meeting implementation targets. The goal for low frequency sites is to collect data to evaluate overall water quality patterns.

How will waters be prioritized for high-frequency monitoring?

Each January, when the annual monitoring plan is released, DEQ seeks input from the public on identifying waters that could benefit from monitoring by the agency. Waters may be prioritized for high-frequency monitoring through this nomination process. As resources allow, additional high-frequency sites may be added based on:

- The potential for people to fully immerse themselves in a waterbody
- Areas where restoration work suggests that waters may be meeting the bacteria standard
- Waters that previously met the bacteria standard to ensure that this is still the case
- Waters where volunteer monitoring data indicates the need for follow-up monitoring in response to water quality improvements or high bacteria concentrations
- Public interest

- Environmental justice considerations, such as areas with vulnerable communities
- Waters that are close to meeting the bacteria standard