



Maryland Department of the  
Environment

## FACTS ABOUT: EPA'S NEW WATER QUALITY CRITERIA FOR BEACHES

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### **RECREATIONAL WATER QUALITY CRITERIA**

Recreational water quality criteria are established to protect human health in waters designated for primary contact recreation use such as swimming. In November 2012, the United States Environmental Protection Agency (EPA) released new recommendations for recreational water quality criteria to meet the requirements of the amendments to the Clean Water Act by the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000, the federal law that refined standards for water quality at public beaches.

These requirements directed EPA to conduct studies associated with pathogens and human health and to publish new or revised criteria recommendations by 2012. These are recommendations that states can choose to use as a tool in setting their own standards. States are not required to adopt the new recommended criteria.

Maryland will consider adopting and implementing the recommended criteria as appropriate. However, states typically rely on guidance documents in adopting new criteria or deciding whether to adopt recommended criteria, and EPA will not have all of the guidance documents to assist Maryland until the end of 2013.

### **ARE SWIMMERS IN MARYLAND STILL PROTECTED?**

Maryland's criteria for water monitoring already meets EPA's requirements. MDE oversees the program for monitoring water quality at Maryland beaches, working with local jurisdictions, which are responsible for water sampling and in turn work with the Maryland Department of Health and Mental Hygiene for sample testing. MDE also requires local jurisdictions to conduct surveys prior to the beach season to identify and address potential pollution sources. The local jurisdictions typically provide notice of beach conditions, and beach conditions are also made available on the Maryland Healthy Beaches website [marylandhealthybeaches.com](http://marylandhealthybeaches.com).



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## **HOW DO THE RECOMMENDED CRITERIA DIFFER FROM THE CURRENT CRITERIA USED IN MARYLAND?**

Although the new, recommended criteria provide similar protection to Maryland’s current criteria, they are based on different definitions of illness and different rates of illness used to establish protective standards for potential pathogens.

The EPA recommendation changes the definition of illness used in the studies to develop the new criteria. The current criteria define illness as gastroenteritis plus fever. The recommended criteria define illness as just gastroenteritis. The current criteria use different illness rates for fresh waters and marine waters (which include ocean beaches). The recommended criteria use the same illness rate for fresh and marine waters but provide an option of using one of two different estimated illness rates. For public advisory purposes, the current criteria use a single-sample maximum threshold based on frequency of use of the recreation area. The new criteria use a “Statistical Threshold Value” (predicted 90<sup>th</sup> percentile of the water quality data) instead of frequency of use. EPA’s recommended criteria also have an optional “Beach Action Value” for beaches impacted by untreated sewage.

| <b>Current Criteria</b> | <b>Geometric Mean</b>                   | <b>Single Sample Maximum</b> |
|-------------------------|---|------------------------------|
| Indicator               | Counts/ 100 ml (estimated illness rate) |                              |
| E. coli (fresh)         | 126 (8 illnesses per 1000 swimmers)     | 235                          |
| Enterococci (fresh)     | 33 (8 illnesses per 1000 swimmers)      | 61                           |
| Enterococci (marine)    | 35 (19 illnesses per 1000 swimmers)     | 104                          |



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| <b>EPA's New Recommended Criteria</b><br>Indicator | Number of illnesses per 1000 swimmers | Geometric Mean Counts/100 ml (estimated illness rate) | Statistical Threshold Value | Optional Beach Action Value |
|--|---------------------------------------|---|-----------------------------|-----------------------------|
| E. coli (fresh)-culturable                         | 36                                    | 126   | 410                         | 235                         |
|  | 32                                    | 100   | 320                         | 190                         |
| Enterococci (fresh or marine) - culturable         | 36                                    | 35  | 130                         | 70                          |
|  | 32                                    | 30  | 110                         | 60                          |

The recommended criteria also provide new tools for monitoring and developing site specific criteria, including:

- Predictive modeling
- Qualitative Microbial Risk Assessment for developing site specific criteria
- Rapid test methods for indicators (qualitative polymerase chain reaction)
- Guidance for sanitary surveys of beaches

## **WHAT ARE MARYLAND'S NEXT STEPS?**

Guidance for implementation of the recommended criteria is still under development by EPA. MDE is following the developments of new guidance and will consider adopting these recommended criteria. However, no final decisions can be made until all the guidance documents are completed by EPA by the end of 2013.

EPA's website includes more information on the [recommended criteria](#).



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