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## ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OW-2016-0715; FRL\_9957-01-OW]

Request for Scientific Views: Draft Human Health Recreational Ambient Water Quality Criteria and/or Swimming Advisories for Microcystins and Cylindrospermopsin

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of availability.

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**SUMMARY:** The Environmental Protection Agency (EPA) announces the release of the draft of *Human Health Recreational Ambient Water Quality Criteria and/or Swimming Advisories for Microcystins and Cylindrospermopsin – 2016* for a 60-day public comment. These are the draft recommended concentrations of the toxins microcystins and cylindrospermopsin in recreational water protective of human health while swimming or participating in other activities on the water. Recreational exposure to the microcystins and cylindrospermopsin produced by cyanobacteria has the potential to result in liver and kidney toxicity, respectively. The recommended values found in this draft document do not replace or supersede the 2012 Recreational Water Quality Criteria (RWQC) recommendations for *E. coli* and *Enterococcus*. Rather, once final, they will supplement the 2012 RWQC to provide further public health protection for additional, potentially hazardous conditions found in ambient recreational waters.

Following closure of this 60-day public comment period, EPA will consider the comments, revise the draft document, as appropriate, and then publish a final document that will provide recommendations for States and authorized Tribes to establish water quality standards under the Clean Water Act (CWA). Alternatively, States and authorized Tribes may use these same values as the basis of swimming advisories for public notification purposes.

**DATES:** Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. **EPA-HQ-OW-2016-0715**, to the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** John Ravenscroft, Health and Ecological Criteria Division, Office of Water (Mail Code 4304T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: (202) 566-1101; email address: [ravenscroft.john@epa.gov](mailto:ravenscroft.john@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. General Information**

*A. How Can I Get Copies of This Document and Other Related Information?*

*1. Docket.* EPA has established a docket for this action under Docket ID No. EPA-HQ-

OW-2016-0715. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Water Docket in the EPA Docket Center, (EPA/DC) EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426.

2. *Electronic Access.* You may access this Federal Register document electronically from the Government Printing Office under the “Federal Register” listings FDSys (<http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>).

## **II. What are Cyanotoxins Microcystins and Cylindrospermopsin and Why is EPA Concerned About Them?**

Cyanobacteria, also commonly referred to as blue-green algae, are photosynthetic bacteria that grow in many diverse habitats. Sometimes cyanobacteria can grow to high cell densities and form blooms, known as harmful algal blooms (HABs). These situations can cause green and blue scums to form in surface water. Microcystins and Cylindrospermopsin are toxins that can be produced by a variety of cyanobacteria species and can be released from cyanobacterial cells at any time. During a HAB event, excessive growth of cyanobacteria in surface waters leads to situations in which elevated levels of cyanotoxins are more likely, however, exposure can occur even when there are no visible signs of a bloom.

Elevated levels of cyanotoxins affect not only the health of humans, but domestic animals and wildlife in contact with contaminated waters. At certain concentrations microcystins, and their associated cyanobacteria, can cause headaches, sore throats, vomiting and nausea, stomach pain, dry cough, diarrhea, blistering around the mouth, and pneumonia through recreational exposure.

Cylindrospermopsin recreational exposure may cause fever, headache, vomiting, bloody diarrhea, hepatomegaly, and kidney damage with loss of water, electrolytes and protein.

### **III. Information on the Recreational Ambient Water Quality Criteria (AWQC) for the Cyanotoxins Microcystins and Cylindrospermopsin**

EPA's draft recommended AWQC identify the concentration identify the following concentrations of microcystins and cylindrospermopsin that would be protective of human health given a primary contact recreational exposure scenario: 4 µg/L for microcystins and 8 µg/L for cylindrospermopsin. The recommended draft values supplement EPA's 2012 recreational AWQC to provide further public health protection for additional, potentially hazardous conditions found in ambient recreational waters.

The draft recommended AWQC are based on the same peer-reviewed science used to develop EPA's 10-Day Drinking Water Health Advisories for these same cyanotoxins published in 2015. The draft criteria document has gone through an internal work group review and includes information on the state of the science describing the human health effects from exposure to cyanobacteria and their toxins, discussion of other domestic and international governmental and agency guidelines for recreational waters, and information on incidents involving exposure of domestic pets and other animals to cyanotoxins.

### **IV. What are Section 304(a) Water Quality Criteria?**

Section 304(a) water quality criteria are recommendations developed by EPA under authority of section 304(a) of the Clean Water Act based on the latest scientific information on the relationship that the effect that a constituent concentration has on particular aquatic species and/or human health.

Section 304(a)(1) of the Clean Water Act directs the EPA to develop and publish and, from time to time, revise criteria for water quality accurately reflecting the latest scientific knowledge. Water quality criteria developed under section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. Section 304(a) criteria do not reflect consideration of economic impacts or the technological feasibility of meeting pollutant concentrations in ambient water.

Section 304(a) criteria provide guidance to States and authorized Tribes in adopting water quality standards that ultimately provide a basis for controlling discharges of pollutants. The criteria also provide guidance that EPA considers when promulgating federal regulations under section 303(c) when such action is necessary. Under the CWA and its implementing regulations, States and authorized Tribes are to adopt water quality criteria to protect designated uses (*e.g.*, aquatic life, recreational use). EPA's water quality criteria recommendations are not regulations. Thus, EPA's recommended criteria do not constitute legally binding requirements. States and authorized Tribes may adopt other scientifically defensible water quality criteria that differ from these recommendations. When adopting new or revised water quality standards, the States and authorized Tribes must adopt criteria that are scientifically defensible and protective of the designated uses of the bodies of water. States have the flexibility to do this by adopting criteria based on (1) EPA's recommended criteria, (2) EPA's criteria modified to reflect site-specific conditions, or (3) other scientifically defensible methods.

#### **V. Use of the Values as Swimming Advisories**

EPA is also publishing these values for consideration by States and authorized Tribes for use as swimming advisories for notification purposes in recreational waters to protect the public. States and authorized Tribes could consider using the values as swimming advisories in

making decisions whether to close, open, warn about concerns in recreational waters in a manner consistent or similar to their current recreational water advisory programs. The values in this 304(a) recommended criteria, even if used as swimming advisories, are not regulations, and thus, do not constitute legally binding requirements.

## **VI. Solicitation of Scientific Views:**

EPA is soliciting additional scientific views, data, and information regarding the science and technical approach used in the derivation of the draft *Human Health Recreational Ambient Water Quality Criteria and/or Swimming Advisories for Microcystins and Cylindrospermopsin* document. EPA is proposing that these recommended criteria, if adopted by States or authorized Tribes as CWA section 303(c) WQS, be used for CWA section 303(d) assessment and listing purposes where the magnitude is not exceeded for more than 10 percent of days during a recreational season up to one calendar year as an indicator of long-term impairment from multiple short-term blooms. EPA is soliciting public comment on this 10 percent exceedance frequency as well as alternative exceedance frequencies. For swimming advisories, EPA is proposing that these recommended values could be used to trigger public notification whenever values are exceeded for one day. EPA is soliciting public comment on this recommended single day exceedance as well as alternative exceedance frequencies.

Dated: December 9, 2016.

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