Key Differences in Proposed Cyanotoxin Rules as compared to Temporary rules

Oregon Health Authority (OHA)
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Risk Categories

Rather than require monitoring of all surface water sources, the temporary rule applied only to sources with a previous harmful algal bloom, detection of cyanotoxins, or a water quality limited listing for certain limiting factors that may be conducive to cyanobacteria and toxins.

For the proposed permanent rule, OHA further divided the applicable sources into risk categories of “susceptible” and “potentially susceptible,” with different monitoring requirements commensurate with the different risk levels. A list of which sources are in which category is included on this webpage.

Use of genetic screening

With cyanotoxins being only occasionally detected, it may not be necessary to test each susceptible source for cyanotoxins every two weeks. Cyanobacteria must have cyanotoxin-producing genes to produce the toxins. Testing for cyanotoxin-producing genes is a less expensive screening tool that can also provide an early warning as to whether toxins will soon be present.

Genetic screening is proposed as a less expensive way to indicate presence of cyanotoxins when the risk is believed to be lower. If a certain threshold of gene counts is exceeded, cyanotoxin testing is required. Industry experts have had success in using this cyanotoxin-producing gene test as a screening tool to determine if additional toxin monitoring is warranted. For systems serving more than 10,000 people, cyanotoxin-producing gene testing is alternated weekly with cyanotoxin testing, to ensure testing is completed a minimum of every 7 days, since the health advisory level is established based on a 10-day exposure period.

Lab Methods

The proposed rules require samples to be analyzed for cyanotoxins using an ELISA (enzyme-linked immunosorbent assay) method. For total microcystins, EPA method 546 must be used. The Oregon Department of Environmental Quality (DEQ) will establish a
standardized ELISA-based method for cylindrospermopsin, since a federal standardized ELISA-based method does not exist. If the cylindrospermopsin is found above a health advisory level, confirmation samples will be analyzed using the EPA method 545, a standardized method using LC/MSMS (liquid chromatography with tandem mass spectrometry), before any advisory is issued.

A note about lab capacity and funding: The Oregon DEQ lab will be ready to conduct analysis for all applicable sources by May 2019, when the rule requires systems to begin monitoring. Private labs can also be accredited using required methods. DEQ is funded to analyze samples through June 30, 2019. Funding after that will be determined in the 2019 Oregon Legislative session.

Sample substitution
Recognizing there may be situations where a sample collected at one location may be deemed to represent the water at another location, the proposed rules allow for substitution if approved by OHA. The proximity and characteristics of sampling locations, sampling techniques, analytical methods used, and intake construction of the two sites would be evaluated to determine if substitution is appropriate. A water supplier may request a substitution in writing, to be promptly reviewed by OHA and DEQ.

Reporting
Due to the acute nature of cyanotoxins (health can be adversely affected after a relatively short period of exposure), rapid analysis and reporting are important to communicate health protection information to consumers if necessary. OHA has jurisdiction primarily over public water suppliers. OHA can only require labs to report results on an expedited timeframe in the event of a maximum contaminant or health advisory level. In this rule proposal, OHA proposes that water suppliers be required to ensure that labs analyze a cyanotoxin sample within 24 hours of receipt. The timelines for reporting results to the water supplier and OHA are also the responsibility of the water supplier, except in the case of a health advisory exceedance. Timely reporting will ensure the proper follow-up testing is conducted and allow water suppliers and OHA to take steps quickly to reduce the risk of cyanotoxins from reaching consumers.