



U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON ENERGY AND COMMERCE

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February 3, 2015

TO: Members, Subcommittee on Environment and the Economy  
FROM: Committee Majority Staff  
RE: Hearing entitled “H.R. 212, the ‘Drinking Water Protection Act’”

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On Thursday, February 5, 2015, at 10:00 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Environment and the Economy will hold a hearing entitled “H.R. 212, the Drinking Water Protection Act.” Witnesses are by invitation only.

**I. WITNESSES**

**Panel I:**

Dr. Peter Grevatt  
Director, Office of Ground Water and  
Drinking Water  
U.S. Environmental Protection Agency

**Panel II:**

Mr. Mike Baker  
Chief, Division of Drinking Water and Ground  
Waters  
Ohio Environmental Protection Agency  
*on behalf of the Association of State Drinking  
Water Administrators*

Mr. Aurel Arndt  
Chief Executive Officer  
Lehigh County Authority (PA)  
*on behalf of the American Water Works  
Association*

Additional witnesses may be announced prior to the hearing.

## **II. BACKGROUND**

Contamination by algal blooms in a public water system's source water gained attention early this past summer when blue-green algae (cyanobacteria) laced with a toxin called microcystin (a cyanotoxin), were found in Lake Erie and Toledo's Collins Water Treatment Plant. On Saturday, August 2, 2014, based upon two sample readings for microcystin registering above Ohio's one (1) microgram per liter standard, the City of Toledo, Ohio urged all customers of Toledo water to neither drink nor boil its treated tap water until an "all clear" was issued.<sup>1,2</sup> Two days later, the Mayor of Toledo announced that the water was safe to drink and lifted the advisory.<sup>3</sup> In the interim, residents were advised against using the water to brush their teeth, bathe their children, or give to their pets, and after the ban was lifted, the city banned swimming and other recreational activities in one of the drinking water reservoirs.<sup>4</sup>

### **A. Cyanobacteria and Cyanotoxins**

Cyanobacteria are often found in lakes and other surface water. Certain combinations of conditions trigger growth of cyanobacteria in these waters, including warm water temperatures and high levels of light and nutrients (primarily phosphorus and nitrogen). Nutrients include agricultural runoff (fertilizers and manure); discharges from sewage treatment plants; and storm-water runoff from lawns, streets, and elsewhere.

Some cyanobacteria contain or create various cyanotoxic strains that can contaminate surface waters and drinking water supplies. These toxins can affect the liver, skin, or nervous system. Exposure to cyanotoxins can cause a range of health effects, from mild rashes to severe illness and, in rare cases, death in humans. In addition, deaths of exposed wildlife, livestock, birds, and pets have been documented worldwide.<sup>5</sup>

Most human exposures are thought to occur during recreational activities, such as swimming and boating, through accidental ingestion or inhalation of water, or when skin comes into contact with toxins. Exposures also can result from drinking or showering in contaminated water.<sup>6</sup>

### **B. Drinking Water Standards for Cyanotoxins**

No enforceable Federal standards or guidelines have been established for cyanotoxins in drinking water. The World Health Organization (WHO) has issued a provisional drinking water standard of 1 microgram per liter ( $\mu\text{g/L}$ , or parts per billion) for microcystin-LR, one of the most

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<sup>1</sup> [http://www.who.int/water\\_sanitation\\_health/dwq/chemicals/microcystinsum.pdf?ua=1](http://www.who.int/water_sanitation_health/dwq/chemicals/microcystinsum.pdf?ua=1)

<sup>2</sup> <http://toledo.oh.gov/news/2014/08/urgent-water-notice/>

<sup>3</sup> <http://www.washingtonpost.com/news/post-nation/wp/2014/08/04/toledo-mayor-lifts-ban-declares-drinking-water-safe/>

<sup>4</sup> <http://www.toledoblade.com/local/2014/08/20/Toxin-from-algae-prompts-ban-on-swimming-at-Ohio-reservoir.html>

<sup>5</sup> <http://www.crs.gov/pages/Insights.aspx?PRODCODE=IN10131>

<sup>6</sup> Ibid.

common and harmful cyanotoxins. Ohio and Oregon have adopted the WHO drinking water guidance levels, while Minnesota has established a more stringent level based on acute infant exposure.

On August 8, 2014, the Association of State Drinking Water Administrators (ASDWA) published the results of a survey it took on States' responses to cyanobacteria and cyanotoxins in drinking water. The survey responses indicate that while nine States have created programs, developed health thresholds, or enacted policies and protocols for sampling and issuing public notices, all of the respondents would like to have more Federal (or national) leadership to help them address these issues. The respondents specifically noted in their comments that help is needed to:

- Provide Federal guidance values and analytical methods and risk communications strategies;
- Develop appropriate notification language to better inform the public when a cyanobacteria bloom is occurring, taste and odor complaints are received from customers, gastro-intestinal illnesses are reported, and toxin concentrations exceed thresholds in drinking water supplies;
- Address issues when toxins concentrate in treatment facility sludge without any blooms in the water source; and,
- Consider the impacts to Ground Water Under the Direct Influence of surface waters that have toxic blooms (public water supply wells may tap groundwater influenced by surface water).

### **C. Challenges to Governmental Involvement Concerning Cyanotoxins in Water Supplies**

An Environmental Protection Agency (EPA) factsheet notes that conditions that cause cyanobacteria to produce cyanotoxins are not well understood.<sup>7</sup> Further, biochemical and analytical complexities make it difficult to determine which toxins are present.<sup>8</sup> Not only does incorrect identification of a cyanotoxin by a water system complicate its ability to properly treat for it, but selection of the wrong treatment can cause some bacteria to release more toxins into the water.

EPA is working to issue a health advisory to help States and water providers address certain cyanotoxins. Authorized under section 1412(b)(1)(F) of the Safe Drinking Water Act (SDWA), health advisories generally include non-enforceable contaminant values based on non-cancer health effects, and technical guidance on health effects, test methods, and treatment technologies. In 2015, EPA plans to issue advisories for those cyanotoxins for which it has sufficient health effects data, microcystin-LR and cylindrospermopsin. Also in 2015, EPA plans to finalize analytical methods for microcystins-LR and the other targeted cyanotoxins. These methods will allow more specific measurement of the toxins, at lower concentrations and with greater accuracy and precision.<sup>9</sup>

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<sup>7</sup> [http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/cyanobacteria\\_factsheet.pdf](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/cyanobacteria_factsheet.pdf)

<sup>8</sup> Ibid.

<sup>9</sup> <http://www.crs.gov/pages/Insights.aspx?PRODCODE=IN10131>

To pursue enforceable drinking water regulations under SDWA, EPA must engage in a multi-step process. First, EPA must regularly prepare contaminant candidate lists (CCLs), which identify and prioritize contaminants that may require regulation. In 1998, EPA listed cyanobacteria and their toxins as candidates for regulation. EPA's 2009 list CCL-3 included three cyanotoxins (microcystin-LR, anatoxin-a, and cylindrospermopsin).

Second, to satisfy SDWA criteria to begin drafting enforceable regulation of a contaminant, EPA must make a determination that the contaminant requires national regulation to provide a "meaningful opportunity for health risk reduction for persons served by public water systems" based on the contaminant's occurrence in public water systems and health risks.<sup>10</sup> To meet SDWA requirements for a regulatory determination, EPA needs additional health effects and occurrence data for each of the toxins. EPA is conducting health effects research and developing analytical testing methods for the cyanotoxins. Additionally, EPA could employ section 1445 of SDWA to help it better understand the occurrence of cyanotoxins in drinking water, by establishing a rule targeted monitoring of unregulated contaminants (UCMR).

Similarly, if EPA decided to regulate the toxins, more data are needed to proceed. Currently, the risk of exposure to low levels of cyanotoxins in drinking water is too uncertain to support standard setting.

### **III. SUMMARY OF H.R. 212**

Introduced on January 8, 2015, by Rep. Bob Latta, H.R. 212 amends the Safe Drinking Water Act and contains three main components.

First, the legislation requires EPA, within 90 days of its enactment and subject to later updates, to develop and submit to Congress a strategic plan for assessing and managing risks from cyanotoxins in drinking water provided by public water systems. The strategic plan must include steps EPA plans to take as well as its timelines for:

- evaluating risks to human health;
- publishing a comprehensive list of cyanotoxins EPA determines harmful to health when present in that drinking water, as well as summarizing their known health effects;
- identifying factors that make cyanobacteria become harmful;
- determining whether to publish health advisories on specific cyanotoxins, establishing guidance for feasible analytical methods to quantify the presence of cyanotoxins, and setting guidance on monitoring frequency;
- recommending feasible treatment options to mitigate any adverse health effects caused by identified cyanotoxins; and,
- entering into cooperative agreements and providing technical assistance to affected States and public water systems to aid in managing risks associated with cyanotoxins in drinking water.

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<sup>10</sup> SDWA section 1412(b)(1)

Second, H.R. 212 requires EPA to identify gaps in (1) its understanding of the human health effects of cyanobacteria and (2) the methods and means of testing and monitoring for the presence of harmful algal blooms in the source water of or drinking water provided by public water systems. EPA, as appropriate, is then asked to consult with other Federal agencies, states, and those agencies or bodies actively analyzing cyanotoxins and their impact on public health and publish the information possessed by the Federal government.

Finally, the Drinking Water Protection Act requires the Government Accountability Office to inventory and report to Congress on Federal spending, between fiscal years 2010 and 2014, on analyses and public health efforts of the Federal government on cyanotoxins, including the specific purpose for which the funds were made available, the law under which the funds were authorized, the Federal agency that received or spent the funds, and recommended steps to reduce any duplication, and improve interagency coordination, of such expenditures.

#### **IV. STAFF CONTACT**

Please contact Jerry Couri or David McCarthy, with the Committee Staff at (202) 225-2927 with any questions.