Indiana Water Quality Standards Review 2018

Comments

1. Indiana Environmental Institute
2. Sierra Club Hoosier Chapter, Hoosier Environmental Council, Lower Ohio Waterkeeper
3. U.S. EPA Region 5

TO: Ms. Mary Ann Stevens

Office of Water Quality

Indiana Department of Environmental Management

Comments on Water Quality Standard

I am writing in response to the Notice of Review of Water Quality Standards (posted 02/28/2018 by LSA).

1. External Work Group

   I recommend there be established two external work groups to advise IDEM for the review of the water quality standards.

   One work group would be a policy group composed of representatives of stakeholders knowledgeable about water quality regulation. This work group would convene semi-annually to monitor progress and advise middle and upper managers on appropriateness and completeness of the IDEM water quality standard process. This group should meet after the comments on the first notice of each rulemaking have been processed by IDEM to advise IDEM on the text of the Second Notice.

   A second work group would be a small group of highly skilled technical parties to advise the IDEM technical staff about technical matters in order that the language, assumptions and calculations of regulation be scientifically sound and internally clear and consistent. This would advise the technical people on language through the rulemaking process to assure clarity and technical precision.

2. Consistency of Water Quality Standards Across the State

   The notice states that "A priority for IDEM is to make the standards consistent for all waters…."

   I agree with this if to the end of the sentence be added the phrase "as appropriate." Certainty is not appropriate scientifically to declare a priori the same value for a criterion of a compound for all waters in and out of the Basin.

   The formula to calculate the criteria should be the same, as should the technical assumptions and the degree of certainty of toxicity.

   However, the toxic effect of the substance on humans is dependent on the aquatic community present and the toxic effect of a water column on the aquatic community depends on the chelating constituents naturally in the water (the idea of Water Effects Ratio in the heavy metal criteria) and on the nature of the fish community.

   Federal law declared correctly that because people eating fish from the waters of the Great Lakes Basin are more vulnerable to harm from a given concentration of BCCs (compounds with bioaccumulative properties that also are persistent and toxic), that the protective criteria for the Great Lakes Basin waters for those compounds should have their own more stringent set of

assumptions than other waters. A federal standards rule was adopted for some compounds along with a process to calculate future chemicals of concern. That regulation required each Great Lakes state to adopt those for the Basin waters in its state. The concept was that all waters within the Basin should have he same criteria, criteria independent of that which each state would adopt for its other waters.

3. Antidegradation Implementation

   The March 2012 revision of the regulation for the Indiana Implementation of the Antidegradation Standard needs itself to be simplified for clarity and practicality and to be revised to correct technical internal inconsistencies.

   The necessary changes I propose are unrelated to the policy established in 2012 regarding the degree of stringency of an antidegradation demonstration that was the cause for the passionate debate by competing stakeholders.

Thank you for your consideration.

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Notice of Review of WQS
MaryAnn Stevens
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
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Via email: mstevens@idem.in.gov

Dear Ms. Stevens:

Thank you for the opportunity to comment on the Indiana Department of Environmental Management (IDEM) review of Indiana's Water Quality Standards (WQS). The Sierra Club Hoosier Chapter. the Hoosier Environmental Council, and the Lower Ohio River Waterkeeper have the following comments.

The Sierra Club is the country's largest grassroots environmental advocacy organization, with more than three million members and supporters nationwide and more than 10,000 members in Indiana. In addition to helping people from all backgrounds explore nature and our outdoor heritage, the Sierra Club works to promote clean air and water, advance sustainable energy, safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and legal action.

The Hoosier Environmental Council is an Indiana environmental nonprofit organization founded in 1983. HEC is devoted to identifying the biggest environmental challenges facing Indiana, and uniting people toward a solution. It uses a combination of education, advocacy, and technical assistance to work toward cleaner air, safer water, protected lands and a healthier, higher quality of life.

The Lower Ohio River Waterkeeper is a newly founded organization operating in the watersheds and on the Ohio River between the Kentucky and Wabash rivers in the states of Kentucky and Indiana. The Lower Ohio River Waterkeeper is dedicated to raising awareness with the public and decision-makers to promote the protection, restoration, and enjoyment of the Ohio River and its tributaries.

Our organizations support IDEM's overall goal to make Indiana's WQS consistent for all the state's waters, whether they are within the Great Lakes basin or part of the Mississippi River drainage (i.e., "downstate"), insofar as that consistency is supported by scientific analysis of the effects of the different retention times for the waters in the two basins. We have the following comments regarding the specific proposals and plans set forth in the Notice of Review:

(1) We support IDEM's proposal to revise the aquatic life ambient water quality criteria (WQC) and human health ambient WQC for metals. While people will probably always disagree about the scientific validity of any proposed change in pollutant criteria, we believe it is in Indiana's best interest to keep up with the latest generally accepted values for these criteria. The proposed criteria, based on current science and National Recommended Water Quality Criteria (NRWQC), achieve that goal. We hope that this revision will eliminate the failure of IDEM's biannual 303(d) listings of impaired waters to receive full approval by the U.S. Environmental Protection Agency (E.P.A) since 2010 due to inadequate evaluation of existing and readily available water quality metals data.

(2) We support IDEM's proposal to eliminate the limited use waters classification and waters classified for limited use in 327 IAC 2-1 and 327 IAC 2-1.5, in accordance with 327 IAC 2-1-3(5)(B). We should no longer accept that some waters cannot be improved to fishable/swimmable standards due to "naturally poor physical characteristics (including lack of sufficient flow), naturally poor chemical quality, or irreversible man-induced conditions." This should include the wet weather limited recreational use subcategory for communities with combined sewer overflows (CSO) established in 327 IAC 2-1-3(c). Such communities should be expected to meet WQS by controlling or eliminating their CSOs.

(3) We support IDEM's proposal to update Indiana's procedures for calculating aquatic life ambient WQC and human health ambient WQC to reflect U.S. E.P.A. guidance and to implement consistent statewide procedures. We hope that this will eliminate disagreements with the E.P.A over water quality assessments, as noted in paragraph (1) above. Specifically, we offer the following suggestions in this regard:

Indiana Should Adopt Improved Ammonia Criteria in compliance with 40 CFR 131.20

Under 40 CFR 131.20, Indiana is obligated to at least consider in writing the new ammonia criteria adopted by U.S. EPA pursuant to Section 303(a) of the CWA for ammonia. Indiana should, in fact, simply adopt the new U.S. E.P.A criteria adopted in 2013 in response to concerns by officials of the U.S. Fish and Wildlife Service and other scientists. Indiana has numerous streams that contain mussels, including endangered mussels, and even more streams that could support mussels but for ammonia pollution and other forms of pollution. (A list of Indiana's mussels, including many extirpated and federally endangered species, may be found here: http://www.in.gov/dnr/fishwild/files/fw-Freshwater_Mussels_Of_Indiana.pdf). The Indiana Department of Natural Resources (D.N.R) notes that Indiana historically was home to about 80 native freshwater mussel species (http://www.in.gov/dnr/fishwild/8684.htm). The D.N.R says that "[n]early half of Indiana's native freshwater mussel species are either already gone (extirpated) from the state or are listed as endangered or species of special concern. Alterations to waterways, (channelization, dredging, dam construction), changes in hydrology, exotic species introductions, and pollution are major threats to these animals."

The D.N.R lists the following ecosystem services performed by freshwater mussels:

1. They act as natural filters, filtering suspended materials from the water.

2. They are an important source of food for many fish, mammals and birds.
3. They stabilize the bottom of a waterbody and help to mix it as they burrow, increasing oxygen exchange.
4. They are indicators of good water quality and habitat stability. Most mussels cannot survive in a waterway that is polluted or of poor quality.
5. They accumulate contaminants in their shells which can be measured to help determine water quality issues.

To help save our remaining mussels, IDEM should adopt the improved ammonia criteria.

Indiana Should also at a Minimum Adopt Phosphorus Criteria

It appears that IDEM does not propose to consider phosphorus criteria in this triennial review although it is well known that phosphorus is causing serious impairments of numerous Indiana waters as well as contributing to serious impairments of downstream waters including Lake Erie and the Ohio River. We applaud the valuable work that IDEM is doing in association with many partners to try to reduce phosphorus loadings to the Maumee River, which contribute to the toxic algae blooms that occur in Lake Erie. In recent years IDEM has also monitored up to 17 lakes and reservoirs for cyanobacteria and cyanotoxins. Annually it finds levels that exceed World Health Organization guidelines in at least some of these water bodies. Several years ago, IDEM initiated a process to establish phosphorus criteria for lakes and reservoirs. After convening a work group to discuss this issue, which met for about seven months, IDEM abandoned the process, saying that it couldn't resolve certain "implementation problems". IDEM must commit itself to overcoming these problems and establishing phosphorus criteria not only for lakes and reservoirs but for rivers and streams as well.

The U.S. E.P.A on numerous occasions has found that states should adopt numeric criteria for phosphorus and nitrogen. It adopted ecoregion criteria for use by the states in 1999 and 2000. Indiana should explain in writing under 40 CFR 131.20 its stance toward nutrient criteria. Moreover, in a March 16, 2011 memo by Nancy K. Stoner, "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions", the U.S. E.P.A made clear that states should adopt at least phosphorus or nitrogen criteria within 3-5 years of 2011. It is now 2018 but Indiana has made no progress in adopting criteria for either pollutant.

In 2016, the District Court for the Eastern District of Louisiana declined to order U.S. E.P.A to adopt numeric nutrient criteria for states in the Mississippi River Basin, which, like Indiana, had failed to adopt such criteria. The District Court wrote with regard to U.S. E.P.A's approach of deferring to the states to adopt criteria, "Presumably, there is a point in time at which the (U.S. E.P.A) will have abused its great discretion by refusing to concede that the current approach - albeit the one of first choice under the Clean Water Act - is simply not going to work." [Gulf Restoration Network v. Jackson, 224 F. Supp. 3d 470, 476 (E.D. La. 2016)].

Indiana needs strong phosphorus criteria to protect both its waters and those downstream. By its continued refusal to develop criteria for phosphorus, IDEM has reached the point where if it does not act, U.S. E.P.A should.

(4) We support IDEM's proposal to update or adopt new human health ambient WQC for 94 chemical pollutants that are NRWQC at Section 304(a) of the Clean Water Act.

(5) We support IDEM's proposal to update current WQS variance rules to include a U.S. E.P.A rule that establishes a regulatory framework for the adoption of WQS variances to implement adaptive management approaches to improve water quality.

With the exception of our two key suggestions on the need for new ammonia and phosphorus criteria described above, the undersigned organizations agree with IDEM that its proposed rulemakings will provide key updates needed to improve Indiana's water quality standards. We appreciate the effort that IDEM's Office of Water Quality has made in this triennial review and look forward to working with it as the various rulemakings move forward.

Sincerely,

Bowden Quinn
Director
Sierra Club Hoosier Chapter

Indra Frank, M.D., M.P.H
Environmental Health & Water Policy Director
Hoosier Environmental Council

Jason Flickner
Director & Waterkeeper
Lower Ohio River Waterkeeper

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APR 25 2018

REPLY TO THE ATTENTION OF:

WQ-16J

Notice of Review of WQS
MaryAnn Stevens
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN Saint Paul, MN, 55155-4194

Dear Ms. Stevens:

On February 28, 2018, the Indiana Department of Environmental Management (IDEM) published a notice in the State Register announcing Indiana's water quality standards review and requesting comment on the need for amendments and revisions to Indiana's water quality standards (WQS). EPA commends IDEM in its efforts to satisfy this important requirement of the Clean Water Act (CWA).

IDEM's notice of the triennial review includes a brief description of WQS work that IDEM has identified as a priority, which includes the following:

(1) Revise the aquatic life ambient water quality criteria (WQC) and human health ambient WQC for metals. Proposed revisions to these metal criteria reflect updates to National Recommended Water Quality Criteria (NRWQC) at Section 304(a) of the CWA and current science. Second Notice of Comment Period, LSA Document #14-58, closed February 1, 2018.

(2) Remove the limited use waters classification and waters classified for limited use in 327 IAC 2-1 and 327 IAC 2-1.5. First notice of rulemaking is being developed.

(3) Update Indiana's procedures for calculating aquatic life ambient WQC and human health ambient WQC to reflect current EPA guidance and to implement consistent statewide procedures. These methodologies are used to derive ambient WQC for chemicals that do not have a NRWQC at Section 304(a) of the CWA, but have the potential to impact human health or aquatic life. Updating these procedures will include adopting updated exposure, bioaccumulation, and toxicity factors that reflect the latest scientific information and EPA policies. First notice of rulemaking is being developed.

(4) Update or adopt new and updated human health ambient WQC for 94 chemical pollutants that are NRWQC at Section 304(a) of the CWA. U.S. EPA derived the 94-human health ambient WQC using updated exposure, bioaccumulation, and toxicity factors that reflect the latest scientific information and EPA policies. First notice of rulemaking is being developed.

(5) Update current Indiana WQS variance rules to be consistent with the 2015 revisions of the federal water quality standards regulations that include a rule at 40 CFR §131.14 that establishes a regulatory framework for the adoption of WQS variances to implement adaptive management approaches to improve water quality.

EPA supports IDEM's proposed work plan as proposed in the notice. Previously, EPA provided specific comments to IDEM on the proposed revisions to metals criteria in (1) above. EPA will provide any specific comments on the other proposed rule revisions as they become available for review and are submitted to EPA for review and approval.

As part of EPA's 2015 revisions of the federal WQS regulations, EPA revised the federal regulations at 40 CFR 131.20(a) to require that if states and authorized tribes choose not to adopt new or revised criteria for parameters for which EPA has published new or revised 304(a) criteria recommendations, they must explain their decision for not doing so. As stated in the preamble to the 2015 revisions:

> [f]ollowing this rulemaking, when states and authorized tribes conduct their next triennial review they must provide an explanation for why they did not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria recommendations since May 30, 2000. During the triennial reviews that follow, states and authorized tribes must do the same for criteria related to parameters for which EPA has published CWA section 304(a) criteria recommendations since the states' or authorized tribes' most recent triennial review. (80 Fed. Reg. 51028)

A list of all new or updated 304(a) criteria recommendations since May 30, 2000 may be found at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100MYS8.PDF?Dockey=P100MYS8.PDF. Since that list was prepared in July 2015, EPA has published new or updated 304(a) aquatic life criteria for cadmium and selenium and is in the process of publishing updated 304(a) aquatic life criteria for aluminum. To be consistent with the revised 40 CFR 131.20, for all parameters for which EPA has published new or updated 304(a) criteria recommendations since May 30, 2000 that are not currently addressed in IDEM's work plan or supporting documentation, IDEM's submission to EPA of the results of this review should include a discussion of whether Indiana has adopted the 304(a) criteria recommendations and an explanation for those parameters where Indiana has not adopted the 304(a) criteria recommendations. Additionally, as described in the preamble to EPA's 2015 WQS regulatory revisions at 80 Fed. Reg. 51029, EPA encourages IDEM to make these explanations available to the public. Finally, EPA notes that Indiana's WQS include a number of site-specific water quality criteria previously adopted by Indiana (IAC 2-1.5-16, Table 16-1, Table 8.9-1). These also should be reviewed by IDEM to ensure that they remain consistent with the most current science for the subject pollutants.

Federal regulations at 40 CFR 131.20(a) also require that states "re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) CWA every three years to determine if any new information has become available." IDEM's proposed WQS work includes removal of the "limited use waters" classification from Indiana's WQS. Item (2) in the notice states that IDEM intent is to, "[r]emove the limited use waters classification and waters classified for limited use in 327 IAC 2-1 and 327 IAC 2-1.5." It is not clear from the notice what IDEM intends to do with waters currently identified as limited use waters. Removing this use and reclassifying these waters into a use class consistent with section 101(a)(2) of the CWA would be one way to address the requirement of this federal regulations at 40 CFR 131.20(a).

Thank you for the opportunity to provide these comments. If you have any questions regarding these comments, please contact me or have your staff contact David Pfeifer of my staff at (312) 353-9024 or pfeifer.david@epa.gov .

Sincerely,

D. Scott Ireland
Acting Chief, Water Quality Branch