Ohio Environmental Protection Agency

Hearing Summary

Rule Package:	Water Quality Criteria for the Protection of Human Health
Original filing date:	October 30, 2019
Public comment start date:	October 30, 2019
Public comment end date:	December 4, 2019
Public hearing date:	December 4, 2019
List of Rules:	3745-1-32, 3745-1-33, 3745-1-34

Were there any participants in this public hearing beyond Ohio EPA staff or JCARR staff?

☒ Yes ☐ No

Were there comments received during the public comment period outside of those presented at this hearing?

☒ Yes ☐ No

This hearing summary has been compiled to meet the requirements of Section 119.03 of the Revised Code.

This hearing summary includes this cover sheet and the following attachments:

1. **Attachment A -** A copy of the public notice for this hearing,
2. **Attachment B -** A copy of the sign-in sheet for this hearing,
3. **Attachment C -** A copy of the script read into the record to begin and end the hearing, and
4. **Attachment D -** A copy of the response to comments including the original cost impact analysis.

Ohio EPA's response to comments document includes the comments received, who commented, the agency response to comments, and a statement of whether or not the rule was changed due to the comments.

Ohio EPA digitally records all public hearings for rules. The digital recordings are available upon request in a WAVE (.wav) file format. These recordings may be sent out for transcription if necessary.

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

Public Notice
Public Hearing Scheduled For
Proposed Rulemaking Governing
Water Quality Standards Program

Notice is hereby given that a public hearing regarding proposed amendments to the Water Quality Standards Program rules in Ohio Administrative Code (OAC) Chapter 3745-1 has been scheduled for **December 4, 2019**. This rulemaking includes the following rules:

Rule Number	Rule Title
3745-1-32	Ohio river standards.
3745-1-33	Water quality criteria for water supply use designation.
3745-1-34	Water quality criteria for the protection of human health [fish consumption].

OAC Chapter 3745-1 contains Ohio's standards for water quality. This rulemaking includes the review and update of three rules containing numeric water quality criteria to reflect the latest scientific information available from U.S. EPA and the Ohio River Valley Sanitation Commission (ORSANCO).

The Agency invites all interested parties to comment on this rule. The public comment period will run until **December 4, 2019**. A public hearing on this proposed rulemaking will be held to consider public comments in accordance with Section 119.03 of the Ohio Revised Code. This hearing will be held at **Conference Room A at the Ohio EPA Central Office, 50 West Town Street, Suite 700, Columbus, Ohio at 10:30 a.m. on December 4, 2019**. All visitors to Ohio EPA must register at the Security desk in the lobby upon arrival. Please bring photo identification (such as a valid driver's license). For security reasons, visitors are required to wear their badge at all times while in the building. Please arrive early to complete these procedures.

To facilitate the scheduling of oral presentations, persons intending to give testimony at the hearing should notify the Ohio EPA Public Interest Center, P.O. Box 1049, Columbus, Ohio 43216-1049, (614) 644-2160. Prior registration will ensure that registrants are heard ahead of those individuals who register at the hearing. Oral testimony may be limited to five minutes, depending on the number of persons testifying. All interested persons are entitled to attend or be represented and to present oral and/or written comments concerning the proposed rulemaking.

Written testimony should be sent to the attention of Emily DeLay at the Division of Surface Water, P.O. Box 1049, Columbus Ohio 43216-1049. Written comments may also be submitted to the Hearing Officer at the public hearing. Written testimony will receive the same consideration as oral testimony. All testimony received at the hearing or by close of business on **December 4, 2019**, will

be considered by Ohio EPA prior to final action on this rulemaking proposal. Written comments submitted after this date may be considered as time and circumstances permit.

Pre-notice of this rulemaking is being given to provide a minimum of 45 days' notice of the public hearing. The preliminary proposed rule and a fact sheet explaining the rule revisions are posted on the Ohio EPA website at www.epa.ohio.gov/dsw/dswrules.aspx. Another notice will be provided when this rule is officially filed with the Joint Committee on Agency Rule Review and the rule will be posted on the Ohio EPA website at the above link. Questions regarding this rule package should be directed to Audrey Rush, at the Division of Surface Water, at (614) 644-2035.

Ohio Environmental Protection Agency

SIGN-IN SHEET

Subject: DSW Rules 3745-1-32, 33, 34
County: Statewide **Date:** December 4, 2019

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DSW WQS Program Rules Hearing

12/4/19

My name is Mary McCarron. I am with the Public Interest Center. I will be presiding over today's public hearing.

Thank you for taking time to attend this hearing before Ohio EPA. The purpose of the hearing today is to obtain comments from any interested person regarding Ohio EPA's proposed rules.

Ohio EPA Division of Surface Water is proposing to amend the following rules of the Ohio Administrative Code chapter 3745-1-32, 1-33 and 1-34. These rules contain numeric water quality criteria to reflect the latest scientific information available from U.S. EPA and the Ohio River Valley Sanitation Commission.

These rules have been filed with the Joint Committee on Agency Rule Review. Copies of the rules are available for public review at Ohio EPA's Columbus Office and on our website.

All interested persons are entitled to attend or be represented, and to present oral and/or written comments concerning the proposed rules. All written and oral comments received as part of the official record will be considered by the director of Ohio EPA.

To be included in the official record, written comments must be received by Ohio EPA by the close of business, today, December 4, 2019. These comments may be filed with me today or emailed to emily.delay@epa.ohio.gov. All written comments submitted for the record receive the same consideration as oral testimony given today.

Written statements submitted after today may be considered as time and circumstances permit, but will not be part of the official record of the hearing.

If you wish to present oral testimony at this hearing today and have not already signed the registration sheet, please do so at this time. The sheet is available at the registration table. Persons will be called in the order in which they have registered.

There is no cross examination of speakers or of representatives of Ohio EPA in public hearings. Ohio EPA hearings such as this afford citizens the opportunity to provide comments on the official record. Therefore, we will not be able to answer questions during the hearing. However, members of the panel may ask clarifying questions of the person testifying to ensure the record is as complete and accurate as possible.

I will now read the names of those who have registered at this hearing and will give each person an opportunity to testify.

Is there anyone else who wishes to testify at this time?

Seeing no further requests for testimony, I remind you that written comments can be submitted through the close of business today.

Thank you for attending. The time is now and this hearing is adjourned.

Division of Surface Water
Response to Comments

Rules: Water Quality Standards Program Rules, OAC Chapter 3745-1:
OAC 3745-1-32: Ohio river standards.
OAC 3745-1-33: Water quality criteria for water supply use designations.
OAC 3745-1-34: Water quality criteria for the protection of human health [fish consumption].

Agency Contact for this Package:

Division Contact: Audrey Rush
Division of Surface Water
614-644-2035
audrey.rush@epa.ohio.gov

Ohio EPA held a proposed rule comment period from October 30, 2019 to December 4, 2019 regarding three Water Quality Standards Program rules. This document summarizes the comments and questions received during the associated comment period.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

Comment 1: I. The RTC Document Does Not Adequately Demonstrate that Current and Future Dischargers Will Not Incur Treatment Costs

To determine potential overall compliance costs, Ohio EPA first removed from consideration pollutants with aquatic life criteria more stringent than their corresponding HHC. Next, it eliminated pollutants where "there are not sufficient monitoring requirements in NPDES permits to provide data for analysis (in many cases, none)." For the remaining pollutants, "Ohio EPA first looked at whether the new criteria would generate new, lower limits through the wasteload allocation process," and then reviewed 2011-2019 discharge data "to determine if the new limits would be met." RTC document, Attachment 1, pp. 2-3.

AF&PA has two concerns with this approach. First, it is not clear how Ohio EPA performed its wasteload allocations, which usually are undertaken for specific

dischargers on specific water bodies. To better facilitate informed public comments, Ohio EPA should provide the underlying data and analysis to support its allocations.

Second, the discharge data examined by Ohio EPA were generated in the 2011-2019 time frame using available analytical methods. The RTC document states that "Ohio law requires that the dischargers use the most sensitive test method available." Analytical methods are continuously becoming more sensitive and future methods likely will be able to detect and quantify pollutants at lower and lower levels. It is reasonable to expect that these new methods will find and quantify pollutants in dischargers' effluents at levels above the new criteria, especially since approximately: 90 percent (86/96) of Ohio's current criteria values are greater (less stringent) than EPA's 2015 criteria recommendations; 70 percent (68/96) of Ohio's current criteria values are greater than 10 times EPA's 2015 criteria values, and 30 percent (32/96) are greater than 100 times EPA's 2015 criteria. Further, 81/86 proposed criteria for the Ohio River basin are more stringent than Ohio's previous criteria. While a few of these are due to updated IRIS toxicity values posted since Ohio last updated their criteria, most are more stringent because of changes in EPA policy choices related to selected exposure scenarios. With EPA's criteria, many more dischargers will have permit limits and incur treatment costs in addition to the monitoring costs discussed in the RTC document. (American Forest &Paper Association)

Response 1: Ohio EPA calculates wasteload allocations (WLAs) based on our rules in OAC Chapter 3745-2, specifically rules 3745-2-05 and 3745-2-10 for ammonia-nitrogen toxicity. If you need more information about calculating wasteloads, please see these rules.

As for how we calculated the WLAs for this particular exercise, we used the eDMR (electronic discharge monitoring report) data submitted by each facility and their permit limits to screen out those who would be unaffected by these rule changes, and then used: 1. the main outfall design flow of each facility; 2. a stream dilution ration of 0.10 or 10% (in the Ohio River Basin – set by ORSANCO); 3. the harmonic mean flow (HMQ), and 4. assumed no background water quality concentration for these pollutants not weeded out by our initial analysis (see attachment in IPR response to comments) because the parameters left are not naturally occurring substances. The equation to determine mass balance below was used (directly from OAC rule 3745-2-05):

$$\frac{WQC\ (Q_{eff} + Q_{up}) - Q_{up}(WQ_{up})}{Q_{eff}}$$

Where:
WQC = water quality criterion as established in OAC rule 3745-2-04.
Q_{eff} = Effluent flow
Q_{up} = percent of stream design flow (stream dilution ratio)
WQ_{up} = background water quality

The Agency believes that it would be inappropriate to publish facility's eDMR reports without permission or a public records request, so we opted to mail a letter about the rulemaking to each facility that we determined may be negatively impacted

by these rule changes. None of the 153 dischargers responded to our letters, reached out to the Agency or commented on these rules.

We would like to point out that facilities do not usually receive a permit limit that is a water quality standard (WQS) straight from the rule, hence Ohio EPA's analysis using calculated wasteload allocations. WQSs are only "end-of-pipe" limits if: the receiving stream has no dilution (a zero-low flow stream), if there is flow in the receiving stream but the background concentration of the pollutant is at or above the WQS, or if the pollutant is being discharged where mixing zones are not allowed (I.e., if a pollutant is a bioaccumulative chemical of concern). If these situations do not apply, then the WQS is applied as an ambient in-stream concentration, meaning that they are calculated with dilution factored in and would result in a permit limit higher than the WQS.

AF&PA quotes the Agency's response to IPR comments: "Ohio law requires that the dischargers use the most sensitive test method available." By this statement, we meant that dischargers are required to use the most sensitive test method available *that has been promulgated into our rules or in 40 CFR part 136.* This is a very important distinction to make and we apologize for any confusion because this does not include all of U.S. EPA's approved methods. Eventually there may be new analytical methods promulgated into rule that can read to a lower level with statistical confidence, however, as Ohio EPA has demonstrated by our wasteload analysis, almost all facilities are already meeting the new WQS numbers, and the other facilities would only need to make minor adjustments (I.e. increasing chemical feed) in order to meet the new WQS. To say that "It is reasonable to expect that these new methods will find and quantify pollutants in dischargers' effluents at levels above the new criteria" is simply incorrect because we have not promulgated any new methods and if the current methods find that the concentration of a parameter is below detection of the most sensitive method promulgated, the facility is still in compliance. Labs have to have equipment and employ methods sensitive enough to read to that level.

Detailed analysis of potential compliance costs associated with the adoption of these criteria were provided during interested party review and are found in Attachment 1.

Comment 2: <u>II. EPA's National HHWQC are Extremely Conservative</u>

As it undertakes the risk management inherent in establishing its HHC, Ohio EPA should recognize that EPA's national HHC (which are based on the 2000 Human Health Methodology) use very conservative default values that result in unnecessarily stringent criteria because of "compounded conservatism."[1] The RTC document states that U.S. EPA would not agree that the exposure factors in the 2015 update are "highly conservative revisions," because the increase in the new factors was not that significant compared to the old. In addition, the national factors are based on the "90th percentile for all adults over the age of 21" and Ohio EPA states this is not a "narrow range of the general population," as commenters such as AF&PA have asserted. RTC document, Attachment 1, p. 2. We have three important concerns regarding the positions articulated in the RTC.

First, the changes in exposure assumptions made by EPA as part of the 2015 "update" are primarily policy-based and do not merely reflect "the latest toxicological

[1] See the NCASI comments that discuss in more detail the compounded conservatism embodied in the national HHC.

and exposure data." For example, EPA's fish consumption rate (FCR) reflects a policy change to include several marine species that may spend part of their lifecycle in near-shore marine waters and these species may not be relevant to waters in Ohio or exposures of Ohioans. EPA's selection of 2.4 liters/day of drinking water (DW) consumption reflects a 90th percentile choice, whereas the previously used value of 2.0 liters was an 86th percentile. And, the vast majority of EPA's 2015 criteria for non-carcinogens use a relative source contribution (RSC) value of 0.2 whereas nearly all of EPA's criteria prior to 2015 used a value of 1.0. These choices are policy-based, not science-based, and Ohio should evaluate their appropriateness for waters of the state, just as other states have done.

Second, we disagree that use of "the new factors was not that significant compared to the old." Considered collectively, the increase in FCR, DW and RSC make many of the resulting criteria 5-10 times more stringent than previous criteria values. This is a significant change not justified solely by new science or data. Rather, this increase in stringency is based largely on the policies for interpreting those data, not on a need to make the criteria more stringent to account for increased actual exposure.

Third, the RTC misses the point of what we mean by "compounded conservatism." EPA's methodology assumes that every day for 70 years, everyone in the state drinks 2.4 liters of water that is:

- Unfiltered and untreated ***and***
- From surface water (lakes, streams, etc.) ***and***
- Contaminated at the HHC level

For water and organism values, the methodology assumes that every day for 70 years people are not only drinking water as described above, but they also are eating 22 grams per day of fish from the same location that is:

- From local waters, grocery stores, aquaculture, foreign countries (now including some marine species not previously included) ***and***
- From waters contaminated at the HHC level (including near-shore marine waters) ***and***
- Contaminated with pollutants from the water to the maximum extent possible ***and***
- Contaminated with the same amount of pollutants despite reductions from cooking.

Each of these exposure factors is conservative in and of itself. The conservatism of the individual factors is compounded because EPA's methodology assumes all the people in the state every day for 70 years drink water and eat fish having all these characteristics. Clearly this is an excessive level of conservatism and it is very unlikely that there is even one citizen in the state that drinks water and eats fish as described above.

Ohio EPA highlights the data and supporting information underlying EPA's national criteria to support its proposed action to adopt those criteria, without any further analysis. We are not challenging the national criteria in these comments, although there are significant flaws with those criteria, as discussed above and in the FWQC comments. We are asserting, however, that they are purposefully conservative to serve as national default criteria and that they do not apply to any Ohio waters or

consumers. Therefore, Ohio EPA should take the opportunity provided by EPA's water quality standards regulations to develop state-specific data that are reflective of actual Ohio residents and waters and undertake the analysis to tailor the national default criteria to Ohio. This would be consistent with the approach taken by other states including New York and Illinois, which specifically have deferred adoption, allowing for greater consideration of the criteria. Additionally, ORSANCO did not include the national criteria in their 2015 update to the Pollution Control Standards and states such as Delaware will be deriving their HHC using state-specific exposure factor values to better tailor the criteria to their communities.

Finally, there is a better, more scientifically advanced way to calculate HHC through PRA. U.S. EPA has both endorsed and used the probabilistic approach for several years. In 2014, they published a Risk Assessment Forum White Paper on PRA and their Guidelines for Human Exposure Assessment also recognizes the value of the method. The Probabilistic Risk Assessment is a systematic and comprehensive method to evaluate total risk and is used by a wide range of institutions including NASA and the US Federal Railroad Administration to determine the probability and severity of a detrimental outcome. The method is extremely flexible and can reliably account for a wide variety and range of risk while guarding against excessive conservatisms which may bias results unnecessarily. As noted in the NCASI comments filed in May, a tool has been developed that allows easy, spreadsheet-based, application to PRA techniques. (AF&PA)

Response 2: Ohio EPA does recognize that U.S. EPA's national recommended water quality criteria are conservative and fully understands the concept of "compounded conservativism." However, water quality criteria are designed to be conservative in order to protect sensitive populations. The fish consumption rate, drinking water intake rate and relative source contribution change as more data are collected and the population demographic changes.

Comment 3: <u>III. Conclusion</u>

Based to a large extent on its wasteload allocation, Ohio EPA has concluded that no dischargers will incur treatment costs for compliance with the new criteria and that only analytical costs will increase, even though most of the existing criteria will become more stringent. The agency should provide additional information behind its wasteload allocation so commenters can better understand the agency's analysis, and provide more information to support its conclusion that dischargers will not incur treatment costs.

Further, Ohio EPA should take the opportunity provided under EPA regulations to develop more scientifically defensible criteria that are achievable and applicable to Ohio waters. Finally, Ohio EPA should consider the many benefits of using PRA. (AF&PA)

Response 3: Please see response 1. Ohio EPA will continue to promulgate U.S. EPA's national recommended criteria at this time.

Comment 4: FWQC member entities or their members own and operate facilities located throughout the country, including in Ohio. Those facilities operate pursuant to permits issued by States or EPA under the National Pollutant Discharge Elimination System

(NPDES) program, which impose control requirements with respect to wastewater discharges. Many of those permits either include or will include effluent limits based on water quality standards developed for the protection of human health. Those standards, issued by States, are often based on the recommended human health criteria issued by USEPA – which is exactly what Ohio EPA is proposing to do here. Those State standards will ultimately determine the effluent limits in permits for FWQC members – both in Ohio and, if the Ohio standards are used as a precedent elsewhere, for members in other States as well. The FWQC, therefore, has a direct interest in the Proposal.

It is important to recognize, here, one basic concept in the process of setting State water quality standards: States are NOT required to adopt the recommended criteria issued by USEPA. While they need to consider the EPA recommendations, States are entirely free to use other scientifically defensible approaches. Unfortunately, Ohio EPA has refused to do that here, even though there is ample justification for doing so. Instead, Ohio EPA has simply decided to adopt the Federal recommendations completely. This course of action ignores major scientific flaws in the EPA approach. Moreover, the State has based its Proposal on an unsupported and illogical claim that the new standards will impose no major burdens on the regulated community. The Proposal will impose such burdens, and Ohio EPA should reconsider before taking final action.

The scientific problems with EPA's human health recommendations were pointed out to EPA while it was developing those criteria. In 2014, the FWQC submitted extensive comments to EPA on the proposed criteria, accompanied by detailed technical reports. Those documents (copies of which are attached to these comments) point out a series of steps in EPA's methodology that are not scientifically justified, including: (1) the derivation of fish consumption rates; (2) the use of a Relative Source Contribution value; (3) the assumptions used as to the amount of fish consumed from local waters, (4) the use of unduly high fish lipid levels; and, even more fundamentally, (5) the use of a bioaccumulation model that ignores some important factors and overstates others. These issues were not addressed by EPA when it finalized its criteria, so all of these concerns remain. Despite these concerns, Ohio EPA seeks to adopt the USEPA criteria, instead of developing its own standards that could address these issues in a scientifically valid manner.

Ohio EPA justifies its acceptance of the flawed EPA recommendations by giving three reasons: "lack of data," "lack of resources," and a claim that the USEPA recommendations "have already been extensively vetted through peer and public review and comment. (Ohio EPA Response to Comments on Human Health WQC at p. 5.) None of those reasons are sufficient. Certainly the agency cannot excuse its acceptance of scientifically flawed standards because it has decided not to expend resources to develop its own data and approaches. And while the USEPA criteria were certainly heavily criticized, including by the FWQC, the fact is that those criticisms have not been addressed – by USEPA or Ohio EPA. That must happen before standards are adopted that will be used to develop enforceable effluent limits.

Ohio EPA also seeks to justify its Proposal by arguing that the new standards will not impose any significant compliance costs on businesses or municipalities in Ohio. But that claim is simply not credible. Many of the new standards are orders of magnitude more stringent than the previous standards. In fact, some are considerably lower than

measured ambient concentrations in waterbodies. For example, in the Ohio River, data collected by the Ohio River Valley Water Sanitation Commission (ORSANCO) have shown that ambient levels for various organic compounds are much greater than the new standards. If the new standards will require dischargers to treat their effluents to below ambient levels, it is hard to see how that would NOT impose major financial costs – if it is doable at all.

Ohio EPA tries to support its claim as to lack of compliance costs by citing to an analysis that it has done as to specific dischargers in the State, but that, too, is subject to question. The agency claims that it has "looked at whether the new criteria would generate new, lower limits through the wasteload allocation process." (Ohio EPA Response to Comments on Human Health WQS, Attachment 1 at p. 3.) Does this mean that the agency has developed new wasteload allocations for the 151 facilities that are potentially affected by the new standards? If so, the agency needs to make those documents available, so those facilities and other stakeholders can review and comment on the calculations. But we doubt that actual wasteload allocations have been determined, since that process would take years. If Ohio EPA has performed some other kind of calculation that is not a true wasteload allocation, those results should not be relied on in support of the new standards.

There are other, additional concerns about the Ohio EPA cost analysis. For example, the agency says that the group of facilities that it reviewed (after going through the "wasteload allocation process") included only organic chemical facilities and "other dischargers that had limits for the chemicals." So the focus, there, is on facilities that already have effluent limits for the chemicals. But those facilities have limits because they have effluent levels that are already of concern under the existing, higher standards. The main impact of the new standards is that they are so low that many facilities that do not need limits under the existing standards will exhibit "reasonable potential" under the new standards, and therefore will receive new, stringent limits. It appears that Ohio EPA's analysis completely ignores that set of affected facilities, which could be very large. Therefore, it is likely that the State's analysis radically underestimates the true compliance costs, and needs to be redone before any final standards can be issued. (Federal Water Quality Coalition)

Response 4: As stated in our response to IPR comments, "Although Ohio EPA is aware that there are options when updating the water quality criteria rules, we must satisfy our regulatory obligation for triennial review under the Clean Water Act and the State of Ohio requires review of rules every five years.

OUG also points out that states have three options when developing criteria, and as previously stated, Ohio EPA is adopting U.S. EPA's national recommended criteria and will not develop state-specific criteria for several reasons including lack of data, lack of resources and because U.S. EPA's criteria recommendations have already been extensively vetted through peer and public review and comment."

U.S EPA has an entire think tank dedicated to assessing and developing water quality standards. Ohio EPA does not currently have the resources for this type of undertaking. Ohio EPA will continue to adopt the national recommended criteria until additional staff can be hired to assist with the WQS program.

These new criteria should not impose major burdens on the regulated community as explained in the IPR response to comments and cost analysis. Ohio EPA

has recalculated the wasteload allocations for the facilities that had the potential to be affected and the data speaks for itself. Because FWQC has not completed their own cost analysis based on actual data and presented different results, FWQC's claim cannot be substantiated.

Comment 5: OUG submits the following comments on proposed changes to Ohio Adm. Code 3745-1-32, Ohio Adm. Code 3745-1-33, and Ohio Adm. Code 3745-1-34. These comments pertain to proposed changes to human health criteria ("HHC") applicable to the Ohio River, inland water supply use designations, and inland WQC for protection of human health (fish consumption).

With regard to the proposed changes to the WQC for the Ohio River (Ohio Adm. Code 3745-1-32), the agency is proposing to adopt the more stringent of the following: (1) the maximum concentration level ("MCL") per the Safe Drinking Water Act; (2) the ORSANCO human health criterion; and (3) U.S. EPA's 2-route human health criteria. Some of the proposed revised criteria are more stringent than existing criteria applicable to the Ohio River, while some of the proposed criteria are less stringent.

In addressing comments from interested stakeholders in it response to comments, Ohio EPA referred to the table that was presented in the factsheet for the draft rules and its response to comment number 1. Further clarification is necessary. The table provides no clarification of how Ohio EPA determined which criteria applied (other than the most stringent). The response to comment number 1 addresses only the use of U.S. EPA's default criteria. Ohio EPA is required to provide independent justification for its water quality criteria and its response to comments is inadequate. (Ohio Utility Group)

Response 5: The criteria listed in the various tables is selected from the following sources: ORSANCO PCS, U.S. EPA Human Health 304(a) criteria, MCLs, or Ohio-derived values. ORSANCO typically updates their values with U.S. EPA updated criteria. Because ORSANCO adopted the 2015 PCS before the U.S. EPA updated criteria became effective in 2015, some of the values in the Ohio River do not reflect the current PCS values – the most stringent of the two values were selected.

Comment 6: <u>U.S. EPA Default Criteria Input Variables Were Not Evaluated by Ohio EPA</u>

In comments on the draft water quality standards, OUG noted that Ohio EPA has not evaluated the relevance of U.S. EPA's updated HHC (finalized in 2015) for Ohio waters. A justification is needed that assesses the appropriateness of the U.S. EPA criteria input variables to Ohio waters. These input variables include: (1) a presumed drinking water intake level of 2.4 liters per day, for a lifetime exposure of 70 years; (2) a daily fish consumption rate of 22 grams per day, specific for locally-caught fish, which does not include consumption of marine fish that are typically purchased in grocery stores or fish markets; and (3) a presumed relative source contribution ("RSC") of 0.2. The conservative RSC value assumes that no more than 20% of the chemical- specific reference dose is attributed to consumption of water and ingestion of fish. Other sources of exposure (e.g., dermal and inhalation) are thus granted a higher proportion of exposure. OUG notes that U.S. EPA has, previously, approved state-specific RSC values of up to 0.8 for various chemical compounds. OUG thinks that, if the U.S. EPA HHC are adopted by Ohio EPA, a default RSC value of 0.5 should be set as the default

value, with the caveat that less stringent RSC values could be approved pending a technical demonstration. In short, Ohio EPA cannot simply propose to adopt nationally recommended U.S. EPA HHC without evaluating each input variable in terms of appropriateness to Ohio surface waters and sources of exposure.

Despite these comments (from several interested parties), Ohio EPA's response to comments reiterates that it is relying on the default criteria because of a lack of state-specific data. This response is inadequate. If Ohio EPA lacks state-specific data, Ohio EPA should consider delay of adoption of these standards until it has collected and assessed these data. This will ensure that the adoption of the water quality criteria is based on the assessment of sound data. (OUG)

Response 6: As we have previously stated in the IPR response to comments, Ohio EPA did evaluate the relevance of U.S. EPA's updated HHC for Ohio waters and determined that there is not enough data to establish scientifically defensible state-specific criteria, and that our preliminary evaluation of the available data indicates that the criteria would not be significantly different.

The RSC value is a number between 0.2 and 0.8 which represents the percentage of exposure from the consumption of fish and drinking water. This number is not always 0.2 and varies from parameter to parameter. U.S. EPA sets these percentages based on toxicological and demographics data for the nation, and Ohio will continue to use these inputs. As we stated in our response to IPR comments in October: "Ohio EPA does not have enough data to justify a default RSC value of 0.5. U.S. EPA's default RSC value is 0.2 unless there is enough data to prove that the RSC of a chemical is greater (up to 0.8). Ohio cannot set an arbitrary default value of 0.5 without the data to back it up."

Comment 7: <u>Manganese.</u>

With regard to the proposed changes to Ohio Adm.Code 3745-1-34 (WQC for the protection of human health – fish consumption), OUG opposed the proposed criterion of 100 µg/L for manganese. The proposed criterion had no basis in the protection of human health via fish ingestion. U.S. EPA, 2002 (National Recommended Water Quality Criteria: 2002 – Human Health Criteria Calculation Matrix, EPA-822-R-02-012, U.S. EPA Office of Water) indicates that this 2-route criterion "…is not based on toxic effects, but rather is intended to minimize objectionable qualities such as laundry stains and objectionable tastes in beverages." OUG thanks Ohio EPA for deleting this criterion as it has no basis in actual human health effects. (OUG)

Response 7: Comment noted.

Comment 8: <u>States Are Not Required to Adopt U.S. EPA's HHC</u>

U.S. EPA issues nationally-recommended HHC pursuant to Section 304(a) of the Clean Water Act; states use these as the starting point for deriving WQC in their respective Clean Water Act water quality standard regulations. On page 3 of the CSI, it is stated that the proposed revisions to Ohio WQC regulations are needed to satisfy 40 CFR §131.11. However, U.S. EPA regulations (40 CFR §131.11[b]) are clear that states have the three options when developing WQC and submitting them to U.S. EPA for approval: (1) adopt the U.S. EPA nationally-recommended criteria; (2) modify these

criteria to reflect site-specific conditions; or (3) develop other "scientifically defensible" criteria.

OUG understands that one of the options is to adopt the nationally-recommended criteria. However, if there is reason to think that the other alternatives are more appropriate, Ohio EPA should evaluate those alternatives and make a determination based on its evaluation. Ohio EPA's justification for adopting the nationally-recommended criteria is simply that it lacks data that are specific to Ohio. OUG thinks that Ohio EPA should postpone adopting these criteria until it has adequate data to provide a justification for the criteria it will ultimately adopt. (OUG)

Response 8: Ohio EPA has evaluated alternatives to adopting the U.S. EPA nationally-recommended criteria. Based on these evaluations the Agency does not believe it feasible to modify criteria to reflect site-specific conditions or develop other "scientifically defensible" criteria. Ohio EPA does not currently have the resources for this type of undertaking. Ohio EPA will continue to adopt the nationally-recommended criteria until additional staff can be hired to assist with the WQS program. Therefore, although Ohio EPA is aware that there are options when updating the water quality criteria rules, we must satisfy our regulatory obligation for triennial review under the Clean Water Act and the State of Ohio requires review of rules every five years.

As we have previously stated in the IPR response to comments, Ohio EPA did evaluate the relevance of U.S. EPA's updated HHC for Ohio waters and determined that there is not enough data to establish scientifically defensible state-specific criteria, and that our preliminary evaluation of the available data indicates that the criteria would not be significantly different.

Comment 9: <u>Other State Activities in Adopting U.S. EPA HHC</u>

OUG notes that two adjacent states have chosen not to initially adopt the U.S. EPA 2015 HHC. The West Virginia Department of Environmental Protection recently received instructions from the West Virginia State Legislature to delay adoption of the 2015 U.S. EPA HHC until a thorough analysis of the appropriateness of the U.S. EPA criteria to West Virginia waters be evaluated. Similarly, the Kentucky Division of Water has determined that an evaluation of the U.S. EPA criteria be conducted by a multi-stakeholder group, in terms of relevance to waters in the Kentucky Commonwealth. Lastly, OUG points out that U.S. EPA Region 10 recently approved the adoption of HHC, and other WQC, proposed by the Idaho Department of Environmental Quality (letter from Chris Hladick [U.S. EPA Region 10] to John Tippets ["Idaho DEQ"] dated April 4, 2019). Some of the Idaho DEQ HHC deviated significantly from U.S. EPA's 2015 updated criteria.

In its response to comments, Ohio EPA took note that other states are developing or assessing state-specific criteria but it provided no justification regarding why it is not assessing state-specific data. If Ohio still lacks the appropriate state-specific data, OUG recommends rather than adopting the default national values, Ohio EPA should spend additional time and resources to collect these state-specific data to ensure that the proposed criteria are appropriate.

OUG recommends that Ohio EPA, in conjunction with stakeholders, further evaluate the appropriateness of adopting U.S. EPA's 2015 HHC to Ohio waters. OUG

thinks that a more extensive cost impact analysis must be conducted for potentially-affected facilities.

OUG thanks Ohio EPA for the opportunity to comment and looks forward to clarification in order to better understand the proposal. (OUG)

Response 9: Ohio is obligated to update its water quality criteria through the triennial rule evaluation. This review was initiated in late 2016. In addition, Ohio requires that we evaluate our rules every five years for updates. These rules have not been updated since 2002 and are long overdue. As stated previously, we do not have the resources to exhaustively evaluate exposure and toxicity data specific to Ohio. If in the future such resources become available, we may consider the option of further evaluation.

The cost impact analysis was provided as part of the IPR response to comments and is attached. During the rules process we have reached out to all potentially affected permittees and did not receive any objection to criteria adoption. We have no data suggesting that significant costs will be incurred from these rules.

- End of Response to Comments -

Attachment 1:

Ohio EPA has identified two potential sources of additional cost to regulated entities – costs due to treatment upgrades, and costs for more advanced chemical testing. The Agency does not believe that any significant treatment upgrades will be needed to meet limits based on the new criteria. Therefore, no new cost.

Ensuring compliance with these lower numbers will require some dischargers to do additional, low-level testing for a few parameters. Ohio EPA projects that these new costs will run from $0 - $400 per year per facility; the specific cost will depend on the sampling frequency required by the permit, the number of discharge points tested at the facility, and whether or not the facility is already using one or more of these advanced analytical techniques.

In breaking down costs, Ohio EPA first filtered out pollutants that would not drive additional costs because the new human health numbers were higher than other regulatory standards that would drive permit conditions. These would include pollutants that have lower aquatic life water quality standards than the new human health criteria and pollutants that have lower treatment technology standards (BAT/NSPS) than the new human health criteria. Note that some BAT values were lower only for the basins.

Table 1. Pollutants Where Aquatic Life WQS are lower than Human Health Criteria

Ohio River Mainstem		***Ohio River Basin***		***Lake Erie Basin***
Acenaphthene		Acenaphthene		Benzene
Anthracene		Anthracene		Chlorobenzene
Barium		Antimony		Cyanide, free
Chlorobenzene		Barium		2,4-Dimethylphenol
1,2-Dichlorobenzene		Benzene		Toluene
1,4-Dichlorobenzene		Bromoform		
1,3-Dichloropropene		Chlorobenzene		
Diethylphthalate		Cyanide, free		
Dimethylphthalate		1,2-Dichlorobenzene		
2,4-Dimethylphenol		1,4-Dichlorobenzene		
Ethylbenzene		2,4-Dichlorophenol		
Fluoranthene		1,3-Dichloropropene		
Fluorene		Diethylphthalate		
Methyl Bromide		Dimethylphthalate		
Phenol		Ethylbenzene		
Pyrene		Fluoranthene		
2,4,6-Trichlorophenol		Fluorene		

Zinc		Isophorone		
		Methlyene Chloride		
		Nitrobenzene		
		Phenol		
		Pyrene		
		Selenium		
		Toluene		
		2,4,6-Trichlorophenol		
		Zinc		

Table 2.	**Pollutants Where BAT/NSPS are Lower than Human Health Criteria**	
	Acenaphthene	2-Chlorphenol (ORB)
	Anthracene	Dibutylphthalate (ORB)
	Chlorobenzene	1,2-Dichloroethane (ORB)
	Chloroform	1,1-Dichloroethylene
	1,2-Dichlorobenzene	1,2-Dichloropropane (ORB)
	1,4-Dichlorobenzene	2,4-Dinitrophenol (ORB)
	trans-1,2-Dichloroethylene	Nitrobenzene (ORB)
	2,4-Dimethylphenol	Tetrachloroethylene (ORB)
	Ethylbenzene	1,1,2-Trichloroethane (ORB)
	Fluorene	Trichloroethylene (ORB/LEB)
	Phenol	
	Toluene	
	1,1,1-Trichloroethane	

An additional set of pollutants was removed from consideration because there are not sufficient monitoring requirements in NPDES permits to provide data for analysis (in many cases, none). Ohio EPA does not expect that new monitoring and limits will be required for these pollutants based on the low detection frequency of these pollutants in NPDES application testing data, and Ohio EPA effluent sampling.

Table 3.	**Pollutants not monitored in NPDES Permits**		
	Benzidine		alpha -Hexachlorocyclohexane
	Bis(2-chloro-1methylethyl) ether		beta-Hexachlorocyclohexane
	Bis(2-chloromethyl) ether		gamma-Hexachlorocyclohexane

	Bis(2-chloroethoxy)ethane		Isophorone
	Chlordane		Methoxychlor
	2,4-D		3-Methyl-4-chlorophenol
	4,4'-DDD		N-Nitrosodiethylamine
	4,4'-DDE		N-Nitrosodibutyl amine
	4,4'-DDT		N-Nitrosodipyrrolidine
	3,3'Dichlorobenzidene		Pentachlorobenzene
	Dinitrophenols		Silvex
	Endrin aldehyde		1,2,4,5-Tetrachlorobenzene
	alpha-Endosulfan		Toxaphene
	beta-Endosulfan		2,4,5-Trichlorophenol
	Endosulfan sulfate		2,4,6-Trichlorophenol
	Hexachlorocyclohexane - technical grade		

To assess potential treatment costs of the remaining parameters, Ohio EPA first looked at whether the new criteria would generate new, lower limits through the wasteload allocation process. If so, the Agency looked at the facility's reported discharge data for 2011-19 to determine whether the new limits would be met. Ohio EPA reviewed information for all organic chemical facilities that directly discharge to waters of the state, and also looked at other dischargers that had limits for the chemicals not excluded using the methods above. For the following seven pollutants, at least one discharger had more restrictive wasteload allocations using the new criteria:

- 1,2,4-Trichlorobenzene
- 2,4-Dinitrotoluene
- Benzo(a)pyrene
- Bis(2-ethylhexyl)phthalate
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachloroethane
- Vinyl Chloride

The analysis for 1,2,4-trichlorobenzene showed that only 1 discharger out of 13 would have lower limits under this rule. Compliance with the new standard cannot be determined because the test methods currently used by the discharger are not sufficiently sensitive to determine compliance; however, highly chlorinated organic chemicals are not commonly used, and have historically been used/generated at relatively few plants. This is also true for hexachlorobenzene, hexachlorobutadiene and hexachloroethane (although more facilities will have lower limits for these pollutants). It is not expected that facilities will have compliance issues with these chemicals. The only facility that has a history of using similar chemicals has not shown significant detections (1 detection in 46 samples for hexachlorobenzene) and test quantification levels have generally been good for this facility. Ohio EPA does not expect compliance issues for these chemicals.

A similar situation exists with benzo(a)pyrene. This chemical is typically associated with tar manufacturing and processing and is not commonly detected in NPDES effluents. While seven of the nine facilities reviewed by Ohio EPA would have lower limits for benzo(a)pyrene, four of the seven use test methods capable of testing these new limits and have not found any detections. Ohio EPA does not believe that the remaining three facilities with lower limits will have any different results.

One facility would have more restrictive limits for 2,4-dintrotoluene. The limit change is relatively small, from 87 ug/l to 69 ug/l. This facility has not detected this chemical and will be able to meet the new limit.

Similarly, neither of the two facilities facing lower limits for vinyl chloride would experience compliance issues.

Several facilities have discharge limits for bis(2-ethylhexyl)phthalate. The new WQS for this chemical would cause lower limits at 9 of 23 facilities. It appears that seven of the nine facilities meet the new limits currently; the remaining two plants are expected to meet the new limits as they implement good sampling protocols. Bis-2EHP is a common contaminant from automatic sampler tubing; Ohio EPA has recommended collecting samples manually for phthalate parameters to eliminate this issue. The Agency believes that there are some dischargers that have not adopted this practice and may still be getting occasional detections of bis-2EHP in the effluent as a result.

Analytical Costs

Testing for these pollutants are typically done using scans that test for large groups of pollutants at one time. For organic pollutants, these are done in 2 groups: (1) easily volatile chemicals (easily evaporated), and (2) less easily evaporated chemicals (semi-volatiles). Most dischargers testing these chemicals do 1-2 scans per year. Scans for volatile compounds cost $75-100 per scan; semi-volatiles cost $150-200 per scan.

Some of the ten pollutants specifically evaluated for treatment cost increases above will require more sensitive analyses to detect the new standards. Federal NPDES rules require that permittees use test methods sufficiently sensitive to quantify discharge limits or wasteload allocation values. For limits that are less than the lowest quantification limit for that pollutant, Ohio law requires that the discharger use the most sensitive test method available (ORC 6111.13). To test for these pollutants at very low levels, permittees may need to run samples using low-level methods, which will result in additional testing costs. Based on a short survey of commercial laboratories, using these methods amounts to an additional run of the sample at the same cost as the general method. About half of permittees appear to be using low-level methods currently. The remaining ten permittees will face extra costs of $100-400 per year based on how many samples they are required to do per year, and how many extra method runs have to be performed.