

**EPA’s Review of Revisions to Indiana’s Water Quality Standards:
Aquatic Life and Human Health Ambient Water Quality Criteria for Metals
(327 IAC 2-1-6 and 327 IAC 2-1.5-8)
Under Section 303(c) of the Clean Water Act
WQSTS # IN2014-612**

Date: 2-1-2022

I. Executive Summary

On November 22, 2021, the U.S. Environmental Protection Agency received from the Indiana Department of Environmental Management (IDEM) a rule revision package containing changes to the State’s water quality standards (WQS) rules at 327 IAC 2-1-6 applicable to all state waters except waters of the state within the Great Lakes system (hereafter referred to as “waters outside the Great Lakes system”) and at 327 IAC 2-1.5-8 applicable to all state waters within the Great Lakes system (hereafter referred to as “waters within the Great Lakes system”). Submission of this rule package was complete with the receipt of the final rule as adopted that was posted in the Indiana Register on December 1, 2021, and sent to EPA in an electronic mail message dated December 8, 2021.

As discussed in Section II of this document, EPA has determined that these rules are consistent with the relevant requirements of the Clean Water Act (CWA) and federal regulations at 40 CFR parts 131 and 132 and therefore approves the WQS revisions. Consistent with the requirements of the Endangered Species Act (ESA), EPA evaluated the potential impacts of its approval of the adopted rules on federally-protected species and designated critical habitat and determined that consultation with the U.S. Fish and Wildlife Service (FWS) is necessary for its approval of the State’s revised criteria to protect aquatic life. As discussed in Section III of this document, EPA developed a biological evaluation (BE) that evaluates potential effects of its approval of the revised aquatic life criteria and sent it to FWS, seeking concurrence with EPA’s conclusion that approval of IDEM’s WQS revisions may affect, but is not likely to adversely affect, federally-listed species. Additionally, consistent with the “EPA Policy on Consultation and Coordination with Indian Tribes,” EPA evaluated whether approval of the adopted rules may affect the interests of federally-recognized tribes. As discussed in Section IV of this document, EPA provided substantive opportunity for all tribes in Indiana to provide input on EPA’s decision-making process and has therefore fulfilled its duty to consult on a government-to-government basis with federally-recognized tribes on actions that may affect tribal interests.

II. EPA Review of IDEM’s Submittal

WQS requirements of CWA sections 101(a)(2) and 303(c)(2) are implemented through federal regulations contained in 40 CFR Part 131. WQS requirements of CWA Section 118, specific to waters of the Great Lakes System, are implemented through federal regulations contained in 40 CFR Part 132. Consistent with federal regulations at 40 CFR § 131.21, new and revised WQS do not become effective for CWA purposes until they are approved by EPA. The criteria by which EPA evaluates State-adopted WQS are identified in 40 CFR § 131.5(a)(1) through

40 CFR § 131.5(a)(8); EPA reviews each of these criteria below. Because the revisions included in this rule package do not affect Indiana’s existing designated uses, affect Indiana’s antidegradation policy or its implementation, grant any WQS variances, affect Indiana’s compliance schedule provisions, or affect any State standards that do not include the uses specified in Section 101(a)(2) of the CWA, the WQS requirements in 40 CFR §§ 131.5(a)(1), (3), (4), (5) and (7) are not relevant in considering whether to approve Indiana’s new and revised WQS. EPA’s review for consistency with the WQS requirements specific to waters of the Great Lakes System in 40 CFR Part 132 can be found in Section II.E.2. EPA’s review of each of the applicable requirements of 40 CFR Part 131 can be found below.

A. Whether the State has adopted criteria that protect the designated water uses based on sound scientific rationale consistent with § 131.11. (40 CFR § 131.5(a)(2))

40 CFR § 131.11(a) provides that

States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.

40 CFR § 131.11(b)(1) provides that states should establish numeric water quality criteria based on:

- (i) 304(a) Guidance; or
- (ii) 304(a) Guidance modified to reflect site-specific conditions; or
- (iii) Other scientifically defensible methods.

1. Revisions to Indiana’s aquatic life criteria for arsenic, cadmium, chromium III, nickel, silver, zinc, and selenium at 327 IAC 2-1-6 and cadmium, lead, and selenium at 327 IAC 2-1.5-8, to protect aquatic life uses.

a. Numeric criteria values based on 304(a) Guidance

Consistent with Section 304(a) of the CWA, EPA publishes national recommended water quality criteria that accurately reflect the latest scientific knowledge regarding criteria necessary to protect the aquatic life uses specified in Section 101(a)(2) of the CWA. As discussed in Chapter 3 of EPA’s *Water Quality Standards Handbook*¹, EPA’s 304(a) criteria recommendations, if not exceeded, generally ensure adequate water quality for protection of a Section 101(a)(2) aquatic life designated use (p. 2) and “[i]f a state or authorized tribe relies on 304(a) criteria recommendations (or other up-to-date EPA guidance documents), they may reference and rely on the data in those documents and may not need to create duplicative or new material for inclusion in their records” (p. 3).

¹ U.S. Environmental Protection Agency, Office of Water, Office of Science and Technology, *Water Quality Standards Handbook*, (2017) at <https://www.epa.gov/wqs-tech/water-quality-standards-handbook>, last accessed December 2021 (hereafter referenced as “the WQS Handbook”).

Indiana's rulemaking revises the State's existing aquatic life criteria that apply to waters outside the Great Lakes system for arsenic, cadmium, chromium III, nickel, silver, zinc, and selenium in Table 6-1 and Table 6-1a at 327 IAC 2-1-6 and the State's existing aquatic life criteria that apply to waters within the Great Lakes system for cadmium and selenium in Table 8-1 and Table 8-1a at 327 IAC 2-1.5-8 by replacing the previous criteria with criteria consistent with EPA's current 304(a) recommendations². For equation-based criteria, Indiana's WQS contain both the criteria equations themselves and tables (Table 6-2 in 327 IAC 2-1-6 and Table 8-2 in 327 IAC 2-1.5-8) that provide the criteria values calculated at various hardnesses for convenience. To ensure the convenience tables accurately reflect the revised criteria, Indiana updated the dissolved values listed at various hardnesses for arsenic, cadmium, chromium III, nickel, silver, and zinc in Table 6-2 based on the revised criteria at 327 IAC 2-1-6 and the values for cadmium in Table 8-2 based on the revised criteria at 327 IAC 2-1.5-8. Because the revised criteria for selenium are not calculated using an equation with a conversion factor and do not vary based on hardness, selenium was removed from Table 8-2. Indiana also adopted criteria for lead consistent with EPA's current 304(a) criteria recommendations for waters within the Great Lakes system in Table 8-1 at 327 IAC 2-1.5-8, and corresponding revisions to Table 8-2 with the addition of dissolved values for lead at various hardnesses. Prior to this rulemaking, Indiana's WQS had not contained numeric criteria for lead that applied to waters within the Great Lakes system. As discussed above, EPA's 304(a) criteria recommendations are developed to ensure protection of the aquatic life uses specified in Section 101(a)(2) and incorporate the latest scientific knowledge and therefore, there is a sound scientific rationale to conclude that Indiana's new and revised criteria are protective of the State's aquatic life use.

For the reasons described above, EPA concludes in accordance with 40 CFR § 131.5(a)(2) and 40 CFR § 131.11(a) that Indiana's new and revised aquatic life criteria for arsenic, cadmium, chromium III, nickel, silver, zinc, and selenium at 327 IAC 2-1-6 and Indiana's new and revised aquatic life criteria for cadmium, lead, and selenium at 327 IAC 2-1.5-8 and associated revisions to the convenience tables (Table 6-2 in 327 IAC 2-1-6 and Table 8-2 in 327 IAC 2-1.5-8), are based on sound scientific rationale and protective of Indiana's aquatic life use.

b. Numeric criteria values based on 304(a) Guidance modified to reflect site-specific conditions

In addition to the statewide criteria for selenium that are consistent with EPA's 304(a) recommendations, Indiana adopted site-specific criteria for selenium that would apply only outside the Great Lakes basin "to surface waters for which the department has made, and U.S. EPA has approved, a site-specific determination that fishes in the Order Acipenseriformes do not occur at the site" (327 IAC 2-1-6(a)(4)(B), Table 6-1b).

Indiana derived the site-specific fish tissue (egg-ovary, whole-fish, and muscle) criterion elements for selenium consistent with EPA's guidance on site-specific species deletion and

² A full list of EPA's Section 304(a) criteria recommendations for aquatic life and links to the criteria documents can be found at: <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table>.

criterion recalculation^{3, 4}. This procedure is used to account for differences in selenium sensitivity between resident species within the site and those species used to derive the statewide criterion. As specified in the EPA's recalculation procedure for deriving aquatic life criteria, a species included in the national dataset for the pollutant under consideration must be retained and used to develop a site-specific criterion if the species occurs within the site. However, if a species in the national dataset does not occur within the site and does not serve as a surrogate for another species, it may be deleted from the dataset used to calculate the site-specific criterion. As discussed in Indiana's "LSA Document #14-58 Summary/Response to Comments from the Second Comment Period," Indiana's site-specific selenium criterion would apply only to waters where fishes in the Order Acipenseriformes do not occur. In Indiana, the native fishes that belong to the Order Acipenseriformes include lake sturgeon (*Acipenser fulvescens*), shovelnose sturgeon (*Scaphirynchus platyrhynchus*), and American paddlefish (*Polyodon spathula*). The national 304(a) dataset includes one species, white sturgeon (*Acipenser transmontanus*) from the Order Acipenseriformes. Because the site-specific criterion would only apply to waters where this species and other species from the same order do not occur, Indiana removed the genus mean chronic value for *Acipenser* from the national toxicity dataset, then recalculated the selenium criterion elements based on the remaining GMCVs in the national dataset. The national dataset contained egg/ovary and whole body toxicity data for eight other fish species representing seven genera and four families, and the muscle toxicity dataset included an additional species representing an additional genus and family, all of which Indiana retained as surrogates for other Indiana native fishes that could occur at the sites. Indiana's response to comments document provides a detailed description and discussion of the procedures, rationale and calculations used to derive the egg-ovary, whole body and muscle site-specific tissue criterion elements using EPA's recalculation procedure by deleting sturgeon from the national dataset.

To translate the site-specific egg-ovary criterion element (19 mg/kg dry weight) into water column criteria, Indiana used a regression approach proposed by DeForest et al. (2017)⁵ to calculate criteria for lentic and lotic waters. In its response to public comments on the 2015 draft 304(a) criteria for selenium⁶, EPA noted that this approach, originally outlined in a 2014 report⁷,

³ Stephan, C., D. Mount, D. Hansen, J. Gentile, G. Chapman, and W. Brungs, *Guidelines for Deriving Numerical Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (1985)(hereafter referenced as the "1985 Guidelines").

⁴ U.S. Environmental Protection Agency, Office of Water, *Revised Deletion Process for the Site-Specific Recalculation Procedure for Aquatic Life Criteria*, (2013).

⁵ Deforest, D.K., K.V. Brix, J. R. Elphick, C.J. Rickwood, A.M.H. DeBruyn, L.M. Tear, G. Gilron, S.A. Hughes and W.M. Adams, "Lentic, Lotic, And Sulfate-Dependent Waterborne Selenium Screening Guidelines for Freshwater Systems," *Environmental Toxicology and Chemistry* 36(9): 2503-2513 (2017).

⁶ EPA Response to Public Comments on the 2015 Draft Selenium Aquatic Life Ambient Water Quality Criterion, at https://www.epa.gov/sites/default/files/2016-07/documents/selenium_freshwater_2016_response_to_comment.pdf.

⁷ DeForest, D.K., K.V. Brix, J.R. Elphick, C.J. Rickwood, A.M.H. deBruyn, L.M. Tear, G. Gilron, S.A. Hughes, and W.J. Adams, "Final Report, Selenium Partitioning between Water and Fish Tissue in Freshwater Systems:

produced similar water column values to EPA's 304(a) approach, which is based on selenium bioaccumulation modeling, despite differences in analytical methods. Since the methods Indiana used to derive site-specific water column criterion elements for waters outside the Great Lakes basin where sturgeon and paddlefish do not occur results in similarly protective values as EPA's 304(a) criteria, EPA concludes that the water column criterion elements are based on sound scientific rationale and will protect Indiana's aquatic life designated use in waters where sturgeon and paddlefish are absent.

For the reasons discussed above, EPA concludes that Indiana's site-specific selenium criteria for waters outside the Great Lakes basin are based on a sound scientific rationale and protective of Indiana's aquatic life use where sturgeon and paddlefish are absent. Because Indiana's site-specific selenium criteria for waters outside the Great Lakes basin were derived after removing reproductive toxicity data for *Acipenser* from the national 304(a) dataset, which resulted in less stringent criteria, the site-specific selenium criteria are not protective of aquatic life where sturgeon and paddlefish occur. As adopted in this rulemaking, the criteria currently do not apply to any waterbodies and, thus, EPA does not need to review whether the site-specific selenium criteria are protective of aquatic life at any specific sites at this time. As specified at 327 IAC 2-1-6(a)(4)(C) and (D), the site-specific selenium criteria will not apply to any site and cannot be incorporated into final National Pollutant Discharge Elimination System permits or used for other Clean Water Act purposes until Indiana makes a site-specific determination that fishes in the Order Acipenseriformes do not occur at the site and EPA approves this determination. If Indiana makes such a site-specific determination, EPA will individually review each determination and base its decision to approve or disapprove on the case-specific facts provided for each, based on EPA's assessment as to whether the site-specific selenium criteria is protective of aquatic life at the site.

2. Creation of new footnotes at 327 IAC 2-1-6 and 327 IAC 2-1.5-8 for hardness-dependent aquatic life criteria for metals that caps hardness at 400 mg/L as calcium carbonate (CaCO₃)

The adopted rules add a new footnote to both Table 6-1 of 327 IAC 2-1-6 and Table 8-1 of 327 IAC 2-1.5-8 for hardness-dependent metals that requires that a hardness value of 400 mg/L as calcium carbonate (CaCO₃) be used where water hardness exceeds 400 mg/L as CaCO₃. The hardness cap is applicable to the following metals for all state waters outside the Great Lakes system⁸: cadmium, chromium III, copper, lead, nickel, silver, and zinc; and is applicable to the following metals for all state waters within the Great Lakes system⁹: cadmium, chromium III, copper, lead, nickel, and zinc. The revisions also make a corresponding removal of acute and

Development of Water-based Selenium Screening Guidelines," Prepared for: North American Metals Council - Selenium Working Group, Washington, D.C. May 2014 (2014).

⁸ Note that revisions to copper and lead for waters outside the Great Lakes system are only applicable to the hardness cap, the magnitude for these metals is not being revised.

⁹ Note that revisions to chromium III, copper, nickel, and zinc for waters within the Great Lakes system are only applicable to the hardness cap, the magnitude for these metals is not being revised.

chronic values for metals for hardness values above 400 mg/L in Table 6-2 (arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc) and Table 8-2 (arsenic, cadmium, chromium III, chromium VI, copper, mercury, nickel, and zinc).

Increasing hardness has the effect of decreasing toxicity of the metals affected by this action (i.e., the numeric values for the criteria get larger with increasing hardness). However, EPA provided guidance on the calculation of hardness-dependent metals criteria in the document *National Recommended Water Quality Criteria: 2002*¹⁰. According to the guidance, "...At high hardness there is an indication that hardness and related inorganic water quality characteristics do not have as much of an effect on toxicity of metals as they do at lower hardnesses. Related water quality characteristics do not correlate as well at higher hardnesses as they do at lower hardnesses. There is also increased uncertainty in this range because very limited data are available to clearly quantify the relationship between hardness and toxicity. Therefore, if hardness is over 400 mg/L as CaCO₃, EPA continues to recommend that a hardness of 400 mg/L be used..." Consistent with this conclusion, EPA's current 304(a) criteria recommendations for hardness-dependent criteria specify that a hardness of 400 mg/L be used to calculate criteria values for a water body where the hardness exceeds 400 mg/L.

Indiana's revised WQS are consistent with EPA's conclusions in the "National Recommended Water Quality Criteria: 2002" and, thus, how EPA's 304(a) national criteria recommendations are intended to be applied. Additionally, because increasing hardness has the effect of decreasing toxicity of the metals affected by this action, using a hardness value of 400 mg/L where water hardness is greater than 400 mg/L will result in more stringent criteria values for waters where water hardness is greater than 400 mg/L. Consequently, EPA concludes that the hardness cap for hardness-based metals criteria is based on a sound scientific rationale and results in criteria that are protective of Indiana's aquatic life use.

3. Name change from arsenic III to arsenic for aquatic life criteria at 327 IAC 2-1-6 and 327 IAC 2-1.5-8

The adopted rules revise the chemical name from arsenic III to arsenic for aquatic life criteria in Table 6-1 and Table 6-2 of 327 IAC 2-1-6 and Table 8-1 and Table 8-2 of 327 IAC 2-1.5-8. The revision has the effect of applying Indiana's arsenic criteria for aquatic life to total arsenic rather than arsenic (III) as it had applied previously. As discussed in Section II.A.1.a. above, Indiana's arsenic criteria to protect aquatic life are consistent with EPA's national 304(a) aquatic life criteria recommendations. EPA's published compilation of its national recommended water quality criteria titled *National Recommended Water Quality Criteria: 2002* states that EPA's national 304(a) aquatic life criteria recommendations for arsenic were derived from data for arsenic III but are applied to total arsenic. Therefore, Indiana's revision to apply its numeric arsenic criteria to total arsenic rather than arsenic (III) is consistent with EPA's current 304(a) recommendations. Because, as discussed in Section II.A.1.a. above, criteria based on EPA's Section 304(a) criteria are protective of a Section 101(a)(2) aquatic life use, there is a sound

¹⁰ U.S. Environmental Protection Agency, Office of Water, Office of Science and Technology, National Recommended Water Quality Criteria: 2002, (2002) at <https://www.epa.gov/sites/default/files/2018-12/documents/national-recommended-hh-criteria-2002.pdf> (hereafter referenced as "National Recommended Water Quality Criteria: 2002").

scientific rationale to conclude that Indiana’s revision to apply its arsenic criteria to total arsenic, consistent with EPA’s Section 304(a) criteria, is protective of Indiana’s aquatic life use.

4. Revisions to Indiana’s human health criteria at 327 IAC 2-1-6 for antimony, copper, nickel, selenium, and zinc to protect the public water supply use and for antimony, nickel, selenium, and zinc to protect the fish consumption component of the aquatic life use

Indiana’s WQS at 327 IAC 2-1-3 (applicable to waters outside the Great Lakes system) require protection for all waters that are used for public water supply at the points where the water is withdrawn (public water supply use) and require that all surface waters be capable of supporting a well-balanced, warm water aquatic community (aquatic life use). To protect human health, Indiana’s WQS include numeric criteria to protect the State’s public water supply use in Table 6-4 of 327 IAC 2-1-6 that apply at the “Point of Water Intake” (hereafter referred to as “public water supply criteria”) and numeric criteria to apply the fish consumption aspect of the State’s aquatic life use that apply “Outside of Mixing Zone” (hereafter referred to as “fish consumption criteria”). Indiana’s public water supply criteria are intended to protect the public from adverse effects associated with exposure to pollutants through both water consumption and fish consumption. Indiana’s fish consumption criteria are intended to protect the public from adverse effects associated with exposure to pollutants only through fish consumption.

Indiana’s WQS revisions include new and revised human health criteria for public water supply use and fish consumption for several pollutants in 327 IAC 2-1-6. EPA reviewed each new and revised public water supply criterion and fish consumption criterion in this rule revision package, as discussed below.

Consistent with Section 304(a) of the CWA, EPA publishes national recommended water quality criteria that reflect the latest scientific knowledge regarding criteria necessary to protect human health from the adverse effects of pollutants in ambient water. These include criteria to protect the public from adverse effects associated with both water consumption and fish consumption (commonly referred to as “water + organism criteria”) and criteria to protect the public from adverse effects associated only with fish consumption (commonly referred to as “organism only criteria”). As discussed in the WQS Handbook, EPA’s CWA 304(a) criteria recommendations, if not exceeded, generally ensure adequate water quality for protection of human health and “[i]f a state or authorized tribe relies on 304(a) criteria recommendations (or other up-to-date EPA guidance documents), they may reference and rely on the data in those documents and may not need to create duplicative or new material for inclusion in their records.”

Indiana adopted new and revised public water supply criteria that are consistent with EPA’s current CWA Section 304(a) water + organism criteria recommendations for human health¹¹. These include the new and revised criteria for antimony, copper, nickel, selenium, and zinc under the “Point of Water Intake” column in Table 6-4 of 327 IAC 2-1-6 applicable to waters outside the Great Lakes system. As discussed above, EPA’s Section 304(a) water + organism criteria recommendations are developed to ensure protection of human health from adverse effects

¹¹ A full list of EPA’s Section 304(a) criteria recommendations for human health and links to the criteria documents can be found at: <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table>.

associated with both water consumption and fish consumption and incorporate the latest scientific knowledge.

Additionally, Indiana adopted new and revised fish consumption criteria that are consistent with EPA's current CWA Section 304(a) organism only criteria recommendations for human health. These include the new and revised criteria for antimony, nickel, selenium, and zinc under the "Outside of Mixing Zone" column in Table 6-4 of 327 IAC 2-1-6 applicable to waters outside the Great Lakes system. As discussed above, EPA's Section 304(a) organism only criteria recommendations are developed to ensure protection of human health from adverse effects associated with fish consumption and incorporate the latest scientific knowledge.

As discussed above, EPA's CWA 304(a) criteria recommendations are developed to ensure adequate protection of human health against health risks from ingesting pollutants through drinking water and fish consumption. Considering the scientific and technical information supporting EPA's Section 304(a) criteria recommendations, there is a sound scientific rationale to conclude that Indiana's new and revised public water supply criteria and fish consumption criteria are protective of Indiana's public water supply use and fish consumption component of the aquatic life use.

5. Removal of human health criteria for beryllium, cadmium, chromium III, chromium VI, lead, and silver at 327 IAC 2-1-6.

Indiana's WQS revision package included the removal of the following previously applicable numeric criteria:

- Public water supply criteria for beryllium, cadmium, chromium III, chromium VI, lead, and silver
- Fish consumption criteria for beryllium and chromium III

40 CFR § 131.11(a) requires that states "adopt those water quality criteria that protect the designated use." For each of the criteria removed from the criteria table, Indiana determined that these specific numeric criteria are not necessary to protect the associated designated use. The removed human health criterion for silver was developed based on a cosmetic effect impact and not a toxicity endpoint. For beryllium, cadmium, chromium III, chromium VI, and lead the criteria are no longer scientifically defensible and there is currently an insufficient basis for calculating human health criteria. EPA does not currently have any Section 304(a) criteria recommendations for the affected pollutants.

The removal of numeric criteria for these pollutants does not remove the State's ability to regulate those pollutants, but only removes the specific, previously adopted numeric criteria for those parameters from Indiana's WQS. Indiana's rules at 327 IAC 2-1-6(a)(2) include a narrative criterion requiring that "All surface waters outside of mixing zones must be free of substances in concentrations that, on the basis of available scientific data, are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals,

aquatic life, or plants.”¹² Indiana’s rules at 327 IAC 2-1-6(a)(2)(C) provide for the calculation of criteria using the corresponding procedures prescribed in rule for substances not specified in rule when implementing this narrative criterion. Consequently, if found in a permitted discharge or through surface water monitoring, Indiana’s narrative criterion and methodology would require the State to develop a numeric expression of its narrative criterion to develop effluent limits in a National Pollutant Discharge Elimination System permit or for assessment purposes.

Because the removed criteria are either not relevant to protection of the associated designated use or are no longer scientifically defensible and there is currently an insufficient basis for calculating human health criteria and Indiana’s narrative criterion may be used to regulate these pollutants, EPA concludes that Indiana’s removal of the public water supply criteria for beryllium, cadmium, chromium III, chromium VI, lead, and silver and the fish consumption criteria for beryllium and chromium III is consistent with 40 CFR § 131.5(a)(2) and 40 CFR § 131.11(a).

6. Rounding of aquatic life criteria for arsenic and chromium VI at 327 IAC 2-1.5-8

Indiana’s adopted rules revise the existing aquatic life criteria for arsenic and chromium VI in Table 8-1 of 327 IAC 2-1.5-8 by rounding the criteria values to two significant digits. EPA’s recommendations on the use of significant figures in its aquatic life criteria derivation guidelines (i.e., the 1985 Guidelines) state, “[r]ound both the CMC and the CCC to two significant digits.” Consequently, Indiana’s rounding to two significant digits is consistent with EPA’s guidance on how these criteria should be applied. These rounding revisions do not change the level of protection or the technical basis of the criteria, but only revise the number of significant digits included in the criteria to reflect the level of precision associated with aquatic life toxicity tests. Therefore, EPA concludes that Indiana’s rounding revisions to the aquatic life criteria for arsenic and chromium VI are consistent with 40 CFR § 131.5(a)(2) and 40 CFR § 131.11(a).

B. Other new and revised WQS that EPA is taking action on.

In addition to the revisions discussed above, Indiana made numerous non-substantive revisions to 327 IAC 2-1-6 and 327 IAC 2-1.5-8, to reorganize the State’s existing WQS, make grammatical and stylistic edits, internal reference updates, and clarify intent.

As discussed in EPA’s 2012 document, titled “What is a New or Revised Water Quality Standard Under CWA 303(c)(3)? Frequently Asked Questions,” EPA considers non-substantive edits to existing WQS to constitute new and revised WQS that EPA has the authority and duty to approve or disapprove under CWA Section 303(c)(3).

EPA reviewed these non-substantive revisions and concluded that these revisions do not change the meaning or implementation of the State’s existing federally-approved WQS. Therefore, EPA concludes that these revisions are consistent with the CWA and federal regulations in 40 CFR Part 131.

¹² Indiana revised this provision for this rulemaking. In revising this provision, Indiana did not make any substantive changes (discussed in Section II.B).

C. New and revised items upon which EPA is taking no action under Section 303(c) of the CWA because they are not new and revised WQS.

As described in Section II above, EPA has authority and duty to review state rules under Section 303(c) of the CWA if those rules constitute new and revised WQS. The EPA document entitled “What is a New or Revised Water Quality Standard Under CWA 303(c)(3)? Frequently Asked Questions” describes the criteria by which EPA determines whether a provision constitutes a new and revised WQS, one of which is whether the provision “address[es] designated uses, water quality criteria (narrative or numeric) to protect designated uses, and/or antidegradation requirements for waters of the United States.” The following provisions of the revised rules establish wastewater treatment requirements and permit conditions to implement bacteria criteria, are technology based requirements, are reporting requirements, are beach notification and closure decisions, or are administrative procedure requirements:

- 327 IAC 2-1-6(d)(4)(B)
- 327 IAC 2-1-6(d)(5) and all subprovisions
- 327 IAC 2-1.5-8(e)(4)(B)
- 327 IAC 2-1.5-8(e)(5) and all subprovisions
- 327 IAC 2-1.5-8(c)(4)(D)(v) and all subprovisions
- 327 IAC 2-1.5-8(c)(4)(D)(vi)
- 327 IAC 2-1.5-8(c)(4)(D)(viii)
- The portion of 327 IAC 2-1-6(d)(3)(B) and 327 IAC 2-1.5-8(e)(3)(B) regarding the requirement for making beach notification and closure decisions.
- 327 IAC 2-1.5-8(j)(2) and all subprovisions
- Portions of footnotes addressing the administrative procedures for selenium fish tissue data collection specifically the second sentences of footnotes 2 and 3 of Table 6-1a and the second sentences of footnotes 3 and 4 of Table 6-1b at 327 IAC 2-1-6(a)(4), and the second sentences of footnotes 2 and 3 of Table 8-1a at 327 IAC 2-1.5-8(b)(3)(B).
- 327 IAC 2-1.5-8(b)(3)(C)(ii), (iv), (v), and (vi) and all subprovisions
- 327 IAC 2-1-6(a)(4)(C)(ii), (iv), (v), and (vi) and all subprovisions
- 327 IAC 2-1-6(a)(4)(D) and all subprovisions

Because the provisions above do not address designated uses, water quality criteria or antidegradation requirements, EPA concludes that they are not new and revised WQS that EPA has authority to review and approve under Section 303(c) of the CWA and is taking no action under Section 303(c) of the CWA on these revisions.

D. Whether the State has followed applicable legal procedures for revising or adopting standards. (40 CFR § 131.5(a)(6))

In a letter dated November 17, 2021, and received by EPA on November 22, 2021, John D. Walls, Chief Counsel, Advisory for Todd Rokita, Indiana Attorney General, certified that the rules were duly adopted and are enforceable in accordance with Indiana state law.

In adopting the rules, the State also provided opportunities for public input consistent with federal requirements at 40 CFR § 131.20(b) and 40 CFR Part 25. Indiana began the rulemaking

process by publishing a First Notice of Comment Period in the Indiana Register on March 5, 2014, notifying the public of its intent to revise Indiana's aquatic life and human health ambient water quality criteria for metals at 327 IAC 2-1-6 and 327 IAC 2-1.5-8. The public notice solicited comments on the affected citations listed, including suggestions for specific language, any other provisions of Title 327 that may be affected by the rulemaking, and alternative ways to achieve the purpose of the rulemaking. Indiana accepted comments through April 4, 2014, and received no comments in response to the First Notice of Comment Period.

On November 15, 2017, Indiana published a Second Notice of Comment Period in the Indiana Register, soliciting public comment on the draft rules. The notice included a copy of the draft rule and a link to all supporting documentation. The notice notified the public that comments would be accepted until January 2, 2018. The end of the public comment period was subsequently extended until February 1, 2018, through an updated Continuation of Second Notice of Comment Period published in the Indiana Register on December 20, 2017. Indiana received 14 comment letters during this period.

On September 23, 2020, Indiana published a Notice of Public Hearing in the Indiana Register, notifying the public that a public hearing to discuss the draft rule for preliminary adoption would be held on November 18, 2020. The published notice provided a link to the draft rule along with the contact information and web address for all supporting documentation. The notice also responded to the public comments received during the Second Notice of Comment Period. As specified in the notice, Indiana held a public hearing on November 18, 2020, and accepted public comments until that date. Indiana received verbal and written comments from two parties during the hearing and written comments from two parties during the public comment period.

Because portions of the proposed rule were substantively different from the draft rule published on November 15, 2017, Indiana conducted a third comment period. On April 21, 2021, Indiana published notice of the Third Comment Period in the Indiana Register, soliciting public comments on the proposed rules. The notice included the Proposed Rule and all supporting documentation. The notice also responded to the comments received during the previous comment period. Indiana accepted comments until May 12, 2021. Indiana received two comments during the Third Comment Period.

On June 30, 2021, Indiana published in the Indiana Register notice of a public hearing to be held on August 11, 2021, prior to consideration of final adoption of the rules. The published notice included links for the Environmental Rules Board Packets, which included the proposed rules and all supporting documentation. The notice also responded to the comments received during the Third Comment Period. As specified in the notice, Indiana held a public hearing in Indianapolis, Indiana and virtually on August 11, 2021. Indiana received no comments during the public hearing.

As described above, IDEM held two public hearings, one of which was publicized more than 45 days prior to the date of the hearing. For both hearings, IDEM recorded the hearing and met other requirements for public hearings specified at 40 CFR § 25.5. IDEM considered and responded to the public comments before adopting the rules. IDEM proposed amendments to the

rules in response to some of the comments. EPA reviewed the comments and IDEM's responses in deciding whether to approve Indiana's new and revised WQS.

E. Whether the State submission meets the requirements included in § 131.6 of this part and, for Great Lakes States or Great Lakes Tribes (as defined in 40 CFR § 132.2) to conform to Section 118 of the Act, the requirements of 40 CFR Part 132. (40 CFR § 131.5(a)(8))

40 CFR § 131.6 identifies the minimum requirements of a WQS submission. As described below, IDEM's submittal meets all the relevant requirements of 40 CFR § 131.6.

1. Minimum requirements for WQS submission (40 CFR § 131.6)

a. Use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the Act (40 CFR § 131.6(a))

As discussed in Section II above, the adopted rules do not modify Indiana's existing, effective designated uses as they are applied to specific Indiana surface waters.

b. Methods used and analyses conducted to support WQS revisions (40 CFR § 131.6(b))

The State submitted the following documents in support of these rules:

Documents provided via electronic mail on November 22, 2021:

- Indiana's Attorney General's Certification dated November 17, 2021, and received November 22, 2021;
- Office of the Attorney General, State of Indiana, Delegation of Authority to Deputy Attorney General and Chief Counsel, Advisory Division, effective January 11, 2021;
- Transmittal letter from Martha Clark Mettler, IDEM, to Tera Fong, EPA, dated November 22, 2021, and received November 22, 2021;
- Notice of Public Hearing on August 11, 2021, published in the Indiana Register on June 30, 2021;
- Notice of Third Comment Period published in the Indiana Register on April 21, 2021, notice includes the Summary/Response To Comments From the Second Comment Period, Summary/Response To Comments Received At The First Public Hearing, and the Proposed Rule language with markups; and
- Map of Watersheds Identified as Acipenseriformes Waters (Sturgeon and Paddlefish).

Documents provided via electronic mail on November 29, 2021:

- Microsoft word version of the Final Rule adopted by the Environmental Rules Board on August 11, 2021; and
- U.S. Environmental Protection Agency, Office of Water, *Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016 (Appendices A-N)*, (2016).

Electronic mail correspondence between IDEM and EPA R5 dated December 1, 2021

Documents provided via electronic mail on December 8, 2021:

- First Notice of Comment Period published in the Indiana Register on March 5, 2014;
- Second Notice of Comment Period published in the Indiana Register on November 15, 2017, notice includes the marked up (strikeout of existing language deleted in the rulemaking and bolded new language) Draft Rule;
- Continuation of Second Notice of Comment Period published in the Indiana Register on December 20, 2017;
- Change in Notice of Public Hearing for the public hearing scheduled for November 18, 2020, published in the Indiana Register on September 23, 2020;
- Notice of Third Comment Period (Proposed Rule and Request for Public Comment) published in the Indiana Register on April 21, 2021, notice includes the Summary/Response To Comments From the Second Comment Period, Summary/Response To Comments Received At The First Public Hearing, and the Proposed Rule language with markups;
- Change in Notice of Public Hearing for the public hearing scheduled for August 11, 2021, published in the Indiana Register on June 30, 2021¹³; and
- Final Rule published in the Indiana Register on December 1, 2021.

c. Water quality criteria sufficient to protect the designated uses (40 CFR § 131.6(c))

As discussed in Section II.A above, Indiana's new and revised criteria to protect Indiana's aquatic life use, public water supply use, and the fish consumption component of the aquatic life use are consistent with 40 CFR § 131.11.

d. An antidegradation policy consistent with 40 CFR § 131.12 (40 CFR § 131.6(d))

These rules do not affect Indiana's existing, EPA-approved and effective antidegradation policy.

e. Certification by the State Attorney General or other appropriate legal authority within the State that the WQS were duly adopted pursuant to State law (40 CFR § 131.6(e))

Indiana's Office of the Attorney General certified the rules in a letter from John D. Walls dated November 17, 2021.

f. General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include uses specified in Section 101(a)(2) of

¹³ The notice for the August 11, 2021, public hearing included a link to a website with the Environmental Rules Board packets. The information on the website for the August 11, 2021, meeting included a Rule Information Sheet, Summary/Response to Comments Received at the First Public Hearing, Summary/Response to Comments from the Third Comment Period, and the Proposed Rule as Preliminarily Adopted with IDEM's Suggested Changes Incorporated.

the Act as well as information on general policies applicable to State standards which may affect their application and implementation (40 CFR § 131.6(f))

The adopted rules do not modify Indiana's existing, effective designated uses as they are applied to specific Indiana surface waters and do not remove, affect or include any general policies applicable to Indiana's WQS that may affect their application and implementation.

2. Requirements of 40 CFR Part 132

The adopted revisions at 327 IAC 2-1-6 only apply to waters outside the Great Lakes system and, thus, the requirements of 40 CFR Part 132 are not applicable to Indiana's revisions to 327 IAC 2-1-6. Because Indiana's WQS at 327 IAC 2-1.5-8 apply to waters within the Great Lakes system at 327 IAC 2-1.5-8, the requirements of 40 CFR Part 132 apply to Indiana's adopted revisions to those WQS.

Indiana's revised rules applicable to waters within the Great Lakes system at 327 IAC 2-1.5-8 include substantive and non-substantive revisions. Indiana made several non-substantive revisions to 327 IAC 2-1.5-8, to make grammatical and stylistic edits, internal reference updates, and clarify intent. As discussed in Section II.B above, EPA reviewed these non-substantive revisions and concluded that these revisions do not change the meaning or implementation of the State's existing federally-approved WQS and, thus, do not affect whether Indiana's WQS are consistent with 40 CFR Part 132.

Indiana's revised rules include the following substantive revisions:

As stated previously in Section II.A.1, Indiana adopted new or revised aquatic life criteria based on EPA's current 304(a) recommendations for cadmium, lead and selenium at 327 IAC 2-1.5-8.

40 CFR §§ 132.3(a) and (b) require that the Great Lakes States adopt the numeric water quality criteria in tables 1 and 2 of 40 CFR Part 132 for the protection of aquatic life in the Great Lakes System. When adopting or revising numeric water quality criteria that apply within the Great Lakes System other than those criteria included in tables 1 and 2, 40 CFR § 132.4(b), in relevant part, requires that, with three exceptions, "the Great Lakes States and Tribes shall use methodologies consistent with the Tier I methodologies in [Appendix A or the site-specific modification provisions in Procedure 1 in Appendix F] of this part." EPA's current 304(a) recommendations for cadmium and lead, which Indiana adopted, were developed using the methods described in the 1985 Guidelines. The Tier I methodology in Appendix A of 40 CFR Part 132 differs from the methodology in the 1985 Guidelines in three ways¹⁴. The three differences are: 1) the GLI methodology gives preference to species that are resident in the Great Lakes System, 2) the GLI methodology does not use the Final Residue Value (FRV) that was used in the 1985 Guidelines, instead human health and wildlife criteria are to be derived using guidelines that are designed to provide adequate protection to human health and wildlife, and 3)

¹⁴ U.S. Environmental Protection Agency, Office of Water, *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (1996)(hereafter referenced as the "1995 Updates").

acute-chronic ratios for saltwater species are not used in the GLI methodology if the Minimum Data Requirements for chronic data are satisfied by data for freshwater species.

For cadmium, the three exceptions are not relevant to how the aquatic life criteria were derived because 1) there are no species that are resident in the Great Lakes System in the national 304(a) dataset that require special preference, 2) the 304(a) criteria were not derived using the Final Residue Value, and 3) no acute-chronic ratios were used to derive the 304(a) chronic criterion. Therefore, EPA's current 304(a) recommendations for cadmium which Indiana is adopting were derived using a methodology consistent with the methodology for Tier 1 in Appendix A to Part 132 and are, thus, consistent with the requirements of 40 CFR §132.4(b).

For lead, there are no species that are resident in the Great Lakes System in the national 304(a) dataset that require special preference and the 304(a) criteria were not derived using the Final Residue Value. The third difference is relevant to the chronic criterion for lead, though, because EPA's current 304(a) chronic criterion recommendation for lead was derived using species mean acute-chronic ratios for a saltwater species (*Mysidopsis bahia*) and three freshwater species (*Daphnia magna*, rainbow trout, brook trout). However, using only the freshwater species, consistent with the Tier I methodology in Appendix A to Part 132 results in a lower final acute-chronic ratio (38.13 vs. 51.29) and, thus, a less stringent chronic criterion (1.77 µg/L) as compared with the chronic criterion (1.317 µg/L) that results from using the 1985 Guidelines. As discussed above, 40 CFR § 132.4(b) allows three exceptions from using the Tier 1 methodology in Appendix A, one of which is specified at 40 CFR § 132(i), which provides that “[n]othing in this part shall prohibit the Great Lakes States and Tribes from adopting numeric water quality criteria ... that are more stringent than criteria or values specified in §132.3 or that would be derived from application of [the Tier 1 methodology in Appendix A].”

In summary, Indiana's adopted acute aquatic life criterion for lead was derived using a methodology that is consistent with the Tier I methodology in Appendix A to Part 132, consistent with 40 CFR § 132.4(b) and Indiana's adopted chronic aquatic life criterion for lead is more stringent than the criterion that would be derived from application of the Tier 1 methodology in Appendix A to Part 132, consistent with 40 CFR § 132.4(i).

For selenium, Indiana's adopted criterion is a chronic criterion expressed as four elements, two of which are based on the concentration of selenium in fish tissue (eggs and ovaries, and whole-body or muscle) and two of which are based on the concentration of selenium in the water-column (two 30-day chronic values and an intermittent value). As discussed in the *2021 Revision to Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016*, the fish tissue elements were generally derived by following the 1985 Guidelines, except that EPA calculated the fish tissue-based criteria using tests that included dietary exposure. The water column elements were then derived by translating the fish-ovary element. Although the fish tissue elements were derived based on the 1985 Guidelines, the water column elements were derived using a methodology that is not specified in Appendix A to Part 132.

As discussed in EPA's 304(a) document, the 304(a) selenium criteria recommendation is intended to protect aquatic life based on long-term effects due to bioaccumulation. The Tier 1 methodology in Appendix A to Part 132 is primarily intended to be used to derive criteria to

protect aquatic life from direct toxicity effects. Since chronic bioaccumulation effects are expected to occur at lower concentrations than direct toxicity effects, the bioaccumulation-based 304(a) selenium criteria recommendations are more stringent than the criteria that would be derived from application of the Tier 1 methodology in Appendix A to Part 132. As discussed in EPA's draft 2021 document, titled "Technical Support for Adopting and Implementing EPA's 2016 Selenium Criterion in Water Quality Standards", EPA expects that GLI states and authorized tribes would likely be able to demonstrate that the revised selenium criterion is as protective as the GLI chronic criterion if they adopt the national CWA Section 304(a) recommended selenium criterion. As discussed above, 40 CFR § 132.4(i) allows states to develop aquatic life criteria using methodologies other than the Tier 1 methodology in Appendix A to Part 132 if those criteria are more stringent than the criteria that would be derived from application of the Tier 1 methodology in Appendix A to Part 132.

The adopted rules include a new footnote to Table 8-1 of 327 IAC 2-1.5-8 for hardness-dependent metals that caps hardness at 400 mg/L as calcium carbonate (CaCO₃). The hardness cap is applicable to the following metals for all state waters within the Great Lakes system¹⁵: cadmium, chromium III, copper, lead, nickel, and zinc. The revisions also make a corresponding removal of acute and chronic values for metals (arsenic, cadmium, chromium III, chromium VI, copper, mercury, nickel, and zinc) for hardness values above 400 mg/L in Table 8-2. Federal WQS requirements in 40 CFR Part 132 that apply to waters in the Great Lakes system do not specifically address requirements for hardness value(s) to be used in hardness-dependent aquatic life criteria equations. However, 40 CFR § 132.4(i) does not prohibit adoption of criteria that are more stringent than criteria specified in 40 CFR § 132.3. Increasing hardness has the effect of decreasing toxicity of the metals affected by this action (i.e., the numeric values for the criteria get larger with increasing hardness). Therefore, capping hardness at 400 mg/L results in more stringent criteria values where hardness exceeds 400 mg/L than the values that would result from using the measured hardness value, and as stated previously in Section II.A.2, EPA's current 304(a) criteria recommendations for hardness-dependent criteria specify that a hardness of 400 mg/L be used to calculate criteria values for a water body where the hardness exceeds 400 mg/L, Indiana's adopted revisions are consistent with 40 CFR § 132.4(i).

Indiana's adopted rules include a revision to the chemical name from arsenic III to arsenic for aquatic life criteria in Table 8-1 and Table 8-2 of 327 IAC 2-1.5-8. The GLI aquatic life criteria for arsenic, which Indiana's criteria are consistent with, are expressed in terms of arsenic III. Although Indiana changed the chemical name to arsenic, the criteria would still require that concentrations of arsenic III not exceed the criteria. In waters where arsenic is present only as arsenic III, Indiana's WQS would require that arsenic III concentrations not exceed the aquatic life criteria in tables 8-1 and 8-2, consistent with 40 CFR § 132.3(a) and (b). Where other forms of arsenic (e.g., arsenic V) are present, Indiana's WQS would require that the combination of arsenic III and other forms of arsenic not exceed the criteria. This would require that concentrations of arsenic III be maintained less than the criteria in tables 8-1 and 8-2, consistent

¹⁵ Note that revisions to chromium III, copper, nickel, and zinc for waters within the Great Lakes system are only applicable to the hardness cap, the magnitude for these metals is not being revised.

with 40 CFR § 132.4(i). Consequently, Indiana's revision to the chemical name of arsenic is consistent with the requirements of 40 CFR Part 132.

Indiana's adopted rules revise the existing aquatic life criteria for arsenic and chromium VI in Table 8-1 of 327 IAC 2-1.5-8 by rounding the criteria values to two significant digits. This criteria revision is consistent with footnote b to Table 1a and Table 2a of 40 CFR § 132.6 on the use of significant figures which states that the CMC and CCC shall be rounded to two significant digits¹⁶. These rounding revisions do not change the level of protection or the technical basis of the criteria. Therefore, EPA concludes that Indiana's rounding revisions to the aquatic life criteria for arsenic and chromium VI are consistent with 40 CFR § 131.5(a)(2) and 40 CFR § 131.11(a).

III. Endangered Species Act (ESA) Requirements

Consistent with Section 7 of the ESA and federal regulations at 50 CFR Part 402, EPA is required to consult with the U.S. Fish and Wildlife Service (FWS) on any action taken by EPA that may affect federally-listed threatened or endangered species or their critical habitat. Actions are considered to have the potential to affect listed species if listed species are present in the action area.

EPA has concluded that it has no discretion to consult on its approval of Indiana's new and revised human health criteria that apply to waters outside the Great Lakes system at 327 IAC 2-1-6, as discussed above in Section II, because those actions pertain to WQS revisions supporting human health-related designated uses and are not designed to protect aquatic life or wildlife. The rationale for this decision is articulated in the 2009 Memorandum from Benjamin Grumbles, Office of Water Assistant Administrator, which stated that:

For ESA section 7(a)(2) to apply, EPA must be taking an action in which it has sufficient discretionary involvement or control to protect listed species. State WQS actions where EPA has concluded that it lacks such discretion include... [a]pproval of water quality criterion to protect human health... [H]uman health water quality criteria are designed to protect humans, not plants and animals. EPA's discretion to act on a State submission is limited to determining whether the criteria ensure protection of designated uses upon which the criteria are based (i.e., use by humans). Therefore, EPA has no discretion to revise an otherwise approvable human health criterion to benefit listed species.

Because the aquatic life criteria are intended to protect aquatic life, EPA determined that its approval of Indiana's revisions to those criteria has the potential to affect listed species in the

¹⁶ The criteria listed in tables 1a and 2a of 40 CFR § 132.6 are expressed in the dissolved form of the metals and, thus, footnote b refers to rounding of the dissolved values after converting the total form to the dissolved form using the conversion factor. Indiana's criteria for arsenic and chromium VI are expressed as dissolved metal and, thus, rounding occurs to the total form of the metal prior to converting to the dissolved form using the conversion factor. However, in this case, rounding the total metals criteria instead of rounding the dissolved metals criteria does not result in any difference in the underlying criteria for arsenic and chromium VI.

action area and, thus, that consultation under Section 7 of the ESA is required for its approval of the aquatic life criteria revisions.

According to the FWS Section 7 consultation assistance webpage (accessed December 22, 2021, <https://www.fws.gov/midwest/endangered/lists/indiana-spp.html>), the listed threatened or endangered species in Indiana include gray bat, piping plover, Indiana bat, northern long-eared bat, Karner blue butterfly, clubshell, fanshell, fat pocketbook, northern riffleshell, rough pigtoe, white cat's paw pearl mussel, Mitchell's satyr, running buffalo clover, Short's goldenrod, pitcher's thistle, Mead's milkweed, eastern prairie fringed orchid, Short's bladderpod, rayed bean, rabbitsfoot, eastern massasauga, sheepsnose mussel, snuffbox mussel, whooping crane, Rufa red knot, copperbelly water snake, rusty patched bumble bee, and eastern black rail. Additionally, critical habitat for piping plover, Indiana bat, Short's bladderpod, and rabbitsfoot, is located in Indiana.

Based on a review of the available information for these species, EPA has concluded that approval of Indiana's revised WQS will have no effect on Karner blue butterfly, running buffalo clover, Short's goldenrod, Short's bladderpod, rusty patched bumble bee, and pitcher's thistle. Additionally, EPA has determined that the adopted rules will have no effect on critical habitat. However, based on the potential presence of aquatic, aquatic-dependent, and/or wetland species in the action area, EPA concluded that consultation under Section 7 of the ESA is required. EPA drafted a BE of the effects of the adopted rules on listed species in Indiana and concluded that its approval of the adopted rules may affect, but is not likely to adversely affect, Indiana bat, northern long-eared bat, gray bat, piping plover, whooping crane, Rufa red knot, eastern massasauga, copperbelly water snake, Mead's milkweed, eastern prairie fringed orchid, clubshell, fanshell, fat pocketbook, northern riffleshell, rough pigtoe, white cat's paw pearl mussel, rayed bean, rabbitsfoot, sheepsnose mussel, snuffbox mussel, Mitchell's satyr butterfly, and eastern black rail. EPA has initiated but not completed consultation with FWS.

IV. Tribal Consultation

On May 4, 2011, EPA issued the "EPA Policy on Consultation and Coordination with Indian Tribes" to address Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments." The EPA Tribal Consultation Policy states that "EPA's policy is to consult on a government-to-government basis with federally recognized Tribes when EPA actions and decisions may affect tribal interests."

On December 9, 2021, EPA sent a letter outlining the proposed WQS revisions and offering government-to-government consultation to the tribal leaders of Pokagon Band of Potawatomi Indians in Indiana. The consultation letter further clarified that if EPA did not receive a response from the Tribe within 30 days of the date of the letter (January 7, 2022), as either written comments or an attempt to schedule a conference call, EPA would conclude that the Tribe did not wish to engage in consultation and EPA could therefore move forward with a decision.

Pokagon Band of Potawatomi Indians did not respond to the letter in written or verbal means by January 7, 2022. EPA therefore provided substantive opportunity for Pokagon Band of Potawatomi Indians to provide input on EPA's decision-making process and has therefore

fulfilled its duty to consult on a government-to-government basis with federally-recognized tribes on actions that may affect tribal interests.