

Review of
Indiana’s 2024 Section 303(d) Lists of Impaired
Waters

I. Introduction and Summary of this Action

Pursuant to Sections 303(d) and 305(b) of the Clean Water Act (CWA or Act), 33 U.S.C. §§ 1313(d), 1315(b), and the U.S. Environmental Protection Agency’s (EPA) implementing regulations at 40 C.F.R. § 130.7, the state of Indiana is required to submit a list of impaired waters and a water quality report every two years.

In 2006, EPA issued guidance for integrating the development and submission of Section 305(b) water quality reports and Section 303(d) lists of impaired waters.¹ This guidance recommends that states develop an Integrated Report (IR) that places all waters into one of five assessment categories, with Category 5 consisting of any water quality-limited segments (WQLS)² where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act. EPA is acting on the state’s Section 303(d) list, reflected in Category 5 of the state’s Integrated Report.

The Indiana Department of Environmental Management (IDEM) submitted its 2024 Section 303(d) list on March 30, 2024.³ Based upon the review of this submittal, EPA is partially approving and partially disapproving Indiana’s 2024 listing of water quality-limited segments (WQLS) pursuant to Section 303(d) of the CWA and the implementing regulations at 40 C.F.R. § 130.7. EPA is also deferring action on several segments related to selenium.

EPA is approving the WQLS and causes of impairment identified by the state on the 2024 Section 303(d) list (Table 1 of Enclosure 3). However, EPA is disapproving Indiana’s decision not to include in its 2024 Section 303(d) list certain WQLS impaired for lead and iron. EPA finds that IDEM has not assessed attainment of “applicable water quality standards” pursuant to 40 C.F.R. § 130.7(b)(3), has not evaluated all existing and readily available water quality-related metals data and information to develop the 303(d) list pursuant to 40 C.F.R. §

¹ See Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (EPA, July 29, 2005) <https://www.epa.gov/tmdl/integrated-reporting-guidance-under-cwa-sections-303d-305b-and-314>.

² 40 C.F.R. § 130.2(j): EPA uses this term to reflect the combination of a water segment and an applicable WQS that is not attained or is threatened. For example, if a segment is not meeting three applicable WQS then there are three WQLS for that segment.

³ On March 30, 2024, EPA received Indiana’s final 2024 Section 303(d) list that was submitted through the Assessment, Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS). Notification was also submitted via email.

130.7(b)(5), and has not provided a rationale pursuant to 40 C.F.R. § 130.7(b)(6) for its decision not to list these waters. EPA is identifying WQLS still requiring TMDLs and pollutants causing their impairment for inclusion on the 2024 Section 303(d) list. EPA will provide public notice and an opportunity to comment on its decision to add the waters identified in Table 9 of Enclosure 3 to the state's 303(d) list. After considering the public comments, EPA will make any appropriate revisions and transmit the determination to IDEM pursuant to 40 C.F.R. § 130.7(d)(2).

EPA is deferring action on the segments in Table 10 of Enclosure 3. Indiana originally identified these as WQLS, impaired for Selenium in Fish Tissue on the public noticed version of the state's 2024 303(d) list. In response to public comments received objecting to these listings, the state declined to include them on the final version of the 2024 303(d) list submitted to EPA for review. EPA reviewed the public comments submitted and discussed the issue with the state. EPA will continue to work in the near term with the state on approaches for evaluating the data and information regarding the assessment of the waterbodies for determining whether applicable IN WQS for Selenium in Fish Tissue are attained. These assessment units did not appear on the EPA approved IN 2022 303(d) list as impaired for Selenium in Fish Tissue and these waters maintain that listing status until an action is taken by EPA on these waters.

EPA's action regarding Indiana's 303(d) list does not extend to any waterbodies that are within Indian Country as defined in 18 U.S.C. § 1151. EPA is taking no action to approve or disapprove the state's list with respect to any waters that are within Indian Country. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) of the CWA for those waters. The statutory and regulatory requirements, and EPA's review of Indiana's compliance with each requirement, are described in detail below.

II. Statutory and Regulatory Background

A. Identification of WQLSs for Inclusion on Section 303(d) Lists

Section 303(d)(1) of the Act directs states to identify those waters within their respective jurisdictions for which applicable water quality standards (WQSs) are not expected to be met even after application of effluent limitations required by Sections 301(b)(1)(A)-(B) and 306 of the CWA (WQSs) (these waters are referred to as "water quality limited segments" as defined in 40 C.F.R. § 130.2(j)), and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

States do not need to list WQLSs for which the following controls are adequate to implement applicable water quality standards: (1) technology-based effluent limitations required by the Act; (2) more stringent effluent limitations required by state, local, or federal authority; and (3) other pollution control requirements required by state, local, or federal authority. 40 C.F.R. § 130.7(b)(1) and (2). All other WQLSs that still require TMDLs must be listed. 40 C.F.R. § 130.7(b).

B. Evaluation of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information. 40 C.F.R. § 130.7(b)(5). This includes, at a minimum but is not limited to, existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state’s most recent Section 305(b) report; (2) waters for which dilution calculations or predictive models indicate non-attainment of applicable water quality standards; (3) waters for which water quality problems have been reported by government agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in a non-point assessment submitted to EPA under Section 319 of the Act. In addition to these categories, states are required to evaluate any other existing and readily available water quality-related data and information; although, states may decide to not use particular data or information in determining whether to list particular waters as long as the state provides a sufficient basis. See 40 C.F.R. § 130.7(b)(6)(iii).

States must provide documentation to EPA to support the state determination to list or to not list waters. 40 C.F.R. § 130.7(b)(6). Such documentation must include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; (3) a rationale for any decision to not use any existing and readily available data for any category of waters; and (4) any other reasonable information requested by EPA.

C. Establishment of a Priority Ranking

Section 303(d)(1)(A) of the Act and EPA’s regulations requires that states establish a priority ranking for listed waters. States’s 303(d) lists must include a priority ranking for all listed WQLSs and must identify those WQLSs targeted for TMDL development in the next two years. 40 C.F.R. § 130.7(b)(4). The priority ranking must take into account the severity of the pollution and the uses to be made of such waters. States may also consider other factors relevant to prioritizing waters for TMDL development.

D. Definition of Applicable Water Quality Standards

For purposes of identifying waters for the Section 303(d) list, the term “applicable water quality standards” refers to standards established under Section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements. 40 C.F.R. § 130.7(b)(3). Section 303(d) of the Act and its implementing regulations require the states to identify the impaired waters within their boundaries and that EPA approve or disapprove the states’ Section 303(d) lists for those waters.

E. EPA Tribal Consultation

Pursuant to Executive Order 13175, Consultation and Coordination with Indian Tribal Governments and with the EPA Policy on Consultation and Coordination with Indian Tribes (May 2011), EPA consults and coordinates on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may impact tribal interests. On March 6, 2024, EPA sent a tribal consultation invitation letter to the Pokagon Band of Potawatomi Indians (the only federally recognized tribe in Indiana) via email offering the opportunity to consult with EPA on its review of Indiana's 2024 303(d) list of impaired waters.⁴ The invitation letter indicated that EPA had set aside 5 potential dates and times to hold the consultation. EPA requested that the Tribe indicate if they would like to consult by April 4, 2024. EPA received no response to consult on this issue. EPA has closed out the consultation on this matter.

III. Analysis of Indiana's Submission**A. Identification of WQLS, and Evaluation of Existing and Readily Available Water Quality- Related Data and Information**

The EPA regulations at 40 CFR 130.7(b)(6)(ii) require states to provide a description of the data and information used to identify waters, including a description of the data and information used by the state as required by 40 CFR 130.7(b)(5) and at 40 CFR 130.7(b)(6) require states to include a description of the methodology used to develop the 303(d) list. EPA does not approve or disapprove assessment methodologies. Instead, in acting on CWA 303(d) lists, EPA evaluates whether the state, territory, or authorized tribe met listing requirements in determining whether applicable WQS are met and included waters requiring TMDLs on its 303(d) list. 2024 Integrated Reporting Memorandum (IR Memo) at 15. The EPA regulations at 40 CFR 130.7(b)(6)(iii) require states to provide a rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in 40 CFR 130.7(b)(5). 40 CFR 130.7(b)(6)(iii). The EPA evaluates whether a state provides a technical, science-based rationale for decisions not to use data or information in developing the list.⁵

EPA has reviewed IDEM's description of the data and information it assembled and evaluated to identify impaired waters within its boundaries, its assessment methodology for developing its 2024 Section 303(d) list, and other relevant information submitted by IDEM (see [Enclosure 2](#) and [Enclosure 3](#)). EPA's review of Indiana's 2024 Section 303(d) list considers whether the state assembled and evaluated all existing and readily available water quality-related data and information and identified waters that do not attain applicable water quality standards.

⁴ See email dated March 6, 2024, from James Ruppel, EPA to Rebecca Richards, Chairwoman of the Pokagon Band of Potawatomi Indians, with attached tribal invitation letter.

⁵ 2024 IR Memo at FN 15 (citing court cases); 2006 IR Memo at 37 (EPA evaluates whether there is a "reasonable technical rationale").

Regarding the data and information, except for the issues discussed in Sections III. D. iii and iv below, EPA concludes that the state of Indiana satisfied the regulatory requirement to assemble and evaluate all existing and readily available water quality-related data and information, including data and information relating to the categories of waters specified in 40 C.F.R. § 130.7(b)(5). In addition, the state provided a description of the data and information used and, where appropriate, a reasonable rationale for not using existing and readily available water quality-related data and information as a basis for listing waters, except as addressed in Sections III.D. ii and iii below.

IDEM collected data consistent with its water quality monitoring strategy (WQMS), which employs a nine-year basin rotation approach to monitor for CWA purposes. IDEM used data it collected from various state monitoring programs⁶ and data collected by other organizations to develop its 2024 IR. The types of data collected consist mainly of chemical (water, sediment, and fish tissue), physical (habitat, flow data), and biological (fish community, macroinvertebrates, and *E. coli*) monitoring information. The state reviewed these data for the purposes of 303(d) listing decisions using IDEM's consolidated assessment and listing methodology (CALM).⁷

The EPA finds that Indiana has provided a description of its methodologies used for determining whether its waters are achieving the state's WQS, satisfying the regulatory requirement to provide a "description of the methodology used to develop the list." 40 CFR 130.7(b)(6)(i). The EPA has considered the state's methodology as part of its review of the state's 303(d) list.

In addition to the water quality data IDEM collects, the agency solicits, assembles, and evaluates data and information from other sources for potential use in its CWA assessments, including data collected through partnerships with other state and federal agencies.⁸ For the data solicitation, IDEM currently uses its External Data Framework (EDF)⁹ that provides a systematic and streamlined process for external organizations to share the water quality data they collect with IDEM for possible use in its CWA assessment and listing processes and other water quality programs. IDEM evaluates any external data submitted and does not rely upon data that does not meet IDEM's QA/QC requirements as identified in the state's quality assurance project plan (QAPP).¹⁰ IDEM is developing a QAPP Tool that assists EDF

⁶ IDEM's data-collection sampling programs include; Probabilistic Monitoring, Fixed Station Monitoring, Contaminants Monitoring, Watershed Characterization, Performance Measures Monitoring, Special Studies, Clean Lakes and Nonpoint Source Program grant projects.

⁷ See Appendix G IDEM'S 2024 Consolidated Assessment and Listing Methodology (CALM), 2024 Indiana IR; and Priority Rankings provided under ATTAINS electronic submission.

⁸ See pages 4 and 18 of *Indiana Integrated Water Monitoring and Assessment Report to the U.S. EPA, 2024* (2024 Indiana IR Narrative).

⁹ See EDF information on IDEM's website at <https://www.in.gov/idem/cleanwater/resources/external-data-framework/> (last accessed April 16, 2024).

¹⁰ See IDEM's *Quality Assurance Project Plan for Indiana Surface Water Quality Monitoring and TMDL Programs*, 3rd Revision, October 2004. See also IDEM's *Quality Assurance Project Plan for Indiana Surface Water Programs*, 4th Revision, March 2017.

participants with creating the QAPP documentation needed to support and evaluate the quality of the monitoring data collected.¹¹

In addition to the data collection efforts described above, Indiana public noticed its draft 2024 Section 303(d) list on IDEM's website starting on February 1, 2024 and ending on March 18, 2024.

Indiana received comments from EPA regarding a number of technical issues with the draft 2024 IR ATTAINS data set, and one comment on the decision to delist 108 WQLSs for iron and lead on the 2024 303d list, that had previously been added to Indiana's 303d list by EPA in 2022. Indiana made changes to address all of EPA's comments except for the comment regarding the 108 WQLS added by EPA in 2022 and delisted by Indiana in the 2024 list submission.

In addition to EPA comments, Indiana received comments related to high concentrations of iron in drinking water and the lack of iron impairment listings, suggestions on making language clarifications regarding Indiana's working process with the Ohio River Valley Water Sanitation Commission (ORSANCO), a comment on a mistake in the cited length of a waterbody, and four comments on the state's proposal to list several waterbodies for selenium.¹²

In response to comments regarding iron impairments, Indiana stated that, "Iron impairments were removed from the draft 2024 303(d) list as Indiana does not have an adopted numeric criterion for Iron and does not believe that impairments can be made without applicable state criteria." Indiana further clarified that many public drinking water utilities utilize ground water which is not assessed as part of the 303(d) process, however if a utility does utilize surface water, it would be assessed against the Public Water Supply Designated Use.

EPA concludes that the state demonstrated how it considered the comment regarding the iron in public drinking water. However, EPA does not agree with the removal of the waterbodies impaired for lead and iron that EPA added to the state's 303(d) list in 2022 after assessing those waters based on Indiana's water quality standards.

Indiana agreed with the clarifications regarding their relationship with ORSANCO and incorporated the suggestions. Indiana confirmed the error in the list regarding the length of the stream and conducted a review of the recorded waterbody dimensions, discovering and correcting additional errors in the size of waterbodies in the IR data.

The Public Notice version of the IN 303(d) list included 8 WQLS as impaired for Selenium in Fish Tissue. Table 10 of Enclosure 3 lists the eight (8) segments, including seven (7) assessment units of the White River, and the Turtle Creek Reservoir. During the public comment period, IN received comments from stakeholders in opposition to these listings.

¹¹ See page 37 and 38 the IR Narrative.

¹² See appendices K1 and K2 of the state's submittal for comments and responses.

The objections to the state's impairment determination raised related to the seven White River WQLS included the following points. (1) That IDEM had inappropriately failed to consider egg/ovary data collected from common carp during the October 2021 sampling event that does not indicate impairment, overlooking EPA Guidance Documents that indicate egg/ovary data should supersede fish tissue data. (2) That IDEM proposed to list seven waterbody segments based on data collected from only three segments. (3) That the criteria that IDEM has set for the waterbodies in question, are based on the presence of species of Acipenseriformes (Sturgeon and Paddlefish). The commentor disputed the finding that the habitat in question could support such species and therefore believes the Selenium fish tissue criteria used are more conservative than is necessary. (4) That the EPA guidance documents relied on were not finalized at the time of sampling, nor were stakeholders given a chance to comment on the sampling plan used to collect the fish tissue.

The objections to the state's impairment determination raised related to the Turtle Creek Reservoir listing was primarily focused on the age of the sampling data (2014) and presented an argument that more recent data indicate that Turtle Creek Reservoir is not impaired and instead shows an increasing trend in Selenium levels.

After reviewing the objections raised in the four letters, IDEM decided not to list the eight (8) WQLS in question for the 2024 303(d) list, and Indiana did not include the eight (8) WQLS in Category 5 on the final list submitted to EPA for review and approval.

After reviewing the objections raised in the public comment letters and discussing the issue with IDEM staff, EPA is deferring action on the eight segments shown in Table 10 of Enclosure 3. EPA will continue to work in the near term with the state on approaches for evaluating the data and information regarding the assessment of the waterbodies for determining whether applicable Indiana WQS for Selenium in Fish Tissue are attained.

After review of the state's public process, EPA concludes that Indiana provided an opportunity for public comment on its 303(d) list consistent with 40 CFR 130.7(a), and with the exception of the state's response to EPA's comment regarding the delisting of the 108 WQLSs, demonstrated how it considered comments in its final decision.

B. Priority Ranking and Targeting

The CWA and the EPA's regulations, require states to establish a priority ranking for the waters on their CWA 303(d) list "taking into account the severity of the pollution and the uses to be made of such waters." CWA Section 303(d)(1)(A); 40 CFR 130.7(b)(4). The regulations at 40 CFR 130.7(b)(4) provide that this priority ranking must include "all listed water quality limited segments still requiring TMDLs" and further require that states submit their priority rankings to the EPA as a component of their biennial CWA 303(d) lists.

EPA has reviewed Indiana’s priority ranking of listed waters for TMDL development for the 2024 Section 303(d) list¹³ and concludes that the state provided “a priority ranking for all listed WQLSs still requiring TMDLs, taking into account the severity of pollution and the uses to be made of such waters” as required by 40 C.F.R. § 130.7(b)(4).¹⁴ In general, IDEM’s TMDL development corresponds with IDEM’s rotating basin monitoring schedule unless there is a significant reason to deviate from that schedule. This strategy allows IDEM to take advantage of all available resources for TMDL development by targeting Section 303(d) listed waters in a given basin for additional monitoring as sampling crews are working in that basin. Indiana’s waterbodies were given a priority ranking for TMDL development based on relevant factors such as: specific designated uses; the magnitude of the impairment; the amount of readily available and representative data; relative complexity and ability to characterize the impairment; and level of activities occurring in the watershed (e.g., local interest by active watershed groups).

The regulations at 40 C.F.R. § 130.7(b)(4) also require that the priority ranking identify waters targeted for TMDL development in the next two years. EPA reviewed the waters identified by Indiana as targeted for development in the next two years (Table 8 of Enclosure 3)¹⁵ and concludes that IDEM has satisfied this requirement in 40 C.F.R. § 130.7(b)(4).

C. EPA’s Previous Related Actions on Indiana’s Section 303(d) List

On April 29, 2022, EPA partially approved the state’s 2022 303(d) list with respect to the impaired waters identified but disapproved the state’s decision to not include a series of WQLSs impaired by metal pollutants. The basis for the partial disapproval was EPA’s determination that the state did not meet the requirements to assess its waters against the “applicable water quality standards” (40 C.F.R. § 130.7(b)(3)); did not assemble and evaluate all readily available data (40 C.F.R. § 130.7(b)(5)); and failed to provide a rationale to not use the data or good cause for not including the waters (40 C.F.R. §§ 130.7(b)(6)(iii), (iv)). Accordingly, EPA added 108 WQLSs impaired by lead and iron pollutants to the state’s 2022 303(d) list. After public notice of the listing additions and consideration of public comments, on July 28, 2022, EPA affirmed this decision.¹⁶

D. EPA’s Partial Approval/Partial Disapproval of Indiana’s 2024 Section 303(d) List

In reviewing Indiana’s 2024 Section 303(d) list, which was submitted on March 30, 2024, EPA first reviewed the methodology used by the state to develop its Section 303(d) list, in light of the state’s federally approved water quality standards and then reviewed the Section 303(d) list of impaired waters and impairment causes. EPA’s review also included an examination of whether the state assembled and evaluated existing and readily available water quality-

¹³ See Appendix E IDEM’s Priority Ranking and 2024-2026 Schedule for Total Maximum Daily Load Development, 2024 Indiana IR. Priority Rankings for all listings in IN’s 2024 303(d) were included in the assessment data contained in ATTAINS.

¹⁴ Federal regulations do not require EPA approval of the substance of the priority rankings or schedules.

¹⁵ See Appendix E of the 2024 Indiana IR.

¹⁶ See Enclosure 3 of EPA’s Decision of Indiana’s 2022 303(d) list dated April 29, 2022.

related data and information and identified waters not attaining applicable water quality standards. Additional details on EPA's analysis are provided in [Enclosure 2](#) and [Enclosure 3](#).

Based upon the review of this submittal, EPA is partially approving and partially disapproving Indiana's 2024 listing of water quality-limited segments pursuant to Section 303(d) of the CWA and the implementing regulations at 40 C.F.R. § 130.7, as described below.

i. Partial Approval

Based on its review of Indiana's 2024 Section 303(d) list submittal, EPA has concluded that, with the exception described under [Section III. D. ii. below](#), Indiana reasonably identified the impaired waters within its boundaries on its Section 303(d) list and, thus, complied with the requirements set forth under Section 303(d) of the CWA and 40 C.F.R. § 130.7. Additional details on EPA's analysis are provided in [Enclosure 2](#) and [Enclosure 3](#). EPA's partial approval of Indiana's 2024 Section 303(d) list extends to the waterbody segments identified in Category 5 of the IR that are included under [Table 1](#) of [Enclosure 3](#).

ii. Partial Disapproval

The EPA regulations at 40 CFR 130.7(b)(6)(iii) require states to provide a rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in 40 CFR 130.7(b)(5). 40 CFR 130.7(b)(6)(iii). The EPA evaluates whether a state provides a technical, science-based rationale for decisions not to use data or information in developing the list. The EPA finds Indiana did not provide an adequate rationale for not using existing and readily available metals data, as described below. 40 CFR 130.7(b)(6)(iii).

Absent any new data or information relevant to the impaired segments identified in [Table 9](#) of [Enclosure 3](#), which were also identified and added to Indiana's 2022 303(d) list by EPA, the state has not provided a reasonable basis for excluding these WQLS from the 2024 303(d) list. The existing and readily available data and information relied on by EPA in 2022 to list these same 108 WQLSs remain relevant and demonstrate that these segments are impaired. During the public comment period, the EPA requested that the state cite any additional data or information that would demonstrate good cause for removing these 108 WQLS from the 2024 303(d) list, but the state was unable to do so.

EPA is partially disapproving Indiana's 2024 Section 303(d) list based on IDEM's decisions not to use some of the total recoverable metals data¹⁷ to assess whether the segments were attaining numeric dissolved metals criteria and not to use the calculated derived metal

¹⁷ IDEM developed a new methodology to use total recoverable metals data to translate this data into dissolved metal data portion. However, when the translated data indicated that there was an impairment of the dissolved criteria, IDEM did not list these waters. They have placed them in category 3 (insufficient information) with the intention of sampling for dissolved metals in the coming years. Based on the future dissolved metals data IDEM will then make a determination if the water is impaired for the dissolved metal. See *Appendix G: IDEM'S 2024 Consolidated Assessment and Listing Methodology (CALM)* pg. G-11.

values to assess attainment of the narrative toxics criteria.¹⁸ As a result of these decisions, Indiana’s final 2024 Section 303(d) list improperly omitted certain WQLSs that EPA has determined are impaired for certain metals (lead and iron). These WQLSs were previously added by EPA to Indiana’s prior 303(d) lists as discussed in Section III. C. above.

EPA has identified segments that are impaired because data show they do not attain:

- Indiana’s dissolved criteria for lead at 327 IAC 2-1-6, Table 6-2; or
- Indiana’s narrative criterion at 327 IAC 2-1-6(a)(2)(C) numerically expressed as IDEM’s “derived criteria,” herein referred to as “derived values” for iron.

IDEM’s rationales for not including these WQLSs impaired by metals in the final 2022 Section 303(d) list consisted of the following:

- Using the total recoverable metals results, where more reliable dissolved metals data are not also available, to assess attainment of dissolved metal criteria for 305(b) assessments, 303(d) listing decisions or TMDL development is not appropriate because doing so may result in an overestimation of toxicity; and
- Using derived values for 305(b) assessments, 303(d) listing decisions, or TMDL development is not appropriate because derived values have not undergone Indiana’s full rulemaking process prescribed by IC 13-14-9 and IC 4-22-2 and therefore have not had adequate due process and public participation.¹⁹

IDEM acknowledges its use of derived values in setting permit limits but notes that the permitting process is not subject to state law requirements applicable to rulemaking and affords due process protection to potentially affected parties. IDEM maintains that the 303(d) listing process differs from the permitting process in that it results in TMDLs and Waste Load Allocations that affect NPDES permitting decisions and affected parties do not have advance notice or an opportunity to dispute these determinations.

EPA disagreed with IDEM’s decisions not to include the WQLS for lead and iron impairments on its 2022 Section 303(d) list for the following reasons:

¹⁸ 327 IAC 2-1-6(a)(2) provides the narrative toxics criteria and states that “At all times, all surface waters outside of mixing zones shall 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.”

¹⁹ See Office Memorandum: *Use of Derived Criteria as Basis for Establishment of Total Maximum Daily Loads (“TMDLs”) and Listing of Impaired Waters Under CWA Section 303(d)* (IDEM, March 4, 2010).

- a) IDEM's decision not to use total recoverable metals data to assess whether waters are attaining the dissolved metals criteria, where there are insufficient dissolved metal data

The state's WQS have included promulgated numeric dissolved metal criteria for certain metals²⁰ since 2005. Prior to Indiana's submission of its final 2010 Section 303(d) list, IDEM evaluated and used total recoverable data to assess metal criteria attainment. IDEM's probabilistic monitoring program collects dissolved metals data, while the fixed station monitoring program collects total recoverable metals data.

While EPA agrees that the dissolved metal fraction more closely approximates the bioavailable fraction of metal in the water column, EPA does not agree that available total recoverable metals data should be dismissed solely on the grounds that dissolved metals data would be preferable if they existed for these waters. EPA recommends the use of metal translators²¹ as a scientifically accepted practice to estimate dissolved metals concentrations in waterbodies based upon the total recoverable metals data. Indiana developed translators for metals in their 2024 IR. However, after review of the data used EPA determined that three (3) WQLS identifying lead as the cause still need to be listed based on the data available to EPA and the translator identified by IDEM in the IR.

EPA finds the state has not provided an adequate rationale for its decision to not use total recoverable metals data, for three (3) WQLs for lead nor has it demonstrated good cause for not including waters on the list for which the total recoverable metals data indicate impairment.

EPA does not agree with the state that using derived values for 303(d) listing decisions or TMDL development is not appropriate because derived values have not undergone Indiana's full rulemaking process prescribed by IC 13-14-9 and IC 4-22-2 and therefore have not had adequate due process and public participation.²²

²⁰ See Office Memorandum: *Use of Derived Criteria as Basis for Establishment of Total Maximum Daily Loads ("TMDLs") and Listing of Impaired Waters Under CWA Section 303(d)* (IDEM, March 4, 2010).

²¹ For waters within the Great Lakes system, Indiana's WQS contain dissolved metal criteria for arsenic (III), cadmium, chromium (III), chromium (VI), copper, nickel, mercury, selenium and zinc (327 IAC 2-1.5-8, Table 8-1). The criterion maximum concentration (CMC) and criterion continuous concentration (CCC) columns of Table 8-1 contain total recoverable metals criteria (numeric and hardness-based). The criterion for the dissolved metal is calculated by multiplying the appropriate conversion factor by the CMC or CCC.

For waters outside the Great Lakes system, Indiana's WQS contain total recoverable metal criteria for mercury and selenium (327 IAC 2-1-6, Table 6-1) and dissolved metal criteria for arsenic (III), cadmium, chromium (III), chromium (VI), copper, lead, nickel, silver and zinc (327 IAC 2-1-6, Table 6-2). The acute aquatic criterion (AAC) and chronic aquatic criterion (CAC) columns of Table 6-2 contain total recoverable metals criteria (numeric and hardness-based). The criterion for the dissolved metal is calculated by multiplying the appropriate conversion factor by the AAC or CAC.

²² See Office Memorandum: *Use of Derived Criteria as Basis for Establishment of Total Maximum Daily Loads ("TMDLs") and Listing of Impaired Waters Under CWA Section 303(d)* (IDEM, March 4, 2010).

b) IDEM's decision not to assess narrative criteria for iron impairments.

Indiana's WQS include narrative criteria²³ and methods²⁴ the state uses to calculate a numeric expression (Tier I and Tier II) of the narrative criteria ("derived values") for substances for which numeric criteria are not specified in the WQS to ensure that the concentration of a substance or combination of substances does not become acutely or chronically toxic to aquatic organisms, wildlife, and human health. The procedures for calculating derived values are included in Indiana WQS and approved by EPA. The procedures were promulgated in accordance with Indiana law and provide a mechanism to allow Indiana to consider the latest science and toxicity data and develop a numeric benchmark to determine whether the prohibition on toxic conditions contained in Indiana's narrative criterion is or is not attained.

While IDEM is required to use all readily available water quality-related data to assess attainment of its narrative criteria to prevent toxic conditions (unless it has a scientific, technical rationale not to use the data), IDEM is not required²⁵ to use only the procedures prescribed under Indiana's WQS for calculating a numeric expression of the state's narrative criterion to assess attainment of the narrative criteria. The state may select a different value basis to assess whether the readily available data demonstrate attainment of the state's narrative criterion. However, the value basis selected to assess the attainment of the state's narrative criterion must prevent toxicity to aquatic life and protect the aquatic life use of the waters.

Consequently, if a derived value was calculated using the procedures prescribed under Indiana's approved WQS, unless the state has identified a different scientific basis (e.g., new toxicity and bioavailability data) that justifies no longer using it, the derived value should be used to evaluate attainment of the state's narrative criterion for purposes of water quality assessment.

EPA notes that there was notice and an opportunity for public comment on the use of derived values. First, the public had opportunity to comment on the derived values methodology when IDEM proposed to adopt it into the state's WQS. Second, the public has the opportunity to comment on the use of the derived values when the proposed Section 303(d) list of impaired waters is publicly noticed. Third, the public has the opportunity to comment when the state develops TMDLs for those impaired waters,

²³ Indiana's narrative criteria at 327 IAC 2-1-6 (2) states: "At all times, all surface waters outside of mixing zones shall 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."

²⁴ See Methods for deriving Tier I criteria and Tier II values described in: 327 IAC 2-1.5-Sections 11 and 13 through 16 (for Tier I) and Sections 12-16 (for Tier II) for waters within the Great Lakes system; 327 IAC 2-1 Sections 8.2, 8.3 and 8.9 for waters outside the Great Lakes system.

²⁵ 327 IAC 2-1-6(a)(2)(C)

which includes WLAs, based upon the derived values. Finally, individual permittees can comment and challenge any proposed effluent limits based upon the derived values.

Even if IDEM believes itself to be somehow prohibited by state law from applying the derived values, EPA is bound by federal law to evaluate the list against approved WQS including narrative criteria, and for the reasons noted above, EPA finds that use of the derived values as a means of implementing the narrative criteria is appropriate under the Clean Water Act and EPA's implementing regulations. By excluding the use of derived values calculated for certain metals (aluminum being the exception),²⁶ based on IDEM's March 4, 2010 legal opinion, Indiana failed to consider all "applicable water quality standards" for listing waters as required under 40 C.F.R. § 130.7(b)(3) and failed to "assemble and evaluate all existing and readily available water quality-related data and information to develop the [section 303(d) list]" as required under 40 C.F.R. § 130.7(b)(5). EPA concludes the state neither provided a rationale for excluding the use of derived value data for iron in compiling its list nor demonstrated good cause for not including certain waters on the list based on derived value for iron as required under 40 C.F.R. § 130.7(b)(6).

EPA partially disapproved the state's 2022 303(d) list due to the state not including the WQLSs in Table 9 of Enclosure 3 and added them to the state's list. The state failed to provide any new information or data to indicate the status of these WQLSs have changed in the 2024 IR to justify their removal from the 2024 303(d) list.

In compiling their section 303(d) lists, states are required to assess state waters in light of "any water quality standard applicable to such waters." 33 U.S.C. § 1313(d)(1)(A). For the purposes of compiling the list, the term "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under Section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements." (40 C.F.R. § 130.7(b)(3)).

As discussed above, IDEM has not provided an adequate rationale for not using derived value and total recoverable metals data to identify waterbody segments impaired by lead. EPA finds that Indiana has not considered "applicable water quality standards" pursuant to 40 C.F.R. § 130.7(b)(3), has not evaluated existing and readily available water quality-related metals data and information to develop the 2024 Section 303(d) list pursuant to 40 C.F.R. §130.7(b)(5), and has not demonstrated good cause for not listing a group of WQLSs impaired for iron and lead pursuant to 40 C.F.R. § 130.7(b)(6). Therefore, EPA is partially disapproving Indiana's 2024 Section 303(d) list, pursuant to Section 303(d) of the Clean Water Act and 40 C.F.R. § 130.7(d)(2) for not listing the WQLS in Table 9 of Enclosure 3.

²⁶ See Section B. 1. Pg 4 of Enclosure 2.

iii. EPA's Identification of Additional Waterbodies for Inclusion on Indiana's 2024 303(d) List

During the 2022 Integrated Reporting Cycle, EPA identified WQLS for inclusion on Indiana's 2022 Section 303(d) list, based on EPA's assessment²⁷ of the metals data²⁸ supplied by IDEM. In reviewing Indiana's draft 2024 IR, EPA noted in public comments that 108 WQLSs impaired by lead and iron identified and added to Indiana's 303(d) list by EPA in 2022 were not included on the 2024 list and that the state cited no additional data or information to delist these WQLS from the 2024 list. Given the lack of any additional monitoring data for these waterbodies, and the fact that the applicable water quality standards in 2022 are still applicable in 2024, EPA concludes that these segments remain impaired in 2024 and must be added to Indiana's 2024 303(d) list. EPA will provide the public an opportunity to comment on the addition of these 108 WQLS and will consider comments received in deciding whether to make any revisions pursuant to 40 C.F.R. § 130.7(d)(2).

During the 2022 reporting cycle, EPA performed water quality assessments for determining the designated use (aquatic life) support status for waterbody segments with regard to metals, by assessing narrative criteria attainment based on total recoverable metals, as detailed below. IDEM had no new data in 2024 therefore EPA used the assessments from 2022.

1. EPA reviewed water quality sampling data for lead, supplied by IDEM, on a site-by-site basis (i.e., all sampling locations applicable to an individual waterbody segment) and assessed according to the magnitude and frequency of the exceedance(s) of Indiana's WQS. Consistent with IDEM's assessment methodology, EPA identified waterbody segments as impaired for lead in instances where more than one exceedance of the chronic criteria²⁹ for aquatic life occurred. When there were insufficient total dissolved metals data, EPA calculated metal translators³⁰ to estimate the ambient dissolved metal fraction based upon available total recoverable metal data to identify exceedances of Indiana's dissolved metal criteria values,³¹
2. To evaluate the attainment of the narrative criteria for iron, EPA considered all available data related to Indiana's derived values³² to identify the waterbody segments attainment

²⁷ See EPA's Metal Assessments Tables (electronic file) in the Administrative Record.

²⁸ See Compilation of emails from IDEM to EPA with attached metal assessment data.

²⁹ See Table G-8 of Appendix G of the 2024 IN IR.

³⁰ EPA use IDEM's site-specific lead data analysis to develop a method to translate measured total recoverable lead data for Indiana sites without measured dissolved lead data for estimating the dissolved fraction.

³¹ IDEM has **promulgated numeric criteria** for certain metals such as **arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc**. These criteria, apart from mercury and selenium, are expressed as dissolved criteria by using a conversion factor to convert the total recoverable metal criteria. Indiana's promulgated numeric criteria for metals include both Acute and Chronic Aquatic Life criteria, except for silver which has only Acute criteria.

³² IDEM has **derived values** for certain metals, calculated based on Indiana's adopted and EPA-approved methods for deriving a numeric expression of the state's narrative criteria. These criteria include both Acute and Chronic

status using the methods described under section D. ii above. Derived values are generally calculated by IDEM consistent with the methods contained in Indiana's water quality standards at 327 IAC 2-1-8.2 and 327 IAC 2-1-8.3. This approach is consistent with EPA's guidance³³ for deriving numeric aquatic life criteria. EPA considers IDEM's derived values to be an appropriate method for interpreting Indiana's narrative WQS and suitable for use in its waterbody assessments for parameters without numeric water quality criteria adopted into Indiana's water quality standards.

Table 9 of Enclosure 3 identifies the WQLS (for iron and lead) that EPA identified for inclusion on Indiana's 2022 Section 303(d) list (Category 5 of the IR) based on EPA's assessment of the existing and readily available metals data. EPA is again identifying these WQLS for inclusion on Indiana's 2024 Section 303(d) list. EPA's water quality assessments of:

- dissolved criteria, based on total recoverable metal data, led to EPA identifying waterbody segments for inclusion on the state's 2022 303(d) list for lead impairments and remain identified for inclusion on the state's 2024 list.
- derived values led to EPA identifying waterbody segments for inclusion on the state's 2022 Section 303(d) list for iron impairments and remain identified for inclusion on the state's 2024 list.

EPA's additions include 108 WQLSs that were previously added by EPA to Indiana's 2022 303(d) list.

iv. **EPA's Deferral**

As stated in Section I above, EPA is deferring action on the eight segments in Table 10 of Enclosure 3. The state has determined additional review is needed to assess the fish ovary data, identified by commenters, and whether it can be used to determine impairment status. EPA will work in the near term with Indiana on approaches for evaluating the new data and information and determining whether applicable WQS for Selenium in fish tissue are attained.

Segments for which further action is pending by EPA maintain the listing status under the previous 303(d) list approved by EPA, until action is taken by EPA on these waters. Based on fish tissue analysis for Selenium, the state added these waters on the public notice version of the state's 2024 303(d) list. These assessment units did not appear on Indiana's 2022 303(d) list as impaired for Selenium in Fish Tissue. Until a final action is taken by EPA for these waters, they are not WQLSs included on Indiana's 303(d) list.

Aquatic Life criteria for **antimony, barium, beryllium, boron, cobalt, iron, manganese, molybdenum, silver, strontium, thallium and vanadium.**

³³ See *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, 1985, PB85-227049