

**REGION 3**

PHILADELPHIA, PA 19103



Environmental Quality Board
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Harrisburg, PA 17101-2301
RegComments@pa.gov

Dear Sir or Madam:

In an October 7, 2023, notice in the *Pennsylvania Bulletin* [53 PA.B. 6170], the Environment Quality Board (Board) announced the Pennsylvania Department of Environmental Protection (PADEP) is conducting a triennial review of the Commonwealth's Water Quality Standards (WQS) in accordance with Clean Water Act (CWA) Section 303(c). As part of that announcement, the Board provided proposed amendments to the WQS regulations.

The U.S. Environmental Protection Agency (EPA), Region III, has reviewed the proposed amendments to Chapter 93, "Water Quality Standards," of Title 25, "Environmental Protection," of the Pennsylvania Code and is providing its comments in an Enclosure to this letter. EPA is providing comments on both the proposed revisions, as well as additional revisions EPA recommends PADEP consider for adoption. EPA will be providing a copy of this letter to the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services) so that the Services may identify any other recommendations for PADEP to consider. We will notify PADEP of any recommendations raised by the Services. This coordination with the Services will help to facilitate EPA's CWA Section 303(c) action and fulfillment of EPA's obligations under the Endangered Species Act once this rulemaking is finalized and submitted to EPA.

Please note that the enclosed comments and recommendations are strictly for the Board and PADEEP's consideration and do not constitute approval or disapproval decisions under CWA §303(c), or a determination by the EPA Administrator under CWA §303(c)(4)(B) and 40 CFR §131.22(b) that revised or new WQS are necessary to meet the requirements of the CWA. EPA appreciates the opportunity to provide comments on this proposed rulemaking and is happy to assist PADEP as necessary to complete this triennial review. If you have any questions concerning this letter, please contact me at (215) 814-5737 or Voigt.Gregory@epa.gov, or have your staff contact Denise Hakowski at (215) 814-5726 or Hakowski.Denise@epa.gov.

Sincerely,

Gregory Voigt, Chief
Standards and TMDLs Section
Water Division

Enclosure

cc: Michael Lookenbill (PADEP)

Enclosure

The U.S. Environmental Protection Agency, Region III, Comments on Pennsylvania's Proposed Triennial Review of Water Quality Standards Regulation at 25 PA. Code Ch. 93

The U.S. Environmental Protection Agency (EPA), Region III, has reviewed the proposed revisions to Pennsylvania's Water Quality Standards (WQS) regulation, as published in the Pennsylvania Bulletin on October 7, 2023 [53 Pa.B. 6170]. This proposed rulemaking is being undertaken fulfill the Commonwealth's obligation to periodically review and revise its WQS as required by the federal Clean Water Act (CWA) (i.e., "Triennial Review"). EPA is providing the following comments for the Environmental Quality Board and the Pennsylvania Department of Environmental Protection's (PADEP) consideration. EPA reiterates that the comments and recommendations contained in this letter are strictly for the Board and PADPE's consideration and do not constitute approval or disapproval decisions under CWA §303(c), or a determination by the EPA Administrator under CWA §303(c)(4)(B) and 40 CFR §131.22(b) that revised or new WQS are necessary to meet the requirements of the CWA.

Re-examination of Waterbodies with Less Than CWA 101(a)(2) Designated Uses

As required by federal regulation at 40 CFR 131.20(a), during this Triennial Review, Pennsylvania is reexamining waterbody segments with WQS that do not include the uses specified in CWA section 101(a)(2) (i.e., fishable or swimmable designated uses) by determining if any new information has become available that would indicate that such uses are now attainable.

For this Triennial Review, Pennsylvania is proposing to maintain the current non-101(a)(2) designated uses for aquatic life and recreation in the urban Delaware Estuary. EPA acknowledges this decision and is highly supportive of ongoing collaboration among a workgroup of coregulators – including representatives from PADEP, Delaware Department of Natural Resources and Environmental Control (DNREC), New Jersey Department of Environmental Protection (NJDEP), the Delaware River Basin Commission (DRBC) and EPA – to review and, where necessary, revise these WQS in close coordination to ensure consistent regulatory action across jurisdictional boundaries. The results of this coordination thus far are significant:

- In 2021, the workgroup finalized a strategy for establishing enhanced recreational uses in the urban Delaware estuary which is summarized in DRBC's FY24-26 Water Resources Plan at: <https://www.nj.gov/drbc/library/documents/WRPFY24-26.pdf> (see Section 2.2.2.2.1). The strategy commits the coregulators to undertake near- and long-term activities that support our combined goal of designating primary contact recreation as the applicable recreation use for Zones 3 and upper-Zone 4 of the Delaware Estuary. Several of the identified activities identified in this strategy are currently underway or have already been completed.
- On December 1, 2022, EPA issued an Administrator's Determination that the current designated uses and dissolved oxygen criteria for aquatic life in the urban Delaware Estuary do not meet the goals of the Clean Water Act. In its Determination, EPA committed to propose a federal rule to revise the relevant WQS by December 2023. Ongoing coordination

amongst the coregulator workgroup has allowed EPA to access the best available science and information, which the Agency has used to inform development of its proposed rule.

PADEP is an important member of the coregulator workgroup. EPA encourages Pennsylvania to continue collaborating on our collective efforts to evaluate and, where necessary, revise the WQS for aquatic life and recreation in the urban Delaware Estuary. EPA recommends the PADEP report on progress achieved by the coregulator workgroup as part of the Triennial Review process.

To the extent that previous Use Attainability Analyses (UAAs) considered safety as a factor in determining Pennsylvania's Water Contact (WC) designated uses, EPA believes there is a clear distinction between WQS and safety considerations. WQS are provisions of state, territorial, or authorized tribal law approved by EPA (or provisions established by EPA in federal law) that describe the desired condition of a water body and the means by which that condition will be protected or achieved. At their core, WQS form a legal basis for controlling pollutants entering the water body. Physical hazards such as boat traffic, turbulent flows, or the presence of legacy infrastructure, are not regulated by WQS. Further, the designation in WQS regulations of a recreational use for a waterbody does not mean that other, non-water-quality-based hazards are not present, or that specific waters should be used for recreation. Instead, the designation of recreational uses serves as acknowledgement that the water quality of a waterbody is, or should be, generally safe for recreation. Given this disconnect and the fact that virtually every waterbody in the United States could present some degree of danger to recreational users, physical hazards do not play a significant role in determining appropriate WQS. Removing or failing to designate primary contact recreation uses solely due to the presence of physical hazards is not appropriate.

Proposed Adoption of New and Revised Water Quality Criteria

In its proposed WQS revisions, EPA is pleased that Pennsylvania is adopting revised aquatic life criteria for cadmium, and new aquatic life criteria for tributyltin and carbaryl. EPA is also supportive of Pennsylvania's proposal to adopt new and revised water quality criteria for the protection of human health. Specifically, Pennsylvania proposes to revise human health criteria based on new scientific information and data for the following parameters: chloroform, chlorophenoxy herbicide (2,4-D), acetone, barium, boron, formaldehyde, methyl ethyl ketone, metolachlor, resorcinol, 1,2,3-trichloropropane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylene. Pennsylvania also is proposing to add a 1,4-dioxane water quality criterion for the protection of human health.

EPA reminds Pennsylvania that pursuant to 40 CFR §131.20(a), if a state does not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria recommendations since its most recent triennial review, then the state must provide an explanation when it submits the results of its triennial review to the Regional Administrator consistent with CWA section 303(c)(1) and the requirements in 40 CFR §131.20(c). The only 304(a) criteria recommendations pursuant to 40 CFR §131.20(a) for Pennsylvania, at this time, are the lakes and reservoirs nutrient criteria that EPA published in 2021 and human health recreational ambient water quality criteria for microcystins and cylindrospermopsin that EPA published in 2019. Should Pennsylvania decide not to finalize criteria for these parameters, it must include an explanation for those decisions in its transmittal to EPA.

EPA published revised lakes and reservoirs nutrient criteria recommendations in 2021 in the document *Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs* [EPA-822-R-21-005]. The 2021 document replaces the previous recommended numeric nutrient criteria published by EPA in 2000 and 2001, which were reference-based, ecoregion specific and derived using monitoring data available at the time. Scientific understanding of the relationships between nutrient concentrations and deleterious effects in lakes has improved since 2001, and standardized, high-quality data collected from lakes across the United States have become available. The 2021 document provides statistical stressor-response models that generate numeric nutrient criteria based on national data and state risk management decisions that can also incorporate local and/or state data. These criteria can be refined to apply at any scale that the state chooses and can be derived to apply statewide, to certain ecoregions, and/or site-specifically. Further, these criteria derivations can incorporate waterbody classes as determined by depth and/or ecoregion. Criteria can be derived to protect the following designated uses: aquatic life, human health-based recreational uses (e.g., swimming) and drinking water source waters.

EPA recommends that Pennsylvania consider adopting nutrient criteria for the protection of lakes and reservoirs derived using the models found in the 2021 lakes and reservoirs nutrient criteria document described above. Alternately, Pennsylvania could adopt the models and then develop criteria using a performance-based approach. The models can be used to develop chlorophyll-*a*, total phosphorus, and total nitrogen criteria. EPA would be happy to assist Pennsylvania in the use of the models and criteria development.

EPA released in 2019 *Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin* [EPA 822-R-19-001]. These recommendations are intended as guidance to states to consider when developing water quality standards. Alternatively, these recommendations can be used as the basis of swimming advisories for notification purposes in recreational waters to protect the public. Currently, Pennsylvania does not have recreational water quality criteria for microcystins and cylindrospermopsin in place; therefore, EPA strongly recommends the adoption of these values for the protection of human health.

In addition to criteria recommendations that must be considered under 40 CFR 131.20(a), EPA encourages PADEP to consider adoption of the following 304(a) criterion recommendation for the protection of human health:

- EPA issued recommended a methylmercury criterion for the protection of human health in 2001 (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001). The criterion is a fish tissue residue criterion, that is a concentration of methylmercury in fish and shellfish tissue that EPA calculated to protect human health. The criterion describes the maximum advisable concentration of methylmercury in freshwater and estuarine fish and shellfish tissue to protect consumers of fish and shellfish among the general population. Because consumption of contaminated fish and shellfish is the primary route of human exposure to methylmercury, EPA expressed the water quality criterion as a fish and shellfish tissue value rather than as a water column value. EPA has provided suggested approaches for relating this criterion to water column concentrations and has developed implementation

guidance. [USEPA. 2010. *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*. EPA 823-R-10-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.]

Further, Pennsylvania should consider revision of its aquatic life criteria for the following to be consistent with 304(a) criteria recommendations:

- *Aquatic Life Ambient Water Quality Criteria for Aluminum (2018)* [EPA-822-R-18-001]
- *Aquatic Life Ambient Water Quality Criteria for Copper – Freshwater (2007 Revision)* [EPA-822-R-07-001]
- *Aquatic Life Ambient Water Quality Criteria for Selenium – Freshwater (2021 Revision)* [EPA-822-R-21-006]

Pennsylvania’s Proposed Adoption of Duration Component for Aquatic Life Use Criteria

For aquatic life criteria, numeric criteria have three components: criterion magnitude (i.e., the criterion maximum concentration (CMC) for acute criteria and criterion continuous concentration (CCC) for chronic criteria), duration of the CMC and CCC (i.e., averaging period), and a maximum allowable frequency of exceedance of the CMC and CCC. [EPA. 2017. *Water Quality Standards Handbook: Chapter 3: Water Quality Criteria*. EPA-823-B-17-001. EPA Office of Water, Office of Science and Technology, Washington, DC. Accessed November 2023]

Pennsylvania is proposing to add duration components for its numeric aquatic life water quality criteria in Tables 3, 5 and 6. Generally, unless otherwise specified, Pennsylvania is proposing the adoption of a one-hour average duration for criteria maximum concentrations, and a four-day average for criteria continuous concentrations, and this is typically consistent with EPA’s recommended average durations. In order to discern how this proposed revision will impact the implementation of Pennsylvania’s aquatic life criteria, EPA requests that Pennsylvania provide the following information:

- Pennsylvania’s current method for averaging data points when evaluating monitoring data for assessment purposes.
- A rationale for not also proposing to adopt the frequency component of aquatic life criteria in this triennial review.
- Absent the adoption of the frequency component, what Pennsylvania will use for a maximum allowable frequency of exceedance of the CMC and CCC.
- A rationale for having different durations for the CMC (“instantaneous”) and the CCC (24 hours average) for the aquatic life water quality criteria for acrylonitrile, chlordane, 4,4-DDT, alpha-endosulfan and beta-endosulfan.

Compliance Schedule Authority

In 2015 when EPA revised the federal WQS regulations at 40 CFR 131, 40 CFR 131.15 was added. That provision states “If a State intends to authorize the use of schedule of compliance for water quality-based effluent limits in NPDES permits, the State must adopt a permit compliance schedule authorizing provision. Such authorizing provision is a water quality standard subject to EPA

review and approval under section 303 of the Act and must be consistent with sections 502(17) and 301(b)(1)(C) of the Act.”

Pennsylvania’s compliance schedule authorizing provision is found in its National Pollutant Discharge Elimination System (NPDES) regulations at 25 Pa. Code §92a.51. This triennial review provides Pennsylvania with an opportunity to align its compliance schedule authorizing provisions with its WQS regulation. Pennsylvania should consider adopting a new provision in its WQS regulation authorizing the use of compliance schedules that references the existing NPDES-related compliance schedule language in permitting regulations at 25 Pa. Code §92a.51.