

EXECUTIVE SUMMARY

Water Quality Standards – Site-Specific Water Quality Criteria 25 Pa. Code, Chapter 93

This proposed rulemaking consists of changes to Chapter 93 (relating to water quality standards) including regulatory clarifications for § 93.8d (relating to the development of site-specific water quality criteria) and the replacement of a total mercury water quality criterion with a site-specific methylmercury criterion for Ebaughs Creek in § 93.9o (relating to Drainage List O).

Purpose of the Proposed Rulemaking

This proposed rulemaking will revise the process for requesting, developing and adopting site-specific water quality criteria in § 93.8d; delete the statewide total mercury water quality criterion of 0.05 µg/L for Ebaughs Creek; and add a site-specific methylmercury water quality criterion of 0.00004 µg/L for Ebaughs Creek in § 93.9o.

Summary of the Proposed Rulemaking

Proposed Amendments to Site-Specific Water Quality Criteria Development Process in Chapter 93

The Department of Environmental Protection (Department) is recommending to the Environmental Quality Board (Board) the adoption of updates and revisions to § 93.8d which outlines the site-specific water quality criteria process. The proposed amendments include the addition of language that clarifies when site-specific water quality criteria may be requested and specifies the conditions under which site-specific water quality criteria may not be requested. A site-specific criterion may not be requested for surface waters with an existing or designated use of High Quality Waters (HQ) or Exceptional Value Waters (EV). The existing water quality of HQ or EV waterbodies must be maintained and protected under § 93.4a (relating to antidegradation), and thus, the water quality goals and expectations for these waterbodies are already site-specific. Site-specific water quality criteria also may not be requested for any pollutant that is a cause of nonattainment or would otherwise interfere with the attainment of protected surface water uses.

The proposed amendments will update language throughout § 93.8d to identify the data and information that must be submitted with each request for a site-specific water quality criterion and the reviews to be taken by the Department as part of the site-specific water quality criterion development and regulatory processes. These proposed amendments are consistent with federal regulations and requirements.

Site-specific water quality criteria are used to develop effluent limitations in permits. Given the need for timely permit development, the Department intends to explore all options available under Commonwealth law for expediting rulemaking procedures to promulgate site-specific water quality criteria while maintaining robust public participation. Although § 93.8d(f)(4) is proposed for deletion, the obligation remains to promulgate site-specific criteria as regulations. The Department intends to enhance its public notices in the *Pennsylvania Bulletin* to reach a

broader audience and will receive and respond to public comments on all draft site-specific water quality criteria. In addition, existing public notification and public participation processes available through the National Pollutant Discharge Elimination System (NPDES) permitting process in 25 Pa. Code Chapter 92a (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance) will continue.

Proposed Amendments to Drainage List O in Chapter 93 – The York County Solid Waste and Refuse Authority (YCSWRA) owns and operates the York County Sanitary Landfill, which is a 306-acre site located in Hopewell Township, York County. Between 1974 and 1997, the landfill received municipal and industrial waste, which was placed into lined and unlined cells. The site contains approximately 135 acres of unlined cells. Detection of volatile organic compounds (VOCs) in several groundwater wells was discovered in 1983 and was associated with the unlined cells. A treatment system was installed to remove the VOCs and began operation in 1985. The treatment system consisted of 17 extraction wells and air stripping towers. The air stripping towers discharge the treated groundwater to a surface water of the Commonwealth under NPDES permit number PA0081744. Mercury was not known to be present in the discharge when the initial permit was issued. It was later identified as a potential pollutant of concern through the Department’s permit renewal application review process.

YCSWRA has requested the Department develop a site-specific methylmercury water quality criterion for Ebaughs Creek, in lieu of applying the statewide total mercury water quality criterion, to protect human health from the toxic effects of methylmercury and to inform their NPDES permit effluent limitations for Outfall 002. Since the Department does not currently have statewide numeric water quality criteria for methylmercury, YCSWRA’s request satisfies § 93.8d(a)(3).

The federal water quality standards regulation requires states to adopt numeric water quality criteria to protect water uses. Chapter 16 generally states that the Department will develop water quality criteria for toxic substances based on criteria recommendations developed by the United States Environmental Protection Agency (EPA) under section 304(a) of the federal Clean Water Act (CWA), EPA section 304(a) criteria recommendations modified to reflect site-specific conditions or other scientifically-defensible methods. The EPA has a CWA section 304(a) methylmercury water quality criterion recommendation for the protection of human health that is a fish-tissue based criterion of 0.3 mg/kg (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, USEPA 823-R-01-001).

The EPA supports the adoption of methylmercury water quality criteria for the protection of human health because methylmercury is known to be one of the forms of mercury that is most toxic to humans. States have multiple options when developing and adopting methylmercury criteria, which may include the fish tissue recommendation, a water column criterion value based on the fish tissue recommendation, or both.

The EPA recommends that states adopt water column criteria values if adequate data is available to determine appropriate bioaccumulation factors (BAFs). Thus, the Department required YCSWRA to collect fish tissue samples and surface water samples from Ebaughs Creek for the calculation of a site-specific BAF. The site-specific BAF was calculated to be 5.882398×10^{-6} L/kg. This BAF along with the human health exposure inputs and provisions for developing

water quality criteria found in 25 Pa. Code Chapters 16 and 93 were used to convert the EPA's fish-tissue-based ambient water quality criteria for methylmercury into a water column criterion. The proposed site-specific water column methylmercury criterion for Ebaughs Creek is 0.00004 µg/L.

Affected Parties

The proposed amendments to Chapter 93 will not immediately affect the regulated community. When site-specific criteria are necessary either to protect more sensitive intervening uses or for substances currently lacking numeric criteria in Chapter 93, persons with NPDES permits may need to conduct the required studies to develop site-specific criteria and may need to install additional treatment to comply with their NPDES permit effluent limitations. In cases where a person with an NPDES permit elects to request a site-specific criterion or criteria, additional costs may be incurred to conduct the required studies and to comply with their NPDES permit effluent limitations.

Requests for site-specific criteria are often initiated by persons with NPDES permits for any number of different pollutants. Therefore, it is not possible to precisely predict the costs that could be incurred for any existing discharges, or new discharges in the future, to comply with any renewed or new site-specific criteria as it is unknown which facilities will qualify for new or renewed site-specific criteria and for which pollutants site-specific criteria will be developed.

The proposed amendments to § 93.9o for Ebaughs Creek are specific to that waterbody. Furthermore, the proposed site-specific methylmercury water quality criterion for Ebaughs Creek would be applicable only to YCSWRA, and therefore, YCSWRA would be the only affected party. The proposed amendments will be implemented through the Department's permit and approval actions.

Advisory Groups

On March 16, 2023, the Department met with the Water Resources Advisory Committee to present its recommended updates to § 93.8d and the site-specific methylmercury water quality criterion for Ebaughs Creek. WRAC voted to support presentation of this proposed rulemaking to the Board. In addition, the Department provided to the Agricultural Advisory Board on March 15, 2023, a regulatory review that included the updates to the site-specific criteria development process and a site-specific methylmercury criterion for Ebaughs Creek.

Public Comments and Board Hearings

The Department recommends that this proposed rulemaking be adopted by the Board and published in the *Pennsylvania Bulletin* as a proposed rulemaking with a 45-day public comment period, including a public hearing to be held during the public comment period.