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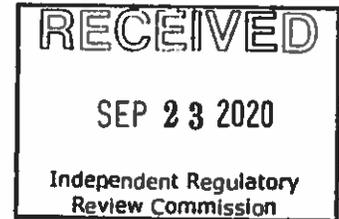


Pennsylvania Fish & Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Drive
Bellefonte, PA 16823
Phone: 814-359-5194

September 23, 2020

Via email at RegComments@pa.gov
Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477



Re: Proposed Rulemaking: Water Quality Standard for Manganese and Implementation

Dear Sir or Madam:

The Pennsylvania Fish and Boat Commission (PFBC) wishes to comment on the Proposed Rulemaking: Water Quality Standard for Manganese and Implementation, published in the Pennsylvania Bulletin on July 25, 2020. On February 26, 2018 we commented on the Advance Notice of Proposed Rulemaking for Water Quality Standards for Manganese.

It is our understanding that the purpose of this proposed rulemaking is to comply with Act 40 of 2017 (71 P.S. § 510-20(j)), to delete the existing manganese (Mn) numeric water quality criterion from Table 3 at § 93.7 which was established for the protection of the Potable Water Supply (PWS) use, to add a Mn criterion to Table 5 at § 93.8c designed to protect human health from the neurotoxicological effects of Mn which will also ensure adequate protection of all water uses, and to identify the point of compliance for the criterion.

We support the second alternative point of compliance; to maintain the existing point of compliance in all surface waters (that is, at the point of discharge). This will protect existing and designated surface water uses and would afford aquatic life an appropriate level of protection from deleterious effects of Mn. We do not support changing the point of compliance to the point of withdrawal which will shift the burden of treatment and control to downstream users such as public water suppliers and customers. This alternative gives no consideration for the potential impacts this change will have on fish, other aquatic life, and recreational uses when moving the point of compliance for Mn from the wastewater discharge to the existing or planned surface PWS withdrawal. Mn will precipitate or settle onto stream substrates under certain stream conditions as a black, sticky coating on streambed substrates which could most certainly interfere with the ability and desire to boat, fish, and enjoy a stream.

The PFBC is pleased to see that DEP did a comprehensive review of scientific and toxicological information for Mn to determine the appropriate water quality criteria to protect all existing and designated water uses and to evaluate the impact of the proposed alternative to move the point of compliance to the PWS withdrawal. Studies indicate that elevated Mn has negative impacts on aquatic life, including freshwater mussels which are among the most imperiled aquatic animal groups in the

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To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.

United States (Stein & Flack 1997). As evidenced in several recent studies in the Clinch River in Virginia (Johnson et al., 2014; Archambault et al., 2017; Rogers et al., 2018), mussel abundance, growth, and survival are adversely affected by exposure to Mn at high concentrations in water and sediments.

The proposed Mn criterion of 0.3 mg/L, which is more stringent than the existing criterion of 1.0 mg/L, is expected to be protective of human health as well as provide adequate protection to aquatic life and other users from the toxic effects of Mn. The PFBC supports the proposed rulemaking amendments that add the Mn criterion of 0.3 mg/L to Table 5 at § 93.8c – Water Quality Criteria for toxic Substances and remove the Mn criterion of 1.0 mg/L from the existing PWS Table 3 at § 93.7.

The PFBC appreciates the opportunity to comment on this proposed rulemaking. If the proposed criterion is adopted and the second point of compliance alternative is adopted, all the users of clean surface waters will benefit.

Sincerely,



Heather Smiles
Chief, Division of Environmental Services

Submitted via email: RegComments@pa.gov

Literature Cited

- Archambault, Jennifer M., Christine M. Bergeron, W. Gregory Cope, Peter R. Lazaro, Jeremy A. Leonard, and Damian Shea. 2017. Assessing toxicity of contaminants in riverine suspended sediments to freshwater mussels. *Environmental Toxicology and Chemistry*. vol. 36 no.2, pp. 395-407.
- Johnson, Gregory C., Jennifer L. Krstolic, and Brett J. K. Ostby. 2014. Influences of water and sediment quality and hydrologic processes on mussels in the Clinch River. *Journal of the American Water Resources Association (JAWRA)* 50(4): 878-897. DOI: 10.1111/jawr.12221.
- Rogers J. J., W. F Henley, A. G. Weberg, J. W. Jones, W. G. Cope. 2018. Assessment of growth, survival, and organ tissues of caged mussels (*Bivalvia: Unionidae*) in a river-scape influenced by coal mining in the Southeastern USA. *The Science of the Total Environment*. 645: 1273-1286.
- Stein, B. A. and S.R. Flack. 1997. 1997 Species Report Card: The State of U.S. Plants and Animals. The Nature Conservancy. Arlington, Virginia. ISBN 1-886765-08-1.