



Manganese in Surface Water: Proposed Change to Current Water Quality Standards

Meeting with Agricultural Advisory Board
October 25, 2018

Manganese

- Manganese (Mn) is the 12th most abundant element in the earth's crust
- Manganese is an essential micronutrient, however excessive intake can cause neurological damage to humans
- DEP currently limits the discharge of manganese to Commonwealth waters to a maximum of 1.0 part per million (1ppm)



Proposed Rule Change

- On October 30, 2017, Act 40 was passed, directing the Environmental Quality Board to promulgate regulations that would require moving the point of compliance for discharges of manganese from the point of discharge to the point of potable water supply (PWS) withdrawal
- On January 27, 2018, DEP announced an Advance Notice of Proposed Rulemaking, seeking scientific and economic information to support a proposed rulemaking
- Comments received indicate potential impacts to agriculture

Research from Penn State Extension

“Experience in Pennsylvania has shown that aesthetic pollutants like iron, manganese and hydrogen sulfide, are the most common water-related causes of problems with dairy herds. These pollutants cause tastes or odors that result in reduced water intake and milk production.”

<https://extension.psu.edu/interpreting-drinking-water-tests-for-dairy-cows>

Must Protect For All Uses

- DEP develops water quality criteria that protect all water uses
- Protected Water Uses include:
 - Aquatic Life
 - Water Supply Uses:
 - ❖ LWS = Livestock Water Supply
 - ❖ IRS = Irrigation
 - ❖ PWS = Potable Water Supply
 - ❖ IWS = Industrial Water Supply
 - ❖ AWS = Wildlife Water Supply

Request for AAB Input

DEP seeks input on:

- Any information relating to effects of manganese on livestock and irrigation water supplies
- If higher levels of manganese in water will have an impact on agricultural uses, or agriculture-related businesses or operations
- Estimates of the direct and indirect costs to these uses, businesses or operations



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Bureau of Clean Water

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