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To: [Paula Wilson](#)
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Subject: Comments on Water Quality Standards Negotiated Rule Making Designation of Domestic Water Supply
Date: Monday, January 15, 2018 10:43:07 PM

Hello Paula, Below are comments I have on the changes being proposed to the Water Quality Standards pertaining to the addition of a definition of Domestic Water Supply, removing the table showing specific public drinking water system intakes and the turbidity criteria as a result of degradation from human activity. I was involved with the Water Quality Standards rule making when these sections were included in 1994. At that time I was employed by IDEQ and working in the Pubic Drinking Water Program in the CDA Regional Office. I thought it would be helpful for the Rule making committee to know some of the background on why these sections were included.

The State of Idaho, especially Northern Idaho, has a large number of pubic water system using surface water supplies. This was especially true in 1994 when the State had 100 surface water systems and started enforcing new requirements for higher levels of treatment for these system. Many of these public water systems utilize a method of treatment called slow sand filtration to help make the water potable. Slow sand filters are excellent for removing pathogens from surface waters but are very vulnerable to turbidity increases in the source water, especially colloidal turbidity (clay). Higher levels of colloidal turbidity can pass through these filters, causing violations of the turbidity standards, treatment failure, as well as increased maintainance by the operators. Systems using other types of treatment, such as membrane and cartridge/bag filters, can also be negatively impacted when the turbidity increases as a result of degradation to the surface water source. The table was added to the Rules in 1994 with the intention of recognizing these source water supplies as being very vulnerable to degradation of the water quality as a result human activities and needing to be afforded addtional protection. By specifically identifying the source water and public water system this would help do this. In the drinking water industry, protection of the watershed is the first barrier of public health protection. Treatment of the source water by filtration and disinfection are second and third barriers of the multiple barrier approach to drinking water protection.

Turbidity is the primary water quality parameter used to determine degradation of the source water for a public water system. Excessive increase in turbidity in the source water can often result in failure of the filtration system exposing the users to unsafe drinking water. There are specific turbidity levels allowed following treatment. For slow sand filters, the maximum level is 5 NTU. Public water systems that have been allowed to remain unfiltered also have the maximum level of turbidity set at 5 NTU. (These systems must also meet very stringent watershed protection measures and pathogen reduction through disinfection. At this point there are no unfiltered public water surface water systems in the State). As I remember, the turbidity criteria in

section 252.01b.i. of the Rules (below) was an attempt to quantify how much degradation from human activity could be allowed at these public water supply sources and still protect the treatment system from failure and violations of the drinking water turbidity standards.

For those surface waters identified in Subsection 252.01.b.i. turbidity as measured at the public water intake shall not be: (4-5-00) (1) Increased by more than five (5) NTU above natural background, measured at a location upstream from or not influenced by any human induced nonpoint source activity, when background turbidity is fifty (50) NTU or less. (8-24-94) (2) Increased by more than ten percent (10%) above natural background, measured at a location upstream from or not influenced by any human induced nonpoint source activity, not to exceed twenty-five (25) NTU, when background turbidity is greater than fifty (50) NTU.

Comments

1. The table should remain in the Water Quality Rules but be undated with current information on the public water system intakes. Having these sources and systems identified in the Rules should make it more likely that the DEQ staff enforcing the Water Quality Rules will communicate with the DEQ drinking water staff when an activity or action is planned in a watershed where there is a public water supply intake.
2. The term “Small” in Public Water Supply should just be public water supply or system. Small is not needed.
3. There should still be some type of turbidity criteria in the rules to help quantify how much the turbidity can be allowed to increase by human activity and not adversely impact the source water of the public water system. Public water systems in Idaho monitor turbidity routinely and there should be a considerable amount of data to help determine natural background.
4. I’m not sure how useful it is to have the definition of “domestic water” being proposed. I would need to know why this is being proposed in these Rules as “after treatment”. It might be better to include a definition for public water source or supply.
5. The impression I have is that these Negotiated Rule changes are taking place without negotiating with the public drinking water surface water system stakeholders or the DEQ public drinking water staff. I recommend these fine folks be brought into the process. “

I appreciate the opportunity to comment on this Rules making process.

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