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Submitted via email: paula.wilson@deq.idaho.gov and jason.pappani@deq.idaho.gov

RE:Water Quality: Docket No. 58-0102-1801 – Update to Human Health Criteria for Arsenic

Dear Ms. Wilson and Mr. Pappani,

Thank you for the opportunity to comment on the draft of Docket No. 58-0102-1801 - Negotiated Rulemaking on updating the human health criteria (HHC) for Arsenic.

Since 1973, the Idaho Conservation League has had a history of involvement with water quality issues. As Idaho's largest state-based conservation organization, we represent over 30,000 supporters who have a deep personal interest in ensuring that our water quality is protected throughout the state.

We thank you for the opportunity to submit comments. We look forward to continuing to work with the Department of Environmental Quality on this project and others in the future. Please feel free to contact us if you have any questions or require additional information.

Sincerely,

Ellie Hudson-Heck, Conservation Assistant
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RE:Water Quality: Docket No. 58-0102-1801 – Update to Human Health Criteria for Arsenic

The development of accurate water quality criteria is a process that should, at a fundamental level, be based on accurate science and be protective of beneficial uses. ICL still believes that more science is needed to further our understanding of arsenic biochemistry before we can either (1) accurately determine a bioaccumulation factor (BAF) or (2) derive an alternative method (e.g., an alternative accumulation model) to accurately obtain a scientifically defensible fish tissue criteria as well as a water column criteria for arsenic. However, with the science that is currently available, ICL thinks that it is critically important to have a criteria that is focused on protecting the designated uses of Idaho's water bodies. At this time, we think the most logical approach is to have a water column only criteria for arsenic. With this in mind, we have outlined an alternative option to derive an arsenic water column criteria for fish only waters:

To ensure that the designated uses are protected, ICL suggests that DEQ should use a BAF that is higher than the geometric mean of the Idaho data (~1.12 L/kg) to calculate a water column criteria. For example, using the 75th percentile BAF (3.45)¹ would result in a water column criteria of approximately 2.4 µg/L. Not only would the magnitude of this water column criteria ensure that designated uses are protected, but more than 75% of Idaho water bodies would have levels of arsenic that are below this limit. Therefore, a water column criteria of 2.4 µg/L would minimize the amount of requested variances and is likely attainable by most dischargers (Figure 1).

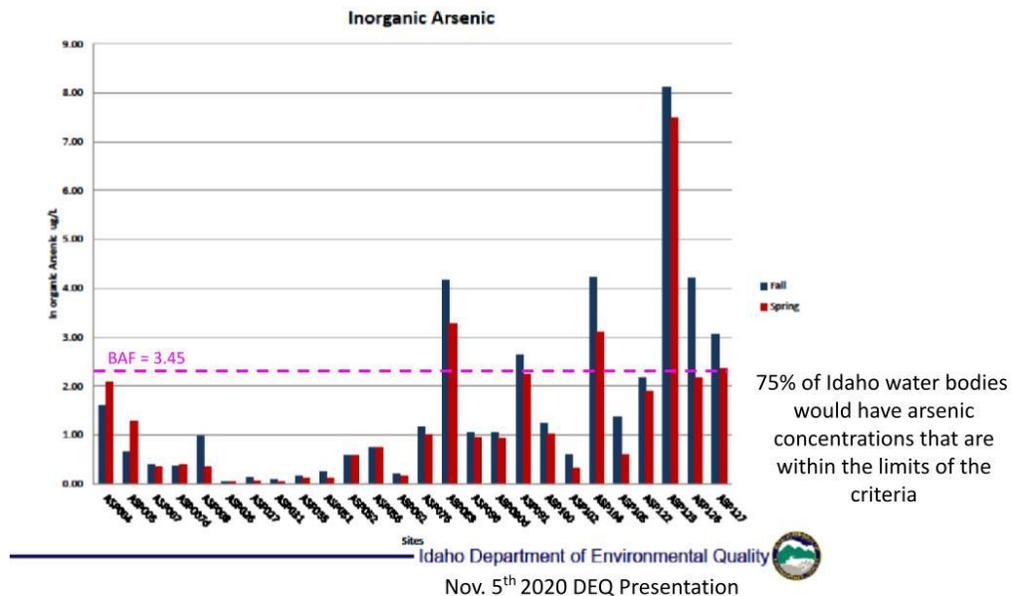


Figure 1. This figure highlights the percent of Idaho water bodies that have concentrations of arsenic that are within the limits of the water column criteria if a BAF = 3.45 (i.e., 75th percentile) was chosen. The dotted pink line indicates a water column criteria of ~ 2.4 µg/L.

It is important to note that ICL is suggesting to use a higher BAF not because it is a scientifically sound approach, rather choosing a higher BAF ensures that the designated beneficial uses are fully protected.

At this time, ICL does not consider the geometric mean BAF = 1.2 scientifically defensible. In fact, from the data IDEQ has presented throughout the rulemaking, it is not clear whether a predictive relationship exists between arsenic in water and arsenic in fish tissue. Therefore, ICL does not see a clear path forward to obtain a scientifically defensible BAF and strongly encourages IDEQ to consider adopting a BAF that will, at minimum, be protective of designated beneficial uses.

If IDEQ decides to additionally develop a fish tissue only criteria, further discussion will be needed to determine the most appropriate means of regulating the two criteria.

References

- (1) Idaho Department of Environmental Quality. *2019 Arsenic Accumulation in Fish Tissue*; 2019.