



## **AMCA Comments on Proposed Amendments to Water Quality Standards November 2017**

On November 9, AMCA submitted comments on DNR's proposed amendments to its Water Quality Standards regulation, 10 CSR 20-7.031. That rule includes several changes of significance to AMCA members and our comments on those changes are summarized below:

**Lake and Reservoir Nutrient Criteria.** DNR's approach appropriately emphasizes the importance of the response variable chlorophyll-a (a measure of algal biomass) over the causal variables total nitrogen (TN) and total phosphorus (TP). Chlorophyll-a is more closely tied to factors that impact designated uses, such as dissolved oxygen and algal toxins, than are TN or TP, and should serve as the basis for the criteria. We agree that it would be inappropriate to set criteria based on the causal variables TN and TP because the relationship between nutrient inputs and the biological response is highly variable. AMCA agrees that implementing chlorophyll-a criteria along with a bioconfirmation approach provides an appropriate and scientifically-based method to attempt to address the uncertainty associated with this variability. Our support is expressly dependent on the Department retaining the framework (criteria, screening values, weight-of-evidence evaluations, etc.) in the proposed rule. We do not support EPA's promulgation of criteria because EPA may not invest the effort required to address flexible criteria such as the state's decisional framework approach with bioconfirmation.

AMCA disagrees that screening thresholds should be converted to water quality standards for TMDL purposes. This is set forth in Section (M)1.C.(l)(c) of the proposal which states: *"In the absence of site-specific targets, nutrient screening thresholds will be used as targets for TMDL development."* A more appropriate approach would be for such circumstances to trigger a priority for DNR to establish site-specific criteria and then a TMDL development priority for the waterbody in question. We urged DNR to clarify this.

**Mixing Zone Clarifications.** AMCA supports DNR's clarifications regarding the definitions of the zone of initial dilution and mixing zones. We also support the proposed clarifications regarding the use of mixing zone models and DNR's flexibility to address site-specific mixing zone demonstrations. This is the type of implementation flexibility that is necessary to allow public utilities to protect aquatic life while maintaining affordable wastewater service for our customers.

**Adoption of Multi-Discharger Variance.** We support DNR's adoption of the Missouri Multiple Discharger Variance (MDV) Framework for total ammonia nitrogen criteria. The variance is essential for small dischargers financially unable to comply with the ammonia permit requirements.



**Expression of pH Criterion.** We appreciate DNR's advanced approach to pH through the technically appropriate expression of the criterion as a four day average (chronic) range. This should address a number of concerns since the Department departed from the more typical 6-9 range. That said, if implementation issues remain with the calculation of the 4-day average, we believe the most straight forward resolution will be to return to the 6-9 range in a future triennial review.

**Use of Median Hardness.** We agree with DNR's update to specify the median hardness for use when determining hardness-based water quality standards and permit limits. We concur that the median, rather than the average or geometric mean is the appropriate value for use, particularly in the development of permit limits.

**Clarify the Equations for Hardness-Dependent Metals.** Table A.2 – Hardness Dependent Metals – provides the statewide criteria for a number of metals, including Cadmium, Chromium (III), Chromium (VI), Copper, Lead, Nickel, Silver, and Zinc. Consistent with EPA's May 14, 2015 approval of updates to several subsections of 10 CSR 20-7.031(5)(S), the equations found in Table A.2 should be updated to include the Water Effect Ratio. The WER factor in the equations will be assigned a value of "1" - unless the Department approves a WER study which follows EPA's guidance EPA-822-R-01-005 that yields a number different than "1". For example, the Copper Acute criterion should be clarified as follows:  $\text{Copper Acute} = (\text{WER} * e^{(0.8190 * \ln(\text{hardness}))} * 0.316)$

**Bis(2-Ethylhexyl) Phthalate.** We urged DNR to retain a fish consumption level of 6.5 grams per day for bis(2-ethylhexyl)phthalate (DEHP). Dischargers across the country have experienced false positives for DEHP due to the ubiquitous use of plastics in treatment, sampling and analytical equipment. We recommended that DNR work with stakeholders to come up with ways to reduce the risk of related false positives and then reevaluate changing the fish consumption assumption for DEHP during a future triennial review.

**Sulfate and Chloride.** We understand that DNR is going back to its prior Chloride and Sulfate standards in response to EPA's disapproval of newer, hardness-based criteria in the prior triennial review. While we recognize the rationale for returning to the prior criteria (which likely remain in effect as a matter of federal law) the reasons DNR had moved away from the prior criteria to hardness-based criteria remain valid. Accordingly, we urged the Department to continue to work on more scientifically robust criteria in the next triennial review.

On November 21, AMCA appeared before the Clean Water Commission to testify in support of the rule, consistent with the above comments. We will discuss the hearing comments during the Membership meeting.