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Adam Krantz

September 27, 2016

Attention: Docket ID No. EPA-HQ-OW-2016-0332

Mike Elias

Health and Ecological Criteria Division

Office of Water, (Mail Code 4304T)

Environmental Protection Agency

1200 Pennsylvania Avenue NW

Washington, DC 20460

Via www.regulations.gov

RE: Request of Scientific Views: Draft Aquatic Life Ambient Estuarine/Marine Water Quality Criteria for Copper – 2016

NACWA appreciates the opportunity to comment on the Draft Aquatic Life Ambient Estuarine/Marine Water Quality Criteria for Copper (81 Fed. Reg. 49982; July 29, 2016). NACWA last commented on the criteria in 2004. At that time, NACWA supported EPA's revision of the freshwater copper criteria to incorporate use of the biotic ligand model (BLM), but stated that EPA's proposed revision to the saltwater criteria was not defensible. In addition to highlighting a number of concerns with the science underlying the saltwater criteria, NACWA encouraged EPA to apply the BLM in both the freshwater and saltwater criteria.

While our March 1, 2004, comment letter supported application of the BLM to both the freshwater and saltwater criteria, NACWA's review of EPA's draft 2016 revision to the estuarine/marine (saltwater) criteria has raised several concerns, as outlined below.

1. The BLM should not be integrated into the criteria calculation. Use of the BLM should be decoupled completely from the calculation and left as an option for use in implementing the criteria.
2. The use of substitute or approximated values for the key BLM inputs defies the intent of using the BLM, which is to derive more reliable estimates of aquatic life sensitivity based on site-specific information. Using such default values will only introduce more uncertainty. These are similar concerns to those NACWA raised in its comments on EPA's *Draft Technical Support Document: Recommended Estimates for Missing Water Quality Parameters for Application of EPA's Biotic Ligand Model*, filed earlier this year (Attached).
3. EPA should not use species mean acute values (SMAVs) represented by a single toxicity test data point or lower the criteria in response to a single

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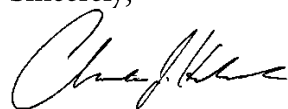
toxicity test data point. A single toxicity test cannot reliably represent the sensitivity of a species or an entire genus. This is particularly true when the single test value differs significantly from data for species in the same genus or when no other data is available for a genus. Even more critical is when that single test value significantly influences the calculation of the criteria or the criteria are purposely lowered to that single data value. The uncertainty associated with the capacity of a single data point to adequately represent mean species or genus sensitivity is far too great to allow this practice to drive water quality criteria calculations. There must be at least two data points within 2x of each other to ensure, to some degree, that the data is reliable enough to drive criteria calculations and water quality standards.

4. Data that do not meet test procedure acceptability standards or that are not properly documented must not be used in calculating national water quality criteria for aquatic life. Of concern is the single data point for *H. rufescens*. It appears the documentation for this test did not provide survival rates or the measured concentrations. Without this information, it is not possible to independently calculate the test result and verify its reliability. This lack of documentation adds tremendous uncertainty to the criteria.

NACWA also supports the more detailed comments submitted by its member agency, the Hampton Roads Sanitation District.

Please let me know if you have any questions or wish to discuss further.

Sincerely,



Chris Hornback
Chief Technical Officer

ATTACHMENT

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Adam Krantz

April 18, 2016

Attn: Docket ID No. EPA-HQ-OW-2015-0469

Kathryn Gallagher

Health and Ecological Criteria Division

Office of Science and Technology, Office of Water (Mail Code 4304T)

Environmental Protection Agency, 1200 Pennsylvania Avenue NW

Washington, DC 20460

Via *Regulations.gov*

RE: NACWA Comments on Draft Technical Support Document: Recommended Estimates for Missing Water Quality Parameters for Application of EPA's Biotic Ligand Model

Dear Kathryn,

The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) *Draft Technical Support Document: Recommended Estimates for Missing Water Quality Parameters for Application of EPA's Biotic Ligand Model* (Draft TSD). NACWA has supported the use of the biotic ligand model (BLM) to provide a more accurate estimate of the level of a pollutant, given the water chemistry at a particular site, which will be protective of water quality. However, it is not clear why EPA has developed this guidance. NACWA is not aware of any utilities or states using the BLM that have requested guidance on using default parameters. Where the BLM is being implemented and data are lacking, the state and the permittee work to ensure the necessary data are collected. NACWA is concerned that the use of default values could undermine the original intent of developing the BLM, resulting in criteria or permit limits that in fact do not reflect site-specific water conditions.

Accordingly, NACWA is recommending that should EPA proceed to finalize the Draft TSD, the Agency needs to limit the options states have for using defaults for certain parameters.

Use of Defaults Not Warranted

In a permitting context, use of default values for BLM input parameters raises significant concerns that permit limits may be put in place that can become difficult if not impossible to change due to anti-backsliding restrictions should more site-specific information become available.

Similarly, use of default values in the criteria or 303(d) context could lead to incorrect impairment and listing decisions, again leading to water quality requirements and permit limits that may be unnecessary.

NACWA understands the Draft TSD is guidance and not binding on the states. However, NACWA is aware that in at least one EPA region the Agency is pushing strongly for states to use defaults in developing permit limits and in making listing determinations, in addition to incorporating use of the defaults into state standards. Whether to use the BLM, including use of any default values, is a decision that rests solely with the state and EPA should not attempt to impose its policy preferences on the states.

Use of default values for the parameters that have the most influence on the outcome of the model, including pH and dissolved organic carbon (DOC), is particularly problematic. The Draft TSD does recognize the important role played by pH and indicates that “site-specific data for pH are needed for successful BLM application.” EPA points out in the Draft TSD that DOC is a major player – the “most important BLM input” for estimating criteria for copper – but only *encourages* users of the BLM to sample for DOC wherever possible. The use of defaults for pH or DOC is never appropriate. EPA needs to change the document to state that site-specific DOC data are also needed for successful BLM application.

Use of 10th Percentile Values Raises Concerns

NACWA is concerned that the use of the 10th percentile value for the default values could introduce unnecessary conservatism into the results of the BLM and resulting permit limits. The BLM was developed to provide more accurate estimates of the levels of pollutants like copper that may cause unacceptable impacts instream based on site-specific information, not as a tool for establishing more stringent permit limits or criteria. Use of the 10th percentile default value for DOC is particularly problematic given its influence on the outcome of the BLM.

Unique Conditions for Effluent Dominated Streams

Based on NACWA’s understanding of the Draft TSD, application of default values in a permitting context could be limited to those instances where the permit includes dilution instream. Effluent dominated streams are considered, at the critical condition, to be 100 percent effluent and the defaults in the guidance appear to be based on broad, surface water qualities. There is no discussion of the potential differences or similarities between surface waters and effluent nor any mention of whether an analysis was done to show that these data populations are similar in distribution and other statistical qualities.

It is unclear in the current Draft TSD how much of the data used to develop the defaults is from effluent dominated streams. Pooling data among these streams and other waterbodies may not be defensible. There also does not appear to be a statistical analysis for this level of data or a discussion of the implications of sampling effluent dominated streams. Ecoregions and stream order would have little to do with effluent discharges, so these approaches to developing defaults may not work.

NACWA Suggests EPA Provide Limited List of Options for Use of Defaults

Though the Draft TSD is intended as guidance and has no binding impact on the states, the fact that this information on defaults will be pushed out to the states opens the door to increased use of the BLM with default input parameters. NACWA has generally supported broader use of the BLM to provide more accurate estimates of protective pollutant levels, but use of default values for key parameters undermines this objective.

At a minimum, the guidance should instruct states to collect actual values for the key input parameters – pH and DOC – and as many of the others as possible. NACWA recommends that EPA provide states with a limited list of options on BLM implementation when dealing with a lack of data. These options could include:

- a. 25th percentile or median values for the geochemical ion (GI) parameters, plus actual temperature, DOC and pH, or
- b. Use of BLM with defaults as a screening tool together with permit requirements for collection of site-specific data in the permit term preceding use of BLM for compliance purposes.

The magnitude of the concern with using default values will vary depending on geographic location. For instance, a rainfall dominated stream may have at times low TOC (< 1 mg/l) and/or low pH (< 6.8) that drive copper criteria (< 1 ug/l) to lower concentrations. Application of defaults in this type of situation would, in turn, result in very low permit limits that would be difficult or impractical to meet. But in a drier part of the same region, the default values may result in more attainable and practical limits. Because of the effect that geography can play in determining site-specific copper criteria and permit limits, NACWA believes that defaults could be useful in screening where or when more data would be appropriate.

Ultimately, the decision to use default values must rest solely with the permitting authority.

Path Forward

Where data are unavailable to adequately develop the critical input parameters for application of the BLM, NACWA suggests exploring an adaptive approach where default values could be used to screen and identify where additional data are warranted. The permitting authority can then require collection of the necessary data to correctly apply the BLM. In fact, this is the way the BLM is being implemented in many parts of the country – where data are needed, the state works with the discharger to collect the necessary information. There are concerns with this approach, namely the burden it could have on small municipalities that may not have the in-house analytical capability of larger utilities, but it is preferable to the imposition of the BLM using default values.

In summary, it is unclear why this document is needed. States and dischargers interested in using the BLM should collect the data necessary to use the model as it was originally intended – to provide a water quality objective that is more reflective of the site-specific conditions in a particular waterbody. NACWA is concerned about the reliance on default values for conducting the BLM. We suggest EPA provide more direct guidance on the limit of using defaults, and specifically note that use of default values for DOC and pH is inappropriate, especially when it has permitting consequences. Ultimately, EPA and permitting agencies must work to find ways to collect adequate data for use of the BLM.

Thank you for the opportunity to comment on the Draft TSD. Please contact me at chornback@nacwa.org or 202/833-9106 should you wish to discuss these comments further.

Sincerely,



Chris Hornback
Chief Technical Officer