



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

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### **REGULATORY ADVISORY PANEL MEETING SUMMARY** **Bacteria, Ammonia, Human Health and Aquatic Life Criteria** **March 23, 2016 10:00 – 12:00**

#### **Welcome and Introductions**

##### **Advisory Panel Members and Alternates Present:**

**Chesapeake Bay Foundation:** Joe Wood

**Dominion Power:** Oula Shehab-Dandan

**James River Association:** Jamie Brunkow

**VA Chamber of Commerce Natural Resources Committee/Smithfield Foods:** Clayton Walton

**US EPA:** Cheryl Atkinson, EPA Region 3 (by conference phone)

**VA Association of Municipal Wastewater Agencies (VAMWA):** Dick Sedgley & Jamie Heisig-Mitchell

**VA Manufacturer's Association/VA Mining Issues Group:** Brooks Smith, Andrew Parker

**Water Environment Federation:** Chris French

**US Fish & Wildlife Service:** Susan Lingenfelter

**VA Dept. Conservation & Recreation:** Rene Hypes

**VA Dept. Game & Inland Fisheries:** Ernie Aschenbach

**VA Dept. Of Health:** Margaret Smigo

##### **DEQ Staff Present:**

John Kennedy (Facilitator), Alex Barron, David Whitehurst, Allan Brockenbrough, Mark Richards, Craig Lott, Matt Richardson, Charlie Lunsford

##### **Other:**

Serena Ciparis – VA Tech, presenter

John Kennedy, Office of Ecology director, began the meeting with introductions of Regulatory Advisory Panel (RAP) members and meeting attendees. He then informed the group of the current status of the recent Triennial Review rulemaking from which the remaining issues that were not adopted by the State Water Control Board (SWCB) form the basis of this current rulemaking. It was also noted that all issues to potentially be addressed by this rulemaking were

covered in the Notice Of Intended Regulatory Action (NOIRA) for Triennial Review and it was unnecessary to issue a new NOIRA prior to proposal development.

## **ISSUES**

Mr. Kennedy told the panel there are 3 issues that must be addressed: updating bacteria criteria to protect recreational uses, freshwater ammonia criteria, and most all criteria for toxics parameters for the protection of human health (94). The ‘must address’ issues are all due to EPA updates of nationally recommended criteria.

Two other issues that may be addressed during this rulemaking are possible revisions to the cadmium and selenium aquatic life criteria for freshwater. Inclusion of these issues is dependent upon whether EPA publishes final nationally recommended criteria in time for consideration by the RAP.

Mr. Kennedy informed the RAP that the federal BEACH Act requires States with coastal recreation waters to adopt new or revised criteria and standards to protect recreation uses no later than 36 months after publication by EPA. New bacteria criteria were published by EPA October 2012. There was a brief of discussion of how Virginia might implement and apply the new criteria in the state. The bacteria criteria will be more fully addressed at a future meeting.

Mr. Kennedy then summarized the situation regarding the freshwater ammonia criteria EPA published in 2013. The nationally recommended criteria are more stringent than VA’s current criteria because of inclusion of very sensitive species (mussels) in the toxicity calculations. He reminded the panel that application would likely be statewide due to widespread and ubiquitous presence of freshwater mussels. He then reiterated some of the common, overarching concerns expressed during the Triennial Review rulemaking when the issue was first addressed. Those concerns included: implementation costs for additional wastewater treatment (particularly for smaller facilities), compliance issues (especially schedules for plant upgrades), and need for coordination of more stringent ammonia discharge limits with current and/or future nutrient limits.

A presentation was then given by Serena Ciparis, a Virginia Tech postdoctoral associate that presented the findings of a joint study between VT and US Fish & Wildlife Service that assessed the effects of wastewater treatment plant effluent on freshwater mussels in the Clinch/Powell River watersheds. The information she presented focused on ammonia concentrations above and below several facilities’ discharges and their potential effect on mussels. Conclusions of the study indicate that:

- High ammonia concentrations do not appear to be a universal problem in the Clinch-Powell system (limited sampling).
- Loadings from ‘problematic’ WWTPs may be an issue further downstream.
- Similar situations are likely in other basins.
- Nitrification may occur from the pipe to the receiving stream and that may be dependent on type of outfall (rock cascade at outfall, cement tunnel).

Mr. Kennedy informed the group that EPA published updated human health criteria for 94 pollutants on June 29, 2015. The list included the 8 parameters under consideration during

Triennial Review. Criteria changes are due to updated fish consumption rate, human body weight, drinking water intake, health toxicity values, bioaccumulation factors, and relative source contributions. Some values increased; some decreased.

He then told the panel that EPA gave notification in November 2015 of pending update to nationally recommended cadmium (Cd) criteria and that proposed Triennial Review amendments were withdrawn from the rulemaking to avoid confusion and the potential of adoption of aquatic life criteria more restrictive than pending EPA recommendations. If final Cd criteria are released in time for proposal development, they would be included in this rulemaking. A similar situation exists for selenium (Se) for which draft criteria were published in July 2015.

## **DISCUSSION**

The majority of discussion was centered on ammonia criteria and ways to implement the criteria and minimize negative impacts to wastewater treatment facilities. Suggestions ranged from changes to the permit regulation to allow for longer compliance schedules to increased use of economic variances particularly for smaller treatment facilities. EPA indicated their willingness to work with VA if that is an option the state wishes to pursue. It was also suggested that the reasonable potential to discharge determination utilize a default pH lower than 9.

EPA asked if VA would possibly consider including the draft cadmium and selenium criteria in the proposed rulemaking prior to final EPA publication with the option of pulling the issue should the final criteria be markedly different than the draft. DEQ responded that is worth consideration.

Staff agreed to distribute a summary of the meeting to the group prior to the next meeting and provide tentative proposed language for some portion of the issues. The RAP was also informed that all presentations, summaries, and pertinent ancillary information would be made available on the DEQ Water Quality Standards web page:

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityStandards/RulemakingInfo.aspx>

Panel members agreed that a minimum of 2 additional meetings would be necessary.

### **Handouts distributed at the December meeting:**

Agenda

Copies of slides from staff presentations

Freshwater Ammonia Criteria Fact Sheet (EPA 2013)

WQS regulation suggested ammonia criteria implementation & variance language (VAMWA)

Human health ambient water quality criteria 2015 update fact sheet (EPA 2015)

Comparison of updated human health criteria and previous criteria