47 CSR 2. REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
RESPONSE TO COMMENTS
2014 Triennial Review

On June 14, 2013, the Division of Water & Waste Management (DWWM) commenced a forty-five day public comment period and subsequently held a public hearing on July 15, 2013 to accept oral comments on proposed revisions associated with the Clean Water Act required review of state water quality standards, also referred to as the "Triennial Review". The state of WV water quality standards can be found in the "Rule Governing Water Quality Standards 47CSR2" ("Rule") and DWWM proposed the following revisions (summarized):

2.2. and 2.2.1. Revision to "Cool water lakes" definition/addition of "Warm water lakes" definition.

7.2.d.8.1. Cat A Use removal, UNT Daugherty Run and Fly Ash Run.

7.2.d.19.3. Variance removal, Ward Hollow of Davis Creek.

7.2.d.29.1. Zinc site specific, Marr Branch.

8.3.a.2. Lakes nutrient criteria, finalizing language.

8.1. Aluminum, Aquatic Life Use. Revise to hardness based approach.

8.6. Beryllium, Human Health. Revise to the EPA recommended criteria.

8.12.1. Dissolved Oxygen - Removal of Kanawha River main stem, Zone 1.

8.13 and 8.13.1. Recreational criteria (Fecal coliform to E. coli).

8.29.2. Removal, River specific temperature criteria.

DWWM accepted oral comments at the hearing, and written comments through July 29, 2013. Twenty-two commenters submitted written comments regarding the proposed revisions and five commenters provided verbal comments. No comments were received after the submission deadline. DWWM addresses both the written and oral comments below.

Written Comments (submitted via email or mail)

1. COMMENTERS: Patrick Gabbert, Bonni McKeown, Robert A. Mertz, Sara Wilts, Debbie Jarrell, Kathryn A. Stone, Hedda Haning, John Doyle, and Leigh Anne Keener

COMMENT A: *Dissolved Aluminum Criteria*

The above listed commenters submitted similar comments, all of which opposed the revision to the dissolved aluminum criteria. All stated that the revision would not protect the designated use of WV streams per Clean Water Act Requirements; we (DEP) need to protect the values of WV's water resources; and protect the public's interest and not the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat waste. Some also stated the revision was based on minimal scientific justification and flawed scientific analysis, the revision would allow greater than a 13-fold and 46-fold increase over the current criteria for acute and chronic aluminum toxicity to aquatic life respectively, and would weaken the standard as it pertains to trout waters.

RESPONSE A: Since the release of the current recommended ambient water quality criteria for aluminum in 1988, several acute and chronic aluminum toxicity studies have been published in the scientific literature. These toxicity studies meet the EPA guidelines for ambient water quality criteria development and also result in additional data being available for deriving an aluminum acute-chronic

ratio. These studies also present evidence that a scientifically defensible relationship exists between the stream hardness concentration and the toxicity of dissolved aluminum in waters within a pH range of greater-than or equal to 6.5 to less-than or equal to 9.0. As stated in some of the comments, this revision will lead to higher aquatic life criteria in some environments, yet in low hardness streams the criteria will actually tighten. The information and data presented in these studies has been vetted and approved by EPA. With respect to trout water protection, in the analysis of the initial approach, the DWWM requested that the applicant utilize the toxicity study completed by Cleveland, Little, Wiedmeyer and Buckler (1989), which included toxicity studies on brook trout, and this study was included in the calculation of the final equation to ensure that this approach took into account native trout species and would be protective in B2 Trout designated waters. As is done for numerous other metal(s) criteria such as zinc, expressing the aluminum criteria on the basis of a hardness equation, rather than as a single fixed value, is an acceptable and scientifically defensible approach.

2. COMMENTER: Larry B Dadisman

COMMENT A: *Withdrawal of Water Quality Standards Rule*

The commenter requests DWWM withdrawal the Rule due to it will harm public and stream health, and also raises concerns pertaining to water quality pollution.

RESPONSE A: These comments do not pertain to any proposed revisions and at this time DWWM plans to move forward with the water quality standards rule making effort. Thank you for your comments.

3. COMMENTER: Bradley Comer

COMMENT A: *Various comments on DWWM priorities and water supply.*

RESPONSE A: The comments do not pertain to any proposed revisions but thank you for the comments.

4. COMMENTER: Brian D. Bailey

COMMENT A: *Indeno (1,2,3-cd) Pyrene*

The commenter recommended a spelling correction to Indeno (1,2,3-cd) Pyrene which is misspelled in Appendix E of the currently effective water quality standards rule.

RESPONSE A: DWWM agrees with the comment and will make the correction.

5. COMMENTER: John and Petra Wood

COMMENT A: *Dissolved Aluminum Criteria*

Commenter disagrees with DEP's claim that revised aluminum criteria are necessary to prevent substantial harm to the public interest. Their opinion is that the proposed changes are in the private interest of industry polluters and will result in problems down the road that WV taxpayers will have to assume.

RESPONSE A: Please see the response to 1.A

COMMENT B: *Dissolved Aluminum Criteria/Water-Effect Ratios (WER)*

Commenter states that simply basing a dissolved aluminum aquatic life criterion on an equation derived from water hardness is not the same as applying a Water-Effect Ratio. In the public interest, any proposed changes to the criteria would need to clearly state in 47CSR2 how and when Water-Effect Ratios would be applied to the proposed aluminum WQS criteria.

RESPONSE B: The commenter is correct in noting the difference between the water quality criteria and WER. The WER is a tool that is allowed under the Clean Water Act to help in the development of modifications to water quality standards, such as the dissolved aluminum criteria. Modifications to state water quality standards are outlined in section 8.5 of the water quality standards rule. Per the comment regarding the use of dissolved versus total for the aluminum standard, it is the policy of the EPA Office of Water that the use of dissolved metal to set and measure compliance with water quality standards is the recommended approach, because dissolved metal more closely approximates the bioavailable fraction of metal in the water column than total recoverable metal. This conclusion regarding metals bioavailability is supported by a majority of the scientific community within and outside EPA. It should also be noted that the current aluminum water quality criteria are listed in the dissolved form.

COMMENT C: *Dissolved Aluminum Criteria/Scientific Studies*

Commenter suggests that the DEP's claim that numerous scientific studies have validated the impact of hardness to the aquatic community is misleading. Most studies on the biological toxicity of dissolved aluminum have been confined to trout/salmon species at a pH <6.5. Commenter suggests that impairment due to dissolved aluminum concentrations can occur in neutral to basic (pH 6.5-9.0) Appalachian streams. Commenter also implores DEP to provide the public and

the state legislature with a list of the numerous scientific studies referred to in the justification.

RESPONSE C: All of these studies have been reviewed by DWWM and approved by EPA and meet federal guidelines for use in the development of this approach. Waters with a pH of less than 6.5 are below the acceptable pH range identified by EPA, and such waters favor the dissolution of aluminum into more bioavailable monomeric and ionic forms. Consistent with EPA's existing criteria for aluminum, the updated aluminum criteria only considered toxicity studies conducted with in the pH range of 6.5 and 9.0 and is reflected in the proposed criteria where the hardness based equation can only be utilized in waters where pH is within this 6.5 to 9.0 range. All materials are available upon request.

COMMENT D: *Dissolved Aluminum Criteria/pH/Public Interest*

Commenter believes that although the proposed criteria may avoid substantial economic harm to both the regulated community and the agency, they will not maintain the level of protection necessary for aquatic life and believes that the public interest would best be served if DEP withdraws the dissolved aluminum amendments from 47CSR2.

RESPONSE D: The revised aluminum standards are based on the protection of the aquatic life of West Virginia rivers and streams. This data is considered acceptable for updating the aluminum criteria, which will protect this use by tightening aluminum standards in low hardness waters as well as prevent overprotection in high hardness streams. At this time DWWM plans to move forward with the water quality standards rule making effort.

6. COMMENTER: Janet Keating (Ohio Valley Environmental Coalition)

COMMENT A: *Dissolved Aluminum Criteria*

The commenter expresses opposition to proposed changes to the rule, specifically the dissolved aluminum criteria revision. This opposition is based on the change to the hardness based approach, allowing significantly more pollution that would be toxic to aquatic life. The commenter also stated the revision would allow greater than a 13-fold and 46-fold increase over the current criteria. The commenter stated this revision would not protect the designated use of WV streams per Clean Water Act Requirements; we (DEP) need to protect the values of WV's water resources; and protect the public's interest and not the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat waste.

RESPONSE A: Please see the response to 1.A.

COMMENT B: *Protection of state water resources*

The commenter makes references to the significance of the state of West Virginias water resources, and the scarcity other states are facing due to long term droughts. Supporting evidence is also presented pertaining to public opinion on drinking water protections and a reference is made to the DWWM mission statement.

RESPONSE B: Thank you for the comment and the references to the public opinion survey. We agree that the protection of the state's water resources is a priority and as stated in the comment this is included in the DWWM mission statement.

7. COMMENTER: Angela Rosser (West Virginia Rivers Coalition)

COMMENT A: *Section 47-2-5: Mixing Zones*

Commenter states that mixing zones are not appropriate for relaxing discharge limits when data indicates that a waterbody lacks the assimilative capacity for a bioaccumulative pollutant, such as selenium. Commenter strongly suggests that DEP apply these provisions in a manner consistent with the purposes of the federal Clean Water Act.

RESPONSE A: This comment on mixing zones does not pertain to any proposed revision but we thank you for the comment. It should be noted that the DWWM permitting section follows federal and EPA approved state guidelines which are outlined in 47CSR2 and 47CSR10. The state of West Virginia has stricter mixing zone requirements than what is allowed in the federal guidelines and it should also be noted that all mixing zones included in permits are approved by EPA.

COMMENT B: *Section 7.2.d.19.3: Removal of site-specific criteria for Ward Hollow of Davis Creek*

Commenter fully supports removal of this variance.

RESPONSE B: Thank you.

COMMENT C: *Section 7.2.d.29.1: Additions of site-specific zinc criteria for Marr Branch*

Commenter has general concerns about adding a site specific zinc criterion and encourages long-term solutions be sought to find effective ways to treat water without the use of zinc.

RESPONSE C: Thank you for the comment, and we acknowledge the concern and it should be noted that the treatment efforts in this location will not stop due to this revision. The permittee is still required to meet this and other water quality standards.

COMMENT D: *Section 8.3.a.2: Criteria for Nutrients-Lakes*

Commenter supports the changes to the nutrient criteria for lakes and would like for WVDEP to consider nutrient criteria for streams. Under the Federal Clean Water Act, West Virginia has an obligation not to contribute to degradation of its downstream neighbors. Commenter urges DEP to reconvene the Nutrient Committee and move the criteria-setting process for rivers and streams forward as expeditiously as possible.

RESPONSE D: Thank you for the comment, and we continue to work on nutrient criteria for streams and rivers. At this time we do not plan on reconvening the nutrient committee but we may consider this action moving forward.

COMMENT E: *Dissolved Aluminum Criteria*

The commenter strongly opposes WVDEP's proposed revisions to the aluminum water quality criteria. The commenter believes the proposed rule change will significantly weaken the aluminum criteria and WVDEP lacks the sufficient information to promulgate hardness based aluminum criteria. The commenter feels aluminum toxicity is complex and WVDEP has not considered any of the complex interactions affecting aluminum toxicity. Also, the standards of Colorado and New Mexico are based on total recoverable aluminum while the agency's proposed aluminum standard is based on dissolved aluminum only making the Colorado and New Mexico criteria more stringent. The commenter believes WVDEP must abandon the flawed aluminum criteria.

RESPONSE E: Thank you for the comments, please see the responses to comment 1.A and comment 5.

COMMENT F: *Appendix E Table 1 Section 8.13: Revision from Fecal Coliform to E. coli*

Commenter supports revision to E. coli but is concerned with how the transition will be handled. Commenter feels that the old and new bacterial criteria should run concurrently until WVDEP has adequately collected E. coli data on WV streams. Specifically, all streams listed as impaired by fecal coliform should remain on the 303(d) list, unless new E. coli data are collected that specifically contradict the existing impairment. This transition process should be explicitly stated in the water quality standards. Commenter also has serious concerns over the daily maximum criterion of 1074 cfu/100 ml in the proposed revision, fearing that since WVDEP rarely collects bacteria samples more than once per month, the proposed daily value will likely become the default criterion. This would result in criteria less stringent than the existing criteria. Commenter feels that the proposed daily maximum criterion should be dropped and the proposed 410 cfu/100 ml should become the maximum not to be exceeded. The commenter feels that the added daily provision to the rule is confusing and could be interpreted as a weakening of the current bacteria standard.

RESPONSE F: Thank you for the comments and at this time we have decided to remove the proposed revision to replace fecal coliform with E. coli for the state recreational criteria. This decision was based on some of the concerns raised in this comment, including the concern per the status of the transition period. Prior to proposing this revision, West Virginia and many other states requested guidance from the United States Environmental Protection Agency ("EPA") on numerous

issues including how the implementation of the new criteria would impact assessment efforts and unfortunately that was not provided. Without this guidance we believe that it is not prudent to move forward with this revision until that information has been provided.

COMMENT G: *Appendix E Table 1 Section 8: Total Dissolved Solids and Conductivity*

The Commenter states that the triennial review fails to update West Virginia's water quality parameters to include numeric standards for TDS and Conductivity. Commenter recommends that the TDS standard be set at 250mg/l, which is the USEPA recommend Human Health criterion. In addition, commenter believes it is imperative that DEP proposed and finalized an aquatic life criterion for conductivity that is consistent with the recent series of peer-reviewed scientific analyses that link high conductivity with harm to aquatic life. USEPA published a draft report that derived a conductivity benchmark of 300 uS/cm in 2010. Conductivity levels of 300 uS/cm and greater harm aquatic life and create conditions that violate West Virginia's prohibition against discharging materials in concentrations that are harmful to aquatic life in state waters. The commenter therefore feels that an enforceable water quality criterion for conductivity is necessary to meet this basic requirement.

RESPONSE G: This comment on total dissolved solids and conductivity does not pertain to any proposed revision but we thank you for the comment. We will continue to review and update state water quality standards and may consider these comments in future triennial reviews.

8. COMMENTER: Brent Walls (Potomac River Keeper)

COMMENT A: *Narrative Criteria – Section 47-2-3: Conditions Not Allowable in State Waters*

Commenter states that paragraph 3.2 reads as if these criteria apply only where "sewage, industrial wastes or other wastes present in any of the waters of the state "cause or materially contribute to" the undesirable conditions proscribed in subparagraphs 3.2.a.-3.2.i. The commenter feels that these criteria do not apply to all designated uses at all flows as stated in section 303(c)(2)(A) of the Clean Water Act. Commenter suggests revising the WQS Rule to clearly require that the conditions listed in 3.2 are prohibited in state waters, without regard to their causes. In addition to clarifying the narrative criteria, the commenter suggests that the State adopt an implementation plan to ensure that the criteria will be applied faithfully and effectively. The commenter is concerned that some waters in the Potomac watershed and elsewhere are impaired by nutrient-driven algal blooms and other related pollution problems and note that permit limits have not been effectively and uniformly implemented. They suggest that DEP develop reliable and well-supported procedures for developing nutrient limits based on narrative criteria, pointing to the failure of the DEP to obtain a favorable ruling in the case Mandirola v. White Sulphur Springs. Another area of concern for the commenter is mountaintop removal coal mining, the need to update current implementation procedures as it pertains to the narrative statement.

RESPONSE A: This comment on the narrative statement does not pertain to any proposed revision but we thank you for the comment, and we may consider this comment and revisions in future triennial review efforts.

COMMENT B: *Section 47-2-4. Antidegradation Policy*

Commenter suggests that the implementation of this policy is extremely deficient in numerous ways, as explained below, and that EPA can and should review the policy during the Triennial Review period.

Trigger for Antidegradation Reviews: Commenter feels that each permitted activity should be reviewed for antidegradation, whether covered by a new or existing permit and regardless of any explicit proposal to "expand" the discharge.

Existing Uses: Commenter states that under the Rule, the State claims authority to exclude uses it deems merely "incidental" but such a limitation on existing uses is not legally supportable.

Significant or De minimis Water Quality Impacts: Commenter feels that the 10% de minimis value in the antidegradation policy is not supported by federal law and, in any case, the application of the type of general rule described here is arbitrary and technically insupportable.

Commenter states that DEP fails to even acknowledge such factors as bioaccumulation, bioconcentration, synergistic or additive effects, carcinogenicity, or many other pertinent technical factors, and thus, its establishment of the significance threshold in the antidegradation implementation procedures is arbitrary and capricious. Also, DEP has failed to provide antidegradation protections in other instances, particular those relating to mining activities. Another area in which the commenter feels antidegradation is almost completely disregarded is in relation to "general" NPDES discharge permits such as the construction stormwater general permit, which does not include any water quality based controls that could be said to uphold all numeric and narrative criteria, let alone the antidegradation policy.

RESPONSE B: This comment on anti-degradation does not pertain to any proposed revision but we thank you for the comment, and we may consider this comment and revisions in future triennial review efforts. It should also be noted that the federal government is revising the federal water quality standards rule and some revisions to the state procedures may be completed once that effort is finalized.

COMMENT C: *Section 47-2-2.1: Definition of "Point Source"*

Commenter states that the definition of "point source" in the proposed rule varies from the federal definition, and that the terms "concentrated animal feeding operation" and "landfill leachate collection system" should be added.

RESPONSE C: This comment on the definition of "Point Source" does not pertain to any proposed revision. At this time the definition is adequate but we may review this topic in future triennial review efforts.

COMMENT D: *Appendix E, Table 1 item 8.33.1: Exemption from Turbidity Criterion*

Commenter feels that the BMP exemption from turbidity requirements is unwise, conflicts with federal regulations, and should be eliminated for two reasons: 1) The treatment provided for any discharge should be required to meet the same water quality based effluent limits as those applied to all other discharges and should reflect a waterbody's ability to assimilate wastes, not differences in the activities producing the pollution and 2) Water quality based limits in permits are to be written to meet certain criteria under critical conditions of stream flow. Under technology-based limits, BMP's are allowed to perform less efficiently under the highest flows in storm events, but this is not allowed when limits are water quality based. The discharges cited in 8.33.1 should be required to maintain

the same criteria as all other point source discharges to ensure protection is provided under critical conditions.

RESPONSE D: This comment on the turbidity criteria does not pertain to any proposed revision. We may review this comment in future triennial review efforts.

10. COMMENTER: Paul Calamita (West Virginia Municipal Water Quality Association)

COMMENT A: *Section 5.2.h.4 – No Mixing Zones When IWC Exceeds 80%*

Commenter feels that mixing zones should be allowed when IWC exceeds 80% of the 7Q10 flow because the 7Q10 occurs very rarely (~ 2% of the time). Prohibiting a mixing zone for a discharge with an IWC >81% means that permit limits will be significantly overprotective at 7Q10 flows and extremely overprotective at higher flows. The State limitation should be revised to 95% IWC instead of the current 80%.

RESPONSE A: This comment on the mixing zone regulations does not pertain to any proposed revision. At this time we believe the regulations for mixing zones are appropriate and protective of designated uses at all flow conditions.

COMMENT B: *Section 6.2: Category A*

Commenter objects to the DEP's application of Category A criteria to all waters, stating that the policy is technically and legally incorrect and not supported by State statute. They recommend that DEP reverse this policy and add the following to Section 6.2: "This category includes stream segments on which the following are located:"

RESPONSE B: This comment on application of Category A criteria does not pertain to any proposed revision. At this time we believe the application of Category A in state waters is appropriate and protective of drinking water. It should also be noted that tools are available to modify the designated use of a water body, as was conducted for the proposed revision to the removal of Category A use in Fly Ash Run and the UT of Daugherty Run.

COMMENT C*:* *Section 7.a.2: Half-Mile Rule*

Commenter urges the DEP to incorporate a waiver provision into the "half-mile" rule to avoid unnecessary regulation changes. The following language is suggested:

The one-half mile rule is not applicable to any stream segment upstream from the intake of a public water supply (Water Use Category A) if the affected water intake owner waives the benefit of the rule in a writing provided to the department. To remain effective, the waiver must be renewed by the downstream water intake owner for each permit renewal of an affected upstream discharger. Any waiver under this subsection may be revoked by the owner of an affected intake upon the provision of written notice to the department. Upon receipt of the notice of revocation, the department shall modify any upstream permit to impose requirements in accordance with the one-half mile zone requirement.

The commenter believes the intake owner should have the opportunity to waive the rule if they concur that the rule imposes an unnecessary hardship on the upstream discharger. This change will allow the half-mile rule to be tailored to apply where it is needed rather than having it apply to everyone.

RESPONSE C: This comment on the half mile rule does not pertain to any proposed revision. Thank you for the comment and we may review in future triennial review efforts.

COMMENT D*:* *Sections 7.b.2 and 8.2.b: Harmonic Mean Flow*

Commenter feels that the DEP should use Harmonic Mean Flow for human health and other long-term bioaccumulative pollutants of concern, including carcinogens. Commenter is not aware of any other state that applies the 7Q10 flow to all water quality criteria.

RESPONSE D: This comment on the request to use harmonic mean flow vs 7Q10 does not pertain to any proposed revision. Thank you for the comment and we may review in future triennial review efforts.

COMMENT E*:* *Sections 8.3.a.2 and 8.3.a.3: Nutrient Criteria for Lakes*

Commenter suggests that the DEP re-propose the criteria linking TP and chlorophyll a in a way that EPA could not partially veto. They mention that the State of Maine and others have done so to obtain EPA approval of similarly linked criteria.

RESPONSE E: Thank you for the comment and at this time we will be moving forward with the proposed revision to the lakes criteria. We have worked diligently with staff from EPA to resolve the past issues with the proposed (and un-approved) portion of the lakes nutrient criteria, and believe that we can resolve any issues in the assessment and listing process. We have reviewed the efforts that Maine has put forth and do not believe we have the data or resources to take a similar approach to lakes criteria and assessment protocols.

COMMENT F: *Sections 8.1.1 and 8.1.2: Hardness-Based Chronic Aluminum Criteria*

Commenter suggests that the DEP use a maximum hardness level of 400 mg/l instead of 220 mg/l in its revised aluminum criteria.

RESPONSE F: The studies and data used to develop the hardness based equation did not use hardness greater than 220 mg/L and do not support using a greater level of hardness than what has been proposed.

COMMENT G: *Section 8.13: Change to E. coli*

Commenter is concerned about the proposal to establish a daily maximum value of 1074 cfu/100ml and urges the DEP to include the following footnote:

"1074 cfu/100ml will be the daily maximum imposed in permits for publicly-owned treatment works and this value cannot be exceeded in more than one percent of the samples taken over the permit term."

If the above cannot be granted, then the commenter wants the 10 percent exceedance provision allowed in the EPA criteria. The commenter states that this is a critical issue for the MWQA members.

RESPONSE G: Please see the response to 7.F.

COMMENT H: *Section 8.1.8.2: Methylmercury Water Column Criteria*

Commenter urges the DEP to include a footnote on this criterion which clarifies that it is an Annual Average water column number. Water column methylmercury is a long-term uptake issue such that annual average limits are technically and legally appropriate (and fully protective). Day-to-day variations in water column mercury levels are not significant to the long-term uptake levels.

RESPONSE H: This comment on the request to revise the methylmercury water column criteria does not pertain to any proposed revision. It should be noted that we along with ORSANCO and other states, continue to review the various issues surrounding mercury criteria and this may be considered in future triennial review efforts.

11. COMMENTER: David Yaussy (West Virginia Manufactures Association)

COMMENT A: *Aluminum*

Commenter supports the change in the aluminum standard to a hardness-based criterion.

RESPONSE A: Thank you.

COMMENT B: *Beryllium*

Commenter supports the changes in the beryllium standard that were made by the emergency rule. They point out that the current criterion of .0077 ug/l is below the lowest method detection limit. The only extant criterion appears to be the Safe Drinking Water Act MCL of 4 ug/l.

RESPONSE B: Thank you.

COMMENT C: *Selenium*

Commenter makes reference to the 2013 WV Legislature mandate that DEP develop selenium criteria for aquatic life after consultation with the regulated community. Commenter requests that they be included among those consulted during the future selenium criteria development process.

RESPONSE C: We will keep the WVMA in mind as that process moves forward.

COMMENT D: *Category A Use*

Commenter objects to the fact that the DEP applies the Category A use to all state waters, as if all streams in the state were public water supplies, and imposes permit conditions to protect the public water supply use where that use does not exist. Commenter indicates that the State has never formally designated all water bodies as public water supplies and that only Categories B and C automatically apply to all state surface waters. They point out that other states do not treat all streams as public water supplies. They also point out that it is a lengthy and expensive procedure to get the Category A use removed from a stream, which in many instances would not be required if the Category A did not apply automatically to all streams. Commenter also states that DEP's justification to preserve the future ability of a stream to serve as a potable water supply is unwarranted and that such a protection is already afforded by operation of the water quality standards. Should a public water supply be installed, Category A becomes an existing use and the public water supply criteria apply at that location. Commenter indicates that its proposed changes to not apply Category A statewide would provide relief to industry white not removing any protection from WV's citizens.

RESPONSE D: Please see the response to 10.B

12. COMMENTER: Rob Reash (American Electric Power)

COMMENT A: *Section 47-2-2: Definitions*

Commenter believes the definitions of cool water and warm water lakes are adequate.

RESPONSE A: Thank you.

COMMENT B: *Section 47-2-8, subsection 8.3: Criteria for Nutrients*

Commenter states that algal blooms can be very transitory and temporal due to weather and/or lake level conditions. Thus, the narrative criterion that prevents "algal blooms or concentrations of bacteria which may impair or interfere with the designated uses of the affected water" (subsection 3.2.g.) should be evaluated in light of the extent and duration of suspected algal and/or bacterial-caused water quality changes.

RESPONSE B: Thank you for the comment and we will consider this during the assessment and listing efforts.

COMMENT C: *Appendix E, Table 1: Numeric Water Quality Criteria*

Commenter supports the following revisions:

- New hardness-based aluminum criteria for aquatic life, stating that the existing criteria are overly protective and have resulted in the construction of waste water treatment units that provide little or no net environmental benefit concerning aluminum toxicity.

-Revised beryllium criterion for human health, stating that the existing criterion is overly protective, is less than known detection limits, and has resulted in permitting and water quality assessment difficulties.

- Replacement of fecal coliform human health criteria with E. coli criteria, as it reflects EPA's most recent assessment of allowable threshold levels.

RESPONSE C: Thank you for the comments and please see the response to the response to 7.F as it pertains to the fecal coliform to E. coli revision.

13. COMMENTER: Jason Bostic (West Virginia Coal Association)

COMMENT A: *Aluminum Criteria*

Commenter supports DEP's efforts to adopt a hardness-based standard for aluminum to better protect aquatic life and simplify NPDES compliance with the aluminum criteria. Commenter feels that many streams in the past have been listed as impaired and targeted for TMDL's based on a flawed standard. They point out that other states such as New Mexico and Colorado have adopted similar hardness-based aluminum criteria.

RESPONSE A: Thank you.

COMMENT B: *Beryllium Criteria*

Commenter supports DEP's efforts to adopt the beryllium MCL of 0.004 mg/l for Category A. They point out that the current criterion for beryllium, 0.0077 ug/l, is nearly three orders of magnitude below the EPA recommended standard. The old criterion was adopted a full year after EPA adopted the beryllium criterion that remains the national recommended criterion to this day. Commenter feels that WV's current beryllium criterion was not based upon the best available science in 1993, and remains scientifically unjustifiable.

RESPONSE B: Thank you.

14. COMMENTER: Tom Boggs (West Virginia Chamber of Commerce)

COMMENT A: *Aluminum and Beryllium*

Commenter applauds the agency's work in developing revised criteria for these parameters. Urges the agency to continue to carefully examine other water quality standards and policies to ensure they are scientifically justified and strike an appropriate balance between environmental protection and fostering a healthy economy.

RESPONSE A: Thank you.

COMMENT B: *Category A*

Commenter is disappointed that the DEP is not applying the Category A use designations in accordance with the existing statutory and regulatory framework, as urged by the Chamber in its letter dated October 12, 2012. The commenter feels that DEP is implementing by policy an interpretation of Category A that is not supported by existing regulation, and in doing so, has discouraged development and investment by imposing standards more stringent than those of surrounding states, thus placing WV at a competitive disadvantage when it attempts to attract new industry and investment.

RESPONSE B: Please see the response to 10.B

14. COMMENTER: Denise Hakowski (Environmental Protection Agency)

COMMENT A: *The commenter questions that after the deletion of the site specific criteria (for dissolved oxygen and temperature) and the variance (for chlorides) will general statewide criteria apply in those locations?*

RESPONSE A: Yes, general statewide criteria will apply at those sites. We will ensure that this information will be included in the final rationale package that is sent to EPA for approval.

COMMENT B: *The commenter requests that information be sent concerning the proposed revisions on Marr Branch and Daugherty Run. The commenter also states the information and rationale for the modifications must be based on sound scientific rationale and protects the designated use.*

RESPONSE B: We will provide all information pertaining to these modifications and can ensure that these modifications were based on sound science, followed proper procedures outlined in both state and federal policy, and protect the designated use of the streams. We also thank EPA for their assistance and initial review during the modification efforts.

COMMENT C: *The commenter supports the revision from fecal coliform to E. coli but requests removal of the minimal sample size language found in the criteria statement and further justification on the protectiveness of the proposed "daily value".*

RESPONSE C: Please see response to 7.F.

COMMENT D: *The commenter recommends that DEP review the State of Pennsylvania's sulfate criteria and consider for adoption in West Virginia.*

RESPONSE D: While this is not a comment pertaining to a proposed revision, we are aware of this downstream impairment and consider this in the permitting/NPDES process; if warranted permit limits can be imposed. Based on ambient sampling data collected by the WVDEP Watershed Assessment Branch

(WAB) the Monongahela river has been meeting the PA sulfate WQS limit since 2009.

COMMENT E: *The commenter offers support to continually study and update the proposed aluminum criteria and offers assistance in that effort.*

RESPONSE E: Thank you and we welcome that assistance.