Public Hearing Sign In Sheet

Proposed Rule 47CSR2

July 15, 2013 6 p.m. Charleston

The Department of Environmental Protection asks for the information below so that agency staff may provide responses and information about decisions to you. The information you voluntarily provide on this sheet becomes part of the public record related to this topic and may be released if requested under the Freedom of Information Act.

Name (please print)	Address	Organization	Phone/Fax	E-mail	Comment Yes/No
ANGIE ROSSER	PO Box 906 Elkins WV 26241	WV Rivers Coalition	304-637-7201	arosser@wvrivers.org	Yes
~~Rob~~ Goodwin	1573 Lee St East, Apt A Charleston, WV 25311	CRMW	304-712-9834	rob@crmw.org	yes
~~DON~~ GARVIN	PO Box 666 Buckhannon 26201	WVEC	304-395-0078	DSGJr@aol.com	Yes
~~Jason~~ Bostic	P.O. Box 3923 Charleston, WV 25339	WV Coal Association	304-342-4153	jboothe@wvcoal.com	Yes

Public Hearing Sign In Sheet

Proposed Rule 47CSR52

July 15, 2013 6 p.m. Charleston

The Department of Environmental Protection asks for the information below so that agency staff may provide responses and information about decisions to you. The information you voluntarily provide on this sheet becomes part of the public record related to this topic and may be released if requested under the Freedom of Information Act.

Name (please print)	Address	Organization	Phone/Fax	E-mail	Comment Yes/No
Robin Blakeman	P.O. Box 6753 Huntington WV 25773	OVEC	304 522 0296		Yes

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

ORIGINAL

PROPOSED RULE 47CSR2

REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

PUBLIC HEARING

MONDAY, JULY 15, 2013
6:10 P.M.

DEP
601 57TH STREET
CHARLESTON, WEST VIRGINIA

Deborah R. Booth
Certified Court Reporter
and Notary Public

MEEKS REPORTING, LLC

POST OFFICE BOX 1852, CHARLESTON, WV 25327 • (304) 342-4758 FAX (304) 342-4847

P R O C E E D I N G S

MS. COSCO: Well, good evening. My name is Kathy Cosco and I am with the Public Information Office. Welcome to the DEP and the public hearing on three of the Agency's proposed rules.

This evening we will be taking comments on changes to 60CSR3, the Voluntary Remediation and Redevelopment rule; 47CSR5A, Rules for Individual Certification of Activities Requiring a Federal Permit; and 47CSR2, Requirement Governing Water Quality Standards.

To make the most efficient use of our time we will open the hearing for comments on the first rule, and once everyone who wishes to speak about that rule has a chance to do so, we will close the hearing on that rule and immediately open the next hearing for the next rule.

We have three sign-in sheets in the back. I have already collected the first round, but if you would like to add your name I'll gather that up. But if you wish to speak about all three rules, we ask that you make sure your name is on each of the sign-in sheets. However, if you only wish to comment on one, your name only needs to be on that sign-in sheet.

The third and last rule that we will accept comments on this evening is 47CSR2, Requirements Governing

Water Quality Standards.

This rule was last amended during the 2011 Legislative Session, but some amendments are currently effective as an Emergency Rule. These proposed amendments are being run in accordance with the Clean Water Act's requirement that water quality standards be reviewed and revised triennially. Proposed changes include a statewide revision of the recreation criteria for bacteria, a revision to the aluminum standard as it pertains to the aquatic life use, a revision to the beryllium standard for human health, and finalizing nutrient criteria for lakes. Numerous site specific revisions are also included. The aluminum and beryllium revisions are currently effective as an Emergency Rule.

Please make sure you have signed in and indicated whether you are going to make a comment. If you have written comments with you, please provide them to me when you speak, or at the close of this hearing. Or you may submit them up until July 29th.

Okay. I have five people who are interested in speaking on this topic this evening. For time is five minutes fair? Does anybody need more than five minutes for their comments?

(No response.)

Well, we won't hold anybody hard to that. I will begin with Angie Rosser. If you'll step up and please share your comments with us.

MS. ROSSER: Thank you for the opportunity this evening to address the proposed rule. My name is Angie Rosser. I am the Executive Director of the West Virginia Rivers Coalition, a statewide nonprofit organization that since 1989 has been working toward the conservation and restoration of West Virginia's exceptional rivers and streams. We represent the interest of people who use and enjoy healthy, clean rivers as one of our state's most valuable resources and contributors to West Virginian's quality of life.

We will be submitting more extensive written comments on the rule, including support of some revisions that we think will help to improve and protect -- or protect water quality, but I wanted to take this opportunity to speak on two leading areas of concern with the rule, the proposed revision to the aluminum criteria and clarity that we believe is required around the proposed E. coli criterion, its application.

The West Virginia Rivers Coalition outright opposes the drastic weakening of the aluminum water quality criteria as set out in the proposed rule. There is no compelling

public interest argument of why this revision was fast tracked in the first place earlier this year as an Emergency Rule and why it is still under consideration now when there is no support for it by the available science. Aluminum toxicity is complex and currently not completely understood. The proposed rule assumes that within the pH range of most natural waters hardness is the only factor that affects the toxicity of aluminum, and this is seldom if, in fact, ever the case. So why would the West Virginia Department of Environmental Protection take this risk now? Why not wait until there is adequate scientific study dealing with aluminum toxicity toward aquatic life to make a responsible and informed recommendation, especially when the stakes are as high as the health of our water resources.

The proposed rule also presents circularity that perversely incentivizes pollution. Under the rule this aluminum standard becomes increasingly permissive as hardness increases. We know that total dissolved solids values, which includes those ions that contribute to hardness rapidly increase within a stream following the disturbance of its watershed due to such activities as surface mining. Thus the more aluminum that is released from a mined or quarried site the more aluminum that will be permitted to be discharged. This is a very dangerous setup for spiraling degradation of

the state's water resources and the provision of this rule that revises the aluminum criteria must be withdrawn at this time in order to protect the public interest.

The other section of the rule to address at this time relates to the rules proposal to transition from fecal chloroform to E. coli as the parameter for assessing bacteria harmful to human health. We support the move to E. coli, but have concerns about how the transition process will be handled, as well as how the new values would be interpreted and applied. There should be a transition period where both the old and the new bacteria criteria run concurrently until the West Virginia DEP has adequately collected E. coli data on West Virginia streams. Specifically, all streams listed as impaired based on the existing fecal criterion should remain on the 303(d) list unless new E. coli data are collected that specifically contradict the existing impairment. We ask that the -- We request the transition process be explicitly stated in the water quality standard or written in response to these comments.

Additionally, we have serious concern that in its application of a new daily maximum criterion included in the proposed revision the standard, in effect, will be actually less protective than what we have now. Understanding that when DEP collects fecal data it rarely does so more than once

a month during routine testing done under the watershed management framework. So it would be extremely rare, if ever, that there would be a monthly geometric mean based on five or more samples a month. It will be very rare that we'll get more than five or more samples a month to get the mean.

So, instead, the vast majority of the assessments will be based on a single sample, which raises the concern that the proposed daily value for E. coli, quote, "not to exceed a concentration level of 1,074 cfu's per hundred mil", is likely to become the default criterion. As this is written and will be applied this would result in a criteria less stringent than our existing criteria. So we contend that this daily maximum criterion should be dropped and the proposed 410 cfu's per hundred mil should be interpreted the same as the prior fecal criterion, meaning that a single sample greater than the 410 cfu's per hundred mil is an exceedance of the water quality standard as it would be equal to ten percent of the exceedance even if ten samples were taken in that month and nine of those samples were less than 410. The added daily value provision to the rule is confusing and hard to articulate and it could be interpreted and implied as a weakening of the current bacteria standard and should be removed.

Thank you for your consideration and response to these comments.

MS. COSCO: Thank you. The next person who signed up to speak is Rob Goodwin.

MR. GOODWIN: Good evening. I'm Rob Goodwin representing Coal River Mountain Watch here this evening and I just want to say that I wholeheartedly oppose this aluminum criteria change, in fact the whole rule in its entirety, request that DEP withdraw its, you know, application for this, you know, rule change and the suggestion that the Legislature should pass it.

These are a couple of reasons why. Well, the first reason why is that I think it comes back to what's needed to have an effective enforcement program in a environmental regulatory agency. To have an effective enforcement program you have to have actual penalties when people violate the law. And on top of having penalties you can't grant changes to a weakening of the rules every time there are complaints about compliance with the regulations. And so it seems to me what's happened here is that for years and years and years there are a bunch of companies that have been able to comply with the aluminum criteria and regulations in the state. So if one company can comply, I'm not sure why other companies, you know, can't, can't comply. And what this rule does is it

allows for instances well over ten times more aluminum to enter our streams in the state. And that right there I don't see has any benefit to -- you know, it's not benefit to anybody.

So I think DEP can maybe take a step in the right direction in a pathway towards gaining some more trust in the citizens and, you know, laying down the law and saying like, "These are the rules. We're not going to weaken them." Maybe you can say, "We're not going to strengthen them." I would actually be maybe okay with that. Let's just stick to the plain, you know, straight up Clean Water Act, everyone is on the same page here, treat the water, comply, penalize those that aren't complying. It will encourage -- It will encourage compliance. I think it's as simple as that.

Secondly, I think we need to be moving in the pathway to be removing pollution from streams in West Virginia rather than increasing pollution in the streams in West Virginia. And I say this because I believe that tourism, like marketing West Virginia as a place for tourism and a place to come and fish and a goal of having as many reproducing trout streams as we can in the state, the difference between a reproducing trout stream and just a trout stream which you stock -- you know, stock fish in. I believe that we can have reproducing trout streams. It will

increase tourism in the state and it really sets us forward on a pathway towards, you know, a better West Virginia, better for everybody, and, you know, that's my second point.

My third point is here that, you know, simply it's confusing. I mean, we want simple regulations. Why don't we just set -- I think just set a hard limit that says, "This is the amount of aluminum that, you know, is allowed to go through" -- you know, "go through a outlet in a permit and that's it." Why do we have to develop this crazy complicated formula based on hardness? You know, I think that it's just bogus. And with respect for those that are calling for simple, complex, reasonable regulations, this really doesn't strike into the category of very straightforward, simple, and reasonable. It involves a complex formula that I believe if you'll look at it you could maybe interpret it in a way that it would mean that there's an infinite amount of aluminum that is allowed to be entered into streams, because I think that in many instances as your aluminum increases your hardness can increase here, and it's like this crazy mathematical formula where you have a never ending, you know, limit that as the hardness goes up the aluminum goes up and it never ends.

And those are my comments for this evening and I encourage the withdrawal of this rule change. I don't think

it's necessary and benefits nobody.

MS. COSCO: Thank you. The next person signed up to speak is Don Garvin.

MR. GARVIN: Thank you. My name is Don Garvin. I am the Legislative Coordinator for the West Virginia Environmental Council. I have never gotten to do this at a public hearing, so I'm -- I have done it at plenty of public meetings as kind of a Clean Water Act primer. But the Environmental Council has -- will be joining in the group comments that Angie mentioned. We have a group of member organizations that will be submitting extensive written comments by the July 29th deadline.

The Federal Clean Water Act was passed in 1972. The objective of the Act is to restore and maintain the chemical, physical, and biological integrity of our nation's waters. The shorthand expression for this is fishable/swimmable. One of the goals of the Act was that 95 percent of our nation's waters would become fishable/swimmable by 1990. Well, that hasn't happened, hasn't even come close to happening.

The EPA has put special emphasis to protecting aquatic life through the Clean Water Act. I'm going to read from the River Network's "Clean Water Act Owner's Manual", which is very thorough. "The aquatic protection use is a

broad category requiring further explanation. Species that are in the water body and which are consistent with the designated use, in other words, not aberrational, must be protected, even if not prevalent in number or importance, nor can activity be allowed which would render the species unfit for maintaining the use." Think about that when you think about aluminum bio-accumulation in fish.

Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. Any lowering of water quality below this full level of production is not allowed. The fact that sport or commercial fish are not present doesn't mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants such as may be found in a pristine Alpine tributary to its system or stream should still be protected whether or not such a stream supports a fishery. Even though the shorthand expression fishable/swimmable is often used the actual objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

The term "aquatic life" would more accurately reflect the protection of the aquatic community that was intended in one section of the Act. I just want to point out

that it's our opinion that the proposed rule changes for aluminum do not protect aquatic life.

And in closing, West Virginia citizens want a DEP that is an advocate for clean water. We don't want a DEP that simply looks to see how far water quality can be degraded. Instead, we want a DEP that wants to look at ways to restore and maintain the chemical, physical, and biological integrity of our state's waters, and we're willing to sit down and work with DEP whenever they want to do that. Thank you.

MS. COSCO: Thank you. The next person is Jason Bostic.

MR. BOSTIC: Thank you again, Kathy. Jason Bostic with the West Virginia Coal Association. I appreciate, again, the opportunity to offer comments on the proposed revisions to the states Water Quality Standards rule. The Coal Association and its members fully support the revisions that are currently proposed to the standards as part of the proposed rule. Hardest based aluminum criteria will implement a more protective, more protective criteria for West Virginia's waters. I think it's also important to note that EPA has approved similar proposals in other states and in different EPA regions.

The beryllium standard change, which is also a part

of this rule package and part of the previous Emergency Rule simply seeks to replace a standard that has never existed anywhere within the federal regulatory structure or EPA with the current federal criteria, again, revising the standard to reflect the best available signs to protect state waters.

However, the Coal Association continues to be disappointed that the Agency has not addressed other areas of concern and impact to the state's waters and its regulatory community such as selenium and issues regarding Category A use designation. And the Association will be filing detailed written comments before the close of the comment period on the rule. Thank you.

MS. COSCO: Thank you, Jason. And our last speaker, unless somebody else has had a change of heart, is Robin Blakeman.

MS. BLAKEMAN: Good evening. I'm with OVEC, the Ohio Valley Environmental Coalition, and I will say that we will be submitting far more extensive comments than what I am going to say tonight, because I'm here as a substitute for one of my co-workers, Dustin White, who became ill over the weekend and wasn't able to make it in here today.

So I'm just going tonight to question kind of the ethics of this decision, especially the ethics of a decision to dump more pollutants into our water streams at this point

in time, at this point in time when thousands of West Virginia citizens stand to lose their insurance benefits because of Patriot's bankruptcy, thousands of West Virginia citizens who have worked for the coal industry for decades. Why are we even considering increasing the allowable amount of pollutants into our streams at this point in time? We should be working harder to provide clean water to these people and to make sure that they have everything they possibly can to stay as well as they can. If they lose their benefits, what do they have? The only thing they can depend on is clean water, fishable streams, and clean air to breathe.

I'll just mention a few of the health risks that come with increasing the aluminum standards. You probably know them, know much more about them than I do, but we're concerned about potential nerve damage to people, increased problems for people who already have kidney disease, and there's a whole lot of those in this state, the possibility that increased aluminum levels could become carcinogenic, correlations between aluminum and Alzheimer's. Think of the health costs that are going to increase in this state. And also there's a correlation between aluminum levels in water and osteomyalgia.

And so I would ask tonight that the West Virginia

DEP deny this rule change and work for the public interest, especially the public interest here and now in West Virginia when thousands of citizens may be standing to lose their hard fought, longstanding health benefits. Thank you.

MS. COSCO: Thank you. Okay. Is there no one else who wishes to speak?

(No response.)

MS. COSCO: Well, then, this concludes the public hearing for the proposed rule 47CSR2. The Agency will review all comments and prepare a written response which will be included when the file is -- when the rule is filed with the Secretary of State. And as I mentioned earlier, the comment period closes on July 29th.

This also concludes tonight's hearings. We thank you for your participation in the rule making process. We wish you to have a good evening and drive safely.

REPORTER'S CERTIFICATE

STATE OF WEST VIRGINIA

COUNTY OF KANAWHA, to-wit:

I, Deborah R. Booth, Notary Public and Certified Court Reporter, do hereby certify that the foregoing is a correct verbatim record of the proceedings had when this matter was called for hearing.

Given under my hand this 22nd day of July, 2013.

Deborah R. Booth, CCR
Notary Public

My commission expires January 26, 2014.

Larry B Dadisman
912 Greendale Dr.
Charleston, WV 25302-3224

July 14, 2013

Public Information Office
DEP Headquarters
601 57th Street, S.E.
Charleston, WV 25304
DEP.Comments@wv.gov

Re: Requirements Governing Water Quality Standards rule – 47CSR2 the Water Quality Standards rule

Dear PSC Officials,

The proposed rule must be withdrawn because it will harm public and stream health. Citizens of West Virginia deserve better care be taken of our environment and the concerns for aquatic life be offered better and new solutions than to sweep treatment of chemicals under the rug by dumping them into our waters.

Our waters suffer from degradation now just to enrich those living out of state who pollute causing further degradation. Filtering chemicals out of flow into streams would be the responsible solution, creating more jobs and not create the harm to our state waters. Using job creation to pollute is an exoneration unacceptable.

Common sense tells us not to use our bath tub to dump waste, then jump in to drink and bath, nor should we be treating the precious Holy drinking water needed for life to do the same. After destruction of our waters comes cost to our health, recreation, and cleanup the public will be stuck with for decades, a direction our state should not go. I for one have been threatened with disciple for missing work because of health problems. Who will pay these bills for citizen's unhealthiness and being be made sick?

A tax break given to correct this now would be a far better solution than the alternative. Please consider keeping our streams clear of pollution and our state in the right direction.

Sincerely,

Larry B Dadisman

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:29 PM
To: Coyne, Kevin R
Subject: FW: proposed changes to 47CSR2 - the Water Quality Standards rule

-----Original Message-----
From: Patrick Gabbert [mailto:Patrick@patrickgabbert.com]
Sent: Monday, July 08, 2013 7:59 PM
To: DEP Comments
Subject: proposed changes to 47CSR2 – the Water Quality Standards rule

Considering the danger that our whole water supply is in, this is no time to be relaxing the rules. This isn't just about business you know. People have to LIVE here!

The proposed revisions are drastic and equate to greater than a 13-fold and 46-fold increase over the current limits for acute and chronic aluminum toxicity to aquatic life respectively.

Citing only minimal scientific justification and flawed scientific analysis for these proposed changes, the rule changes as proposed fail to:
Protect the "designated use" of WV streams as required under the federal Clean Water Act.Protect the value of WV's unique and irreplaceable water resources. And to protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining
operations) who do not want to pay to treat their waste.

The proposed rule requires the calculation of aluminum limits based on the hardness (or pH) of the stream. The new equation in the rule would significantly weaken stream protections, as compared to the existing rule. As proposed, the rule would weaken the current criterion for trout waters at all hardness values. And, as hardness increases, the standard will become increasingly less stringent.

Do not sell out your fellow West Virginians. We ARE watching you.

Patrick Gabbert
HC 66 Box 284
Renick, WV 24966

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:29 PM
To: Coyne, Kevin R
Subject: FW: Don't change alumnium toxicity rule

From: Bonni McKeown [mailto:barrelhbonni@yahoo.com]
Sent: Monday, July 08, 2013 9:59 PM
To: DEP Comments
Subject: Don't change alumnium toxicity rule

The West Virginia Department of Environmental has proposed changes to 47CSR2 – the Water Quality Standards rule – which would allow significantly more pollution from the discharge of aluminum toxic to aquatic life in West Virginia rivers and streams.
The proposed revisions are drastic and equate to greater than a 13-fold and 46-fold increase over the current limits for acute and chronic aluminum toxicity to aquatic life respectively.
Citing only minimal scientific justification and flawed scientific analysis for these proposed changes, the rule changes as proposed fail to:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

The proposed rule requires the calculation of aluminum limits based on the hardness (or pH) of the stream. The new equation in the rule would significantly weaken stream protections, as compared to the existing rule. As proposed, the rule would weaken the current criterion for trout waters at all hardness values. And, as hardness increases, the standard will become increasingly less stringent.
While the changes in the proposed rule are technical and somewhat difficult to understand, our message is simple: **The proposed rule must be withdrawn.**

Sincerely, Bonni McKeown, 12 Arlington Ct., Charleston WV 25301

PRAY FOR PEACE
WORK FOR JUSTICE
BOOGIE FOR SURVIVAL

www.barrelhousebonni.com

Reconnecting generations through blues education: www.chicagoschoolofblues.com

The Story of a Chicago Blues Musician, co-authored with Larry Hill Taylor: www.stepsonoftheblues.com

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:29 PM
To: Coyne, Kevin R
Subject: FW: Water Quality Standards for Toxic Aluminum

From: Robert A. Mertz [mailto:ramertz@mountain.net]
Sent: Tuesday, July 09, 2013 6:52 AM
To: DEP Comments
Subject: Water Quality Standards for Toxic Aluminum

As a Biology, Wildlife Management and Environmental Earth Science teacher working in the public school systems of several states, for thirty one years, 29 in West Virginia, I have been teaching students as well as our two sons, the importance of a sustainable life style. I want them to learn to live within the ecological budget of Earth. The quality of life for the present and future generations depends on keeping the life sustaining diversity of our complex life systems healthy. Although there are some impressive self-maintaining dynamics at work to stabilize these systems, there are limits to their ability to correct for continued stress. The geological record is full of evidence showing sudden drastic upheavals and ecological disasters. We have no valid reason to believe that we humans with our huge powers to alter the climate and ecosystems will not trigger another watershed shift in the world's balance that will result in condition that renders the Earth unsuitable for human life, or that degrades the quality of our existence to a much lower level. It is our duty as the most powerful species to exist on this planet to use our might to protect the integrity of our life support systems for the benefit of all living things, to do anything else is the extreme in narrow minded, short sighted self indulgent stupidity.

I am apposed to proposed changes for the following reasons.

Citing only minimal scientific justification and flawed scientific analysis for these proposed changes, the rule changes as proposed fail to:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

The proposed rule requires the calculation of aluminum limits based on the hardness (or pH) of the stream. The new equation in the rule would significantly weaken stream protections, as compared to the existing rule. As proposed, the rule would weaken the

current criterion for trout waters at all hardness values. And, as hardness increases, the standard will become increasingly less stringent.

DEP stands for Department of Environmental Protection, perhaps you should strive to live up to that name instead of striving to protect the profits of coal industry.

Robert A. Mertz

1205 Mulberry Ridge

Spencer, WV 25276-8561

ramertz@mountain.net

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:29 PM
To: Coyne, Kevin R
Subject: FW: Written comments regarding the rule – 47CSR2

From: Sally Wilts [mailto:sallywilts@yahoo.com]
Sent: Tuesday, July 09, 2013 7:35 AM
To: DEP Comments
Subject: Written comments regarding the rule – 47CSR2

Dear sirs:

The proposed changes to the rules governing aluminum in streams will result in adverse conditions for aquatic life. There is no mystery about this as fish biologists have studied it for many years.

The proposed revisions are drastic and equate to greater than a 13-fold and 46-fold increase over the current limits for acute and chronic aluminum toxicity to aquatic life respectively.

Citing only minimal scientific justification and flawed scientific analysis for these proposed changes, the rule changes as proposed fail to:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

The proposed rule requires the calculation of aluminum limits based on the hardness (or pH) of the stream. The new equation in the rule would significantly weaken stream protections, as compared to the existing rule. As proposed, the rule would weaken the current criterion for trout waters at all hardness values. And, as hardness increases, the standard will become increasingly less stringent.

I am opposed to these rule changes.

Sara Wilts
PO Box 184
Bruceton Mills, WV 26525
304-379-7567

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:30 PM
To: Coyne, Kevin R
Subject: FW: West Virginia Department of Environmental Protection proposed changes to 47CSR2

From: debbie jarrell [mailto:debbiejarrell@gmail.com]
Sent: Monday, July 15, 2013 9:42 AM
To: DEP Comments
Subject: West Virginia Department of Environmental Protection proposed changes to 47CSR2

The West Virginia Department of Environmental has proposed changes to 47CSR2 – the Water Quality Standards rule – which would allow significantly more pollution from the discharge of aluminum toxic to aquatic life in West Virginia rivers and streams.
the rule changes as proposed fail to:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

I object to this change to 47CSR2.

Debra Jarrell
PO Box 49
Rock Creek, WV 25174

--
Debbie Jarrell
Co-Director
Coal River Mountain Watch

The outcome is the action as well as inaction of us all.
http://www.youtube.com/watch?feature=player_embedded&v=SLu4FyUQjsQ

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:30 PM
To: Coyne, Kevin R
Subject: FW: Water Quality Standards - Rule 47CSR2

From: xkatwalkx@aol.com [mailto:xkatwalkx@aol.com]
Sent: Monday, July 15, 2013 11:08 AM
To: DEP Comments
Subject: re: Water Quality Standards - Rule 47CSR2

I strongly oppose the proposed changes to 47CSR2, which would allow significantly more pollution from discharge of aluminum toxic waste to aquatic life in the rivers and streams of West Virginia. Such measures make a mockery of the department's name: **environmental protection**!

The rule changes fail to:

* protect the 'designated use' of WV streams as required under the federal Clean Water Act
* protect the value of our state's unique and irreplaceable water resources
* protect the public's interest rather than interests of a small number of polluters (chiefly coal mining operations) who do not want to pay to treat their waste

The proposed rule MUST be withdrawn. The very quality of our lives is at stake!

Kathryn A. Stone
26 Birch Tree Lane
Chas., WV 25314
Tel: (304) 342-1161
E-Mail: xkatwalkx@aol.com

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:30 PM
To: Coyne, Kevin R
Subject: FW: Protect Our Water

From: Hedda Haning [mailto:hedda.l.haning@gmail.com]
Sent: Monday, July 15, 2013 2:04 PM
To: DEP Comments
Subject: Protect Our Water

I am sorry a conflict prevents me from coming to the hearing tonight on water standards. Please remember that water is West Virginia's most important resource. We must protect. Your hearing must accomplish that we:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

Do not under any circumstances accept anything less.

Thank you,

Hedda Haning
Charleston 25314
304-344-0472

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:30 PM
To: Coyne, Kevin R
Subject: FW: Public comment re: proposed changes to 47CSR2

From: John Doyle [mailto:jdoyle952@gmail.com]
Sent: Monday, July 15, 2013 5:25 PM
To: DEP Comments
Subject: Public comment re: proposed changes to 47CSR2

Dear WV Dept. of Environmental Protection:

I submit to you that the currently proposed revisions to 47CSR2 are drastic and equate to greater than a 13-fold and 46-fold increase over the current limits for acute and chronic aluminum toxicity to aquatic life respectively.

The rule changes as proposed fail to:

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

It is my understanding that the proposed rule requires the calculation of aluminum limits based on the hardness (or pH) of the stream. Thus, the new equation in the rule would significantly weaken stream protections, as compared to the existing rule. As proposed, the rule would weaken the current criterion for trout waters at all hardness values. And, as hardness increases, the standard will become increasingly less stringent.

My message to you is simple: **The proposed rule must be withdrawn.**

Thank You for all the things you do to protect and preserve the living environment of our state, for us, for wildlife, for future generations and for our friends downstream.

Sincerely,

John Doyle 1527 Hampton Rd.

Charleston, WV 25314-1656

Phone: 304-345-6096

Coyne, Kevin R

From: DEP Comments
Sent: Wednesday, July 17, 2013 6:49 AM
To: Coyne, Kevin R; Campbell, Patrick V; Cosco, Kathy; Mandirola, Scott G
Subject: FW:

From: lakeener@frontier.com [mailto:lakeener@frontier.com]
Sent: Tuesday, July 16, 2013 11:39 PM
To: DEP Comments
Subject:

Dear WV DEP,

Please.....

1. Protect the "designated use" of WV streams as required under the federal Clean Water Act.
2. Protect the value of WV's unique and irreplaceable water resources.
3. Protect the public's interest, rather than the interests of a small number of polluters (primarily coal mining operations) who do not want to pay to treat their waste.

Thank You,
Leigh Anne Keener
Morgantown WV

Coyne, Kevin R

From: DEP Comments
Sent: Tuesday, July 16, 2013 4:29 PM
To: Coyne, Kevin R
Subject: FW: Clean water Protection

From: bradley cromer [mailto:bcromer42@gmail.com]
Sent: Wednesday, July 10, 2013 8:10 AM
To: DEP Comments
Subject: Clean water Protection

Dear WVDEP,,, Please put Water at the Top and not after Pollution.....???? Natural Gas is Poisoning Our Water Supplies.... I hope you Guys sleep well,, because We don't, We just wait for Cancer Diagnosis.... Why are you guys letting this happen on ypur watch??? Ou children's Water Supply is also in your hand...while it last.... Protecting out of state companies is all you are doing... The Birthplace of Rivers, Now the Birthplace of BTEX..... yummy..... great job...

Coyne, Kevin R

From: Bailey, Brian D
Sent: Wednesday, July 17, 2013 4:04 PM
To: Coyne, Kevin R
Subject: Mis-spelling in WQS - Indeno (1,2,3-cd) Pyrene

Kevin,

We were doing some work and noticed that Indeno (1,2,3-cd) Pyrene is mis-spelled (as Ideno) on Page 41.

Figured I would give you a heads up.

Brian Bailey
WV DEP
DWWM-Permitting
601 57th St S E
Charleston, WV 25304
Phone: 304-926-0499 ext. 1021
Fax: 304-926-0496

Coyne, Kevin R

From: DEP Comments
Sent: Wednesday, July 24, 2013 11:25 AM
To: Coyne, Kevin R
Subject: FW: Proposed Rule: 47CSR02
Attachments: Wood-47CSR2-rule change-dissolved aluminum.pdf

From: Petra&John Wood [mailto:pbjmwood@gmail.com]
Sent: Wednesday, July 24, 2013 6:57 AM
To: DEP Comments
Subject: Proposed Rule: 47CSR02

Please accept the attached public comments regarding West Virginia's proposed rule change to the dissolved aluminum water quality standard (WQS) criteria.

--
John and Petra Wood

John M. and Petra B. Wood
P.O. Box 271
Cassville. WV 26527

24 July 2013

West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street, S.E.
Charleston, WV 25304
dep.comments@wv.gov

RE: Proposed Rule, 47CSR2 – Requirement governing Water Quality Standards

Please accept the following public comments regarding West Virginia's proposed rule change to the dissolved aluminum water quality standard (WQS) criteria.

This proposed rule change is identical to the emergency rule that was proposed in March 2013 to change the dissolved aluminum Acute Aquatic Life Criterion[1] (currently 0.750 mg/l) and the Chronic Aquatic Life Criterion[2] (currently 0.750 mg/l for warm waters and 0.087 mg/l for cold waters) to a sliding scale based on hardness and pH values in the range of 6.5 to 9.0 standard units. WVDEP's justification stated *with particularity* those facts and circumstances which made the emergency rule necessary to prevent substantial harm to the public interest to be "Unnecessary treatment costs for a portion of the regulated community and the inclusion of many waters on the DEP's 303(d) list that are not impaired...". We emphatically disagreed with this justification because it is not in the public interest; rather, it is in the private interest of industry polluters. Its sole purpose is to externalize the costs of pollution control, kicking the can down the road for future West Virginia taxpayers to assume.

It *is* in the public interest that any proposed changes to 47 CSR §2 explicitly define how and when those changes apply to WSQ criteria. "Because 304(a) aquatic life criteria are national guidance, they are intended to be protective of the vast majority of the aquatic communities in the United States."[3] The national WQS criteria for aluminum are expressed in terms of **total recoverable** metal in the water column: 0.750 mg/l Criteria Maximum Concentration (CMC), and 0.087 mg/l Criterion Continuous Concentration (CCC). With regards to the CCC for total recoverable aluminum, the national criteria have a footnote indicating that:

> "There are three major reasons why the use of **Water-Effect Ratios** might be appropriate. (1) The value of 87 µg/l is based on a toxicity test with the striped bass in water with pH= 6.5-6.6 and hardness <10 mg/L. Data in "Aluminum Water-Effect Ratio for the 3M Plant Effluent Discharge, Middleway, West Virginia" (May 1994) indicate that aluminum is substantially less toxic at higher pH and hardness, but the effects of pH and hardness are not well quantified at this time. (2) In tests with the brook trout at low pH and hardness, effects increased with increasing concentrations of total

[1] One hour average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.
[2] Four-day average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.
[3] http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm

aluminum even though the concentration of dissolved aluminum was constant, indicating that total recoverable is a more appropriate measurement than dissolved, at least when particulate aluminum is primarily aluminum hydroxide particles. In surface waters, however, the total recoverable procedure might measure aluminum associated with clay particles, which might be less toxic than aluminum associated with aluminum hydroxide. (3) EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 µg aluminum/L, when either total recoverable or dissolved is measured."[4] **(emphasis added)**.

Simply basing a dissolved aluminum Aquatic Life Criterion on an equation derived from the hardness level of the water is not the same as applying a Water-Effect Ratio (see USEPA 1997). In the public interest, any proposed changes to the dissolved aluminum criteria would need to clearly state in 47 CSR §2 how and when Water-Effect Ratios would be applied to the proposed dissolved aluminum WQS criteria.

As scientific justification for the emergency rule change, WVDEP stated that "...numerous scientific studies have validated the impact of hardness as it relates to the aquatic community. These studies were recently utilized to update and justify new hardness based approaches to dissolved aluminum criteria in Colorado and New Mexico, and subsequently these approaches have been approved by both the respective EPA regions and EPA headquarters. These same studies can be used to validate a relationship between the hardness concentration of West Virginia's waters 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." WVDEP's justification was misleading, if not erroneous, because the majority of studies on the biological toxicity of dissolved aluminum have been confined to trout and/or salmon species in streams with a pH <6.5. Firstly, WVDEP needs to provide the public as well as the state legislature with a list of these "numerous scientific studies". Secondly, WVDEP has failed to respond to the objections that were voiced orally and in writing concerning the March 2013 proposed emergency rule change to dissolved aluminum WQS.[5] Just because several Western states have derived hardness based approaches to dissolved aluminum criteria does not prove that the same approach is applicable to the "aquatic community" of Appalachian streams.

Included below is peer-reviewed scientific evidence that Appalachian streams with pH >6.5 exhibit biological impairment due to dissolved aluminum concentrations that are much lower than the proposed, hardness-based WQS criteria.

Soucek et al (2002) observed the virtual elimination of the perlid stonefly, *Acroneuria*, downstream of an AMD impacted tributary in the North Fork of the Powell River in southwestern Virginia, where average values for pH, conductivity, alkalinity, and hardness were consistent throughout the system with average values of 7.9 ± 0.1, 486 ± 56 µS/cm, 75 ± 22 mg/L as CaCO3, and 165 ± 5 mg/L as CaCO3, respectively. According to their analyses, "the factor most strongly correlated with variation in *Acroneuria* sp. numbers from site to site during both sampling seasons was total Al in the water column. While Al generally is not thought to be a toxic influence in neutral pH surface waters because of its low solubility, studies suggesting otherwise are accumulating. These include laboratory studies with *Daphnia magna* (Havas 1985), and mixing zone studies with fish (Rosseland *et al.* 1992). In addition, recent work (Campbell *et*

[4] http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm

[5] There is no entry for the March 27, 2013 public hearing in the "response to comments" column at http://www.dep.wv.gov/WWE/Programs/wqs/Pages/wqsarchives.aspx

al. 2000) indicates that snail behavior is significantly altered by grazing upon extracellular mucopolysaccharides that have bound polyhydroxy-Al at neutral pH. Furthermore, we have observed acute toxicity to *Ceriodaphnia dubia* at pH > 7.0 when organisms were exposed to ~1.3 to 2.8 mg Al/L shortly after acidic solutions were diluted and neutralized (Soucek *et al.* 2001). The Criterion Continuous Concentration (CCC) for Al (the estimate of the highest concentration to which aquatic communities can be exposed indefinitely without unacceptable effects) is 87 µg/L at pH 6.5 to 9.0 (U.S. EPA 1999). While the average Al concentration downstream of Stone/Straight Creek was only 50 µg/L, individual measurements at this site were as high as 89.9 µg/L. Chronic continuous exposure to these concentrations of Al may be toxic to perlid stoneflies."

MacCausland and McTammany (2007) found that density and number of macroinvertebrate families, genera, and Ephemeropteran, Plecopteran, and Trichopteran (EPT) families were significantly lower downstream of mined areas than at upstream reference sites. where the dissolved aluminum concentrations averaged 0.05-0.1 mg/l at reference sites, 0.1-1.4 mg/l at "episodic" AMD sites, and 0.2-0.5 mg/l at "chronic" AMD sites even though the stream pH was lower at two of the three reference sites (4.91, 6.01, and 7.07) than at the at the "episodic" (5.04, 6.24) and "chronic" (6.34, 6.53) AMD sites. They speculated that aluminum concentrations were relatively low at upstream reference sites — even though the pH was low — "...due to high dissolved organic carbon, which makes aluminum less toxic (Dangles et al., 2004)" and that this "...provided us with an idea of what the invertebrate community could look like in a stream with low pH but low metal contamination.". MacCausland and McTammany (2007) also noted that "In many mine drainage streams with relatively high pH, precipitated iron and aluminum may coat the stream substrate and cause unstable habitat for macroinvertebrates (Warner, 1971; Koryak et al., 1972; Hoehn and Sizemore, 1977; Moon and Lucostic, 1979; McKnight and Feder, 1984; Earle and Callaghan, 1998)."

Freund and Petty (2007) noted that streams began exhibiting ecological impairment—based on WVSCI scores—with dissolved aluminum, iron, manganese, and nickel concentrations as low as 0.16, 0.22, 0.34, and 0.020 mg/L, respectively; and at sulfate concentrations as low as 50 mg/L and at specific conductance levels of 144 µS/cm. They also noted that "All indications from this study and previous studies (Maret and MacCoy 2002; Clements 2004; Merovich and Petty, 2007) suggest that the combination of many dilute stressors can interact to produce biological impairment even in streams where no single chemical constituent exceeds water quality criteria. This is an important water quality management issue that must be addressed if we are to ever be successful restoring and protecting biological life uses of streams in mined watersheds".

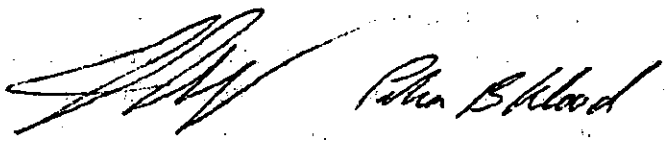
Gerritsen et al (2010) identified dissolved aluminum toxicity stress-response threshold effects based on a statistical analysis of state-wide West Virginia data with a "plausible threshold" at median concentrations >0.2 mg/l, "substantial effects" at median concentrations >0.4 mg/l, and "sustained effects" at minimum concentrations >0.4 mg/l. They also calculated 95% change-point confidence-interval estimates for dissolved aluminum concentrations at which genus-level macroinvertebrate metrics began to decline. The lower 95% confidence limits of those confidence intervals, listed in the table below (from their table A-1), ranged from 0.04 to 0.135 mg/l dissolved aluminum. With the exception of Percent EPT, all of the upper 95% confidence limits within the entire pH range examined (pH 6.0-9.0) were ≤ 0.545 mg/l of dissolved aluminum.

Metric	95% CI of Dissolved aluminum (mg/l)	
	Entire pH range	pH ≤ 6
Percent Ephemeroptera	0.040—0.452	0.051—6.31
Number of Ephemeroptera genera	0.043—0.310	0.061—3.775
Percent EPT	0.505—9.825	0.5—9.925
Total number of genera	0.135—0.535	0.11—9.251
Number of EPT genera	0.0622—0.545	0.095—6.31

Moreover, aluminum may be adversely affecting bottom feeders. For example, Cravotta (2005) observed that "Elevated concentrations of iron, manganese, aluminum, strontium, copper, nickel, and zinc in whole white sucker sampled from Mahanoy Creek near Gowen City indicate potential for sediment-derived metals to accumulate in aquatic organisms."

All of the above-cited studies suggest that biological impairment due to dissolved aluminum concentrations can occur in neutral to basic (pH 6.5—9.0) Appalachian streams. However, even if the proposed standards were to be approved by EPA, the proposed dissolved aluminum WQS criteria cannot apply to existing NPDES permits with existing effluent limits for aluminum. To do so would violate the anti-backsliding provision of the Clean Water Act which precludes any permit modification to "contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." 33 U.S.C. § 1342(o). For all of these reasons, we believe that the proposed amendments to West Virginia's dissolved aluminum WQS criteria *may* avoid substantial economic harm to both the regulated community and the agency, but they *will not* maintain the level of protection necessary for its aquatic life. We believe that the public interest will be best served if WVDEP withdraws the dissolved aluminum amendments from 47 CSR §2.

Sincerely,



John M. and Petra B. Wood

Literature Cited

Cravotta CA, III (2005) Effects of Abandoned Coal-Mine Drainage on Streamflow and Water Quality in the Mahanoy Creek Basin, Schuylkill, Columbia, and Northumberland Counties, Pennsylvania, 2001. USGS Scientific Investigations Report 2004-5291. 66pp.

Freund JG and Petty JT (2007) Response of fish and macroinvertebrate bioassessment indices to water chemistry in a mined Appalachian watershed. Environ. Manage. 39:707-720.

Gerritsen J., L. Zheng, J. Burton, C. Boschen, S. Wilkes, J. Ludwig, and S. Cormier. (2010) Inferring causes of biological impairment in the Clear Fork Watershed, West Virginia. U.S. Environmental

Protection Agency, Office of Research and Development, National Center for Environmental Assessment,Cincinnati, OH. EPA/600/R-08/146. 108pp.

MacCausland A, McTammany ME (2007) The impact of episodic coal mine drainage pollution on benthic macroinvertebrates in streams in the Anthracite region of Pennsylvania. Environ. Pollution 149:216-226.

Soucek DJ, Denson, BC, Schmidt TC, Cherry DS, Zipper CE (2002) Impaired *Acroneuria* sp. (Plecoptera, Perlidae) populations associated with aluminum contamination in neutral pH surface waters. Arch. Environ. Contam. Toxicol. 42:416-422.

USEPA (1997) Modifications to guidance site-specific criteria: Use of the WER procedure with hardness equations; A change in the recalculation procedure; and Optional considerations of life stage when a recalculation procedure is used. 21pp.
<http://water.epa.gov/scitech/swguidance/standards/upload/2003_08_06_standards_modif-int-wer.pdf>

Coyne, Kevin R

From: DEP Comments
Sent: Wednesday, July 24, 2013 11:25 AM
To: Coyne, Kevin R
Subject: FW: Comments on rule 47CSR2
Attachments: Aluminum standards.2013.WV.pdf

From: Janet Keating [mailto:janet.ovec@gmail.com]
Sent: Tuesday, July 23, 2013 4:32 PM
To: DEP Comments
Cc: dianne bady; Vivian Stockman
Subject: Comments on rule 47CSR2

Attached, please find OVEC's comments to the proposed rule changes.

Thank you.

Sincerely,
Janet

--
Janet Keating, Executive Director
Ohio Valley Environmental Coalition
P.O. Box 6753
Huntington, WV 25773-6753
304.522.0246 phone
304.522.4079 fax

www.ohvec.org
www.sludgesafety.org
www.wvoter-owned.org

"Your spirit is your true shield." Morihei Ueshiba, founder of Aikido; quote from *The Art of Peace*

Ohio Valley Environmental Coalition
Supporting Organized Voices and Empowered Communities Since 1987
P.O. Box 6753 Ph. 304-522-0246
Huntington, WV 25773-6753 www.ohvec.org Fax 304-522-4079

23 July 2013

Public Information Office
WV Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: Proposed changes to 47CSR2—the Water Quality Standards rule

To whom it may concern:

The Ohio Valley Environmental Coalition (OVEC), a non-profit grassroots environmental organization, with a central office in Huntington, West Virginia, appreciates the opportunity to submit public comments on the proposed changes to 47CRS2.

OVEC opposes the proposed changes to 47CSR2 because they would allow significantly more pollution from the discharge of aluminum in West Virginia's rivers and streams, which is toxic to aquatic life.

We agree with our ally organization, the West Virginia Environmental Council that "the proposed revisions are drastic and equate to greater than a 13-fold and 46-fold increase over the current limits for acute and chronic aluminum toxicity to aquatic life, respectively."

In a state with many financially vulnerable people, changes to this rule that causes harm to aquatic life, especially fish populations, also places additional financial burden on citizens who depend upon fishing to supplement diets.

Further, these rule changes fail to:

1. Protect the "designated use" of West Virginia streams as required under the federal Clean Water Act;

2. Protect the value of West Virginia's unique and irreplaceable water resources; and

3. Protect the public's interest over the narrow and profit-motivated interest of polluters (primarily the mining operators) who do not want to pay to treat their wastes.

Beyond its citizens, water is the most significant resource of our state—more important than coal, especially at a time when water is becoming increasingly scarce and many states throughout our country are experiencing long-term drought conditions. According to a major new ORC International survey conducted for the nonprofit Civil Society Institute (CSI) and Environmental Working Group (EWG),

86 percent of Americans think "the availability of ample clean drinking water should be a top national priority in the U.S" (http://www.civilsocietyinstitute.org/media/011013release.cfm). It is prudent to remember that neither life nor economic development can exist without clean, abundant, potable water

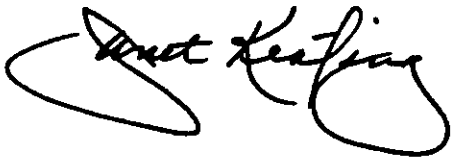
As a reminder, the following is the mission statement of the Division of Water and Waste Management:

"The Division of Water and Waste Management's (DWWM) mission is to preserve, protect, and enhance the state's watersheds for the benefit and safety of all its citizens through implementation of programs controlling hazardous waste, solid waste and surface & groundwater pollution, from any source."

Please keep you mission in mind when making important decisions that affect our state's waters.

We ask that you keep us informed about this important matter.

Sincerely,



Janet Keating, Executive Director

Coyne, Kevin R

From: Calamita, Paul <paul@aqualaw.com>
Sent: Saturday, July 27, 2013 11:21 PM
To: Coyne, Kevin R
Cc: Mandirola, Scott G; DavidSago@aol.com; Morel, Meghan
Subject: WV MWQA Comments on Water Quality Standards Revisions

Dear Mr. Coyne:

Please accept the following comments of the West Virginia Municipal Water Quality Association (MWQA) on the proposed amendments to the WQS Regulation.

Section 5.2.h.4 – No Mixing Zones When IWC Exceeds 80%. We do not understand why mixing zones are not authorized in situations where the instream waste concentration is greater than 80% of the 7Q10. The 7Q10 occurs extremely rarely (two percent or so of the time). Prohibiting any mixing zone for a discharger with an IWC of 81 percent means that the permit limits will be significantly overprotective at 7Q10 flows and extremely overprotective at higher flows. This State limitation should be revised to 95% IWC instead of the current 80%.

Section 6.2 Category A. We object to the Department's application of Category A water quality criteria to all waters of the State. That is technically and legally incorrect and is not supported by State statute. DEP should reverse this policy/regulation, including by adding the following to Section 6.2: "This category includes streams segments on which the following are located:"

Section 7.a.2 Half-Mile Rule.

We urge the Department to incorporate a waiver provision into the "half-mile" rule. This will avoid unnecessary regulation changes (or legislation such as HB 4383 and SB 455 in the 2012 session) where unnecessary permit limits are imposed based upon this State only rule. Here is our suggested language:

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.

This is a smart, fair, and efficient change to the rule. Any water intake owner that wants to keep the benefit of the half-mile rule for one or more pollutants in an upstream discharger's effluent simply does nothing and the rule will continue to apply. However, where the operation of the rule will impose an unnecessary hardship on an upstream discharger, the intake owner will have the opportunity and ability to waive the rule if the intake owner wishes to. The intake owner can revoke this waiver at any time. Rather than applying the one-half mile rule on everyone, this change will allow the half-mile rule to be tailored to apply where it is needed or simply desired by a downstream water intake owner.

Section 7.b.2 Harmonic Mean Flow. We fail to understand why the Harmonic Mean Flow is not used for human health and other long-term bioaccumulative pollutants of concern? We think it is long-past time for DEP to update this aspect of the WQS regulation. We are not aware of another single state that uses the 7Q10 flow to apply all WQS/Criteria.

Section 8.2.b Harmonic Mean Flow: Same comment as above regarding the fact that it is long overdue that DEP use the Harmonic Mean Flow for human health parameters including carcinogens.

Sections 8.3.a.2 and 8.3.a.3 Nutrient Criteria for Lakes. We fail to understand why DEP is removing the linkage between the lake TP and chlorophyll a criteria. We recognize that EPA vetoed this language but we do not believe they had the authority to do so and understood that DEP would repropose the linked criteria in a way that EPA could not partially veto. We understand that this is exactly what the State of Maine and others have done to obtain EPA approval of similarly linked criteria. We urge DEP to restore the linkage proposed by Section 8.3.a.3 in a way that EPA has to either approve the linked TP and chlorophyll a criteria or veto them as a package.

Section 8.1.1 and 8.1.2 Hardness-Based Chronic Aluminum Criteria. We do not understand why the ceiling hardness is limited to 220 mg/L instead of 400 (typically used by US EPA in its derivation of the national metals criteria). We believe the equation should be used at hardness values up to 400 mg/L.

Section 8.13 Change to E.Coli. We are concerned about the proposal to establish a daily maximum value of 1074 cfu/100 ml. We urge DEP to include a footnote on the daily value which states as follows:
*1074 cfu/100 ML 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."

Please note that USEPA's policy against allowing mixing zones for bacteria for POTW discharges was recently overturned by the United States Court of Appeals for the Eighth Circuit in the Iowa Cities decision. Thus, DEP really should provide mixing zones for bacteria. However, the MWQA members will accept the e.coli daily maximum providing they can exceed this value one percent of the number of samples taken over the term of the permit. This is the DEP's current practice. Failing that we want the 10 percent exceedance provision allowed in the EPA criteria. Thus, we would have a daily maximum that applied end-of-pipe but which could be exceeded 10 percent of the time in any given month.

This is a critical issue for the MWQA members.

8.1.8.2 Methylmercury Water Column Criteria. We urge the Department 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.

We appreciate the Department's consideration of our comments and representatives of the MWQA are available to discuss these comments if that would be helpful.

Sincerely,

Paul Calamita
MWQA General Counsel

C: MWQA Members

Coyne, Kevin R

From: Tom Boggs <tboggs@wvchamber.com>
Sent: Monday, July 29, 2013 3:36 PM
To: Coyne, Kevin R
Subject: 2013 Triennial Review of Water Quality Standards
Attachments: WV Chamber - Comments Proposed DEPWQS-AsEmailFiled.pdf

Kevin:

Attached is the Chamber's comment letter on the subject review. A hard copy will follow.

Thank you for the way you handled this process from its beginning. I thought things were very transparent and went smoothly. If you have any questions of me, do not hesitate to call.

Tom

WEST VIRGINIA CHAMBER

Thomas Boggs | Vice President
1624 Kanawha Blvd. East
Charleston, WV 25311
main: 304-342-1115 • direct: 304-342-1695 • fax: 304-342-1130
tboggs@wvchamber.com • www.wvchamber.com

WEST VIRGINIA CHAMBER

July 29, 2013

Via U.S. Mail and email to Kevin.R.Coyne@wv.gov

WV Department of Environmental Protection
Division of Water and Waste Management
Water Quality Standards Program
Attn: Kevin Coyne
601 57th Street, SE
Charleston, WV 25304

Re: Comments on 2013 Triennial Review of Water Quality Standards

Dear Mr. Coyne:

Thank you for the opportunity to provide comments on the DEP's proposed revisions to the water quality standards as required under the 2013 Triennial Review. These comments are filed on behalf of the West Virginia Chamber of Commerce ("the Chamber"). The Chamber is West Virginia's largest, most influential general business organization, representing all business sectors in every region of the State. Members range from small business enterprises to mid-sizes manufacturers to tourism destinations to energy companies to Fortune 500 corporations. However, small businesses are the core of our membership - making up 85 percent of the Chamber's companies and firms.

The Chamber applauds the agency's work in developing the revised criteria for Aluminum and Beryllium. The revisions are scientifically justified and make West Virginia's regulatory approach to these criteria consistent with other areas of the country. The Chamber supports such common sense rulemaking. The Chamber 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.

In its letter to you on October 12, 2012, the Chamber urged the DEP to apply the Category A use designations in accordance with the existing statutory and regulatory framework. We are disappointed the agency has not given any indication that it will change its existing interpretation that would be consistent with that request. While the Chamber provided ample justification in support of its request, the agency has persisted in implementing by policy an interpretation that is not supported by existing regulation, and in doing so, has discouraged development and investment by imposing standards more stringent than those of our surrounding states thus placing West Virginia at a competitive disadvantage when it attempts to attract new industry and investment.

1624 Kanawha Blvd. East • Charleston, WV 25311 wvchamber.com PHONE 304.342.1115 FAX 304.342.1130

The Chamber appreciates the opportunity to offer these written comments. The Chamber reserves the right to present additional comments at future public hearings on this topic. If you have any questions, please feel free to contact me.

Sincerely,

Thomas M. Boggs
Vice President

Coyne, Kevin R

From:	Yaussy, David L. <dly@ramlaw.com>
Sent:	Monday, July 29, 2013 4:44 PM
To:	DEP Comments
Cc:	Cosco, Kathy; Coyne, Kevin R; james.turley@icl-ipa.com; David.F.Altman@dupont.com; karen@wvma.com; Patty Barnhart; Yaussy, David L.
Subject:	Comments on proposed revisions to 47 CSR 2
Attachments:	WVMA water quality standard comments 7-29-13 (R0823155).pdf

Attached are the comments of the West Virginia Manufacturers Association regarding the proposed changes to 47 CSR 2, West Virginia's water quality standards. Thank you for the opportunity to comment on the rule.

ROBINSON &McELWEE
attorneys at law

David L. Yaussy
Robinson & McElwee PLLC
700 Virginia Street East, Suite 400
Charleston, West Virginia 25301
office: 304.347.8358 | mobile: 304.552.6658
dly@ramlaw.com | www.ramlaw.com | bio

WEST VIRGINIA MANUFACTURERS ASSOCIATION

2001 Quarrier Street, Charleston, WV 25311
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FAX: (304) 342-4552
wvma@wvma.com

July 29, 2013

Mr. Kevin Coyne
Program Manager, Water
Quality Standards
West Virginia Department of
Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

Re: 2014 Triennial Review of Water Quality Standards

Dear Mr. Coyne:

The West Virginia Department of Environmental Protection has advised the public that it is accepting comments on the 2013 Triennial Review of Water Quality Standards, 47 C.S.R. 2, until July 29, 2013. On behalf of the West Virginia Manufacturers Association I would ask you to consider the following:

1. **Aluminum.** We support the change in the aluminum standard to make it hardness-based, as are the criteria for other metals such as cadmium, trivalent chromium, copper, lead, nickel, silver and zinc.

2. **Beryllium.** We support the changes in the beryllium standard that were made by emergency rule. The previous beryllium criterion for public water supplies, found in Appendix E, Table 1 of 47 C.S.R. 2, was .0077 ug/L, which is lower than the lowest method detection limit of 20 ng/L. 40 CFR §141.23. EPA has no recommended criterion for human health uses in its National Recommended Water Quality Criteria, and none of its historical criteria-listing documents support West Virginia's prior 7.7 ng/L criterion. The only extant national criterion for protection of human health appears to be the Safe Drinking Water Act Maximum Contaminant Level (MCL) of 4 ug/L.

3. **Selenium.** While no proposal to change the selenium criteria is being made at this time, revisions to *W. Va. Code* §22-11-6 made by the 2013 West Virginia Legislature mandate development of selenium criteria for aquatic life after consultation with the regulated community and other entities. The WVMA asks that it be included among those consulted during the selenium standard development process.

4. **The Category A Use.** We raised concerns about application of the public water supply use (defined at 47 C.S.R. 2-6.2, and frequently referred to as "Category A"), as part of the preview of triennial review issues in the fall of 2012. We objected to the fact that the DEP applies the Category A use in all state waters, as if all streams in the state were public water supplies, and imposes permit conditions (and requires corresponding wastewater treatment) to protect the public water supply use where that use does not exist. We are disappointed that the DEP has not responded to our concerns by proposing a change in the definition of the Category A use that would relieve municipalities and industry of unnecessary costs involved in meeting unnecessarily strict standards, without removing any protection for West Virginia citizens.

   There is no support in the water quality standards rule itself for the DEP's position.[1] The State has never formally designated all water bodies as public water supplies; only Categories B and C automatically apply to all state surface waters. "Unless otherwise designated by these rules, at a minimum all waters of the State are designated for the Propagation and Maintenance of Fish and Other Aquatic Life (Category B) and for Water Contact Recreation (Category C) consistent with the Federal Act goals." 47 C.S.R. 2-6.1. In fact, the Environmental Quality Board, which was previously responsible for promulgating water quality standards, originally stated that it did **not** consider all state waters to be public water supplies if they are not actually used as such. In the 1986 *Rationale Document for Revision of Legislative Rules*, the EQB stated that "above all, [the EQB members] agreed that the category and criteria for public water supplies should not be applied to streams or stream segments where no one is using the waters for drinking." *See* EQB's 1986 *Rationale Document for Revision of Legislative Rules*, page 20.

   Other states do not treat all streams as public water supplies. Kentucky, Virginia, Ohio and Maryland designate certain streams, on which there are public water intakes, as public water supplies, and apply the appropriate criteria to protect those streams and intakes. Those states do not require industry and municipalities to protect the public water supply use in s from which the public is not drawing drinking water. Those states' water quality standards protect the public, while not imposing unreasonable costs on industry.

   Procedures are available for removal of the public water supply use from a stream segment. However, using the DEP's process for removing the Category A use is

[1] Not only is there no express support for the DEP's position in the water quality standards rule, there is implicit evidence that a universal application of Category A to all state streams was never intended. For example, the list of known public water supplies found at 47 C.S.R. 2, Appendix B, is superfluous if all streams are public water supplies.

expensive and time consuming. Putting together the documentation for a use removal can cost thousands of dollars in legal and consultant fees, usually in situations where the need for the use removal is obvious. For example, the Category A use removal at Ward Hollow that was granted to the Union Carbide Corporation and placed in the rule at Section 7.2.d.19.3 (and that is being removed this year) was for a small stream with a flow that was patently insufficient to serve as a water supply and that ran through an area that is already served by a water utility. Similar situations have arisen at Little Scary Creek (Section 7.2.d.20.2), Pats Branch (Section 7.2.d.34.1), and now Daugherty Run (Section 7.2.d.8.1). There was absolutely no reason to require a costly exercise like a use removal in any of these cases, and no use removal would have been required if the Category A use had not applied automatically to all streams.

In the past, the DEP has stated that, by protecting the Category A use in streams now, it preserves the future ability to use the stream as a potable water supply. First, such a protection is already afforded by operation of the water quality standards. Anywhere a public water intake is installed, the Category A use becomes an existing use, and the public water supply criteria apply at that location. All upstream dischargers must protect that use, regardless of whether the upstream discharger pre-dated the public water supply intake. Second, we are not aware of many intakes being established in the state, nor are they likely to be installed. Most streams will never qualify as a public water supply, regardless of the municipal or industrial discharges into them, because of insufficient flow or excessive sediment. Third, it would be highly unusual for a public water supply company, with an abundance of potential water intake locations throughout the state at its disposal, to locate immediately downstream of an industrial discharger. The DEP's concerns about protecting possible future uses are unwarranted.

The language we would propose to amend the water quality standards to clarify that Category A is not a state-wide use is set forth in an attachment to this letter. Our proposed change would provide relief to industry while not removing any protection from West Virginia's citizens. We urge you to propose it or something substantially similar.

We appreciate the opportunity to offer these comments. Please contact me or David Yaussy, 304 347-8358, if you should have any questions or want any clarification.

Sincerely yours,

Karen S. Price

Karen S. Price

KSP:shb

Proposed Changes to West Virginia Water Quality Standards

47 C.S.R. 2

6.2. Category A – Water Supply, Public.

This category is used to describe waters which, after conventional treatment, are used for human consumption. This category includes streams on which the following are located:

6.2.a. All community domestic water supply systems;

62.b. All non-community domestic water supply systems, (i.e. hospitals, schools, etc.);

6.2.c. All private domestic water systems;

6.2.d. All other surface water intakes where the water is used for human consumption. ~~(See Appendix B for partial listing of Category A waters; see section 7.2.a.2, herein for additional requirements for Category A waters.) The manganese human health criterion shall only apply within the five-mile zone immediately upstream above a known public or private water supply used for human consumption.~~Compliance with criteria for the protection of human health is determined at the public water supply intake and for a distance one-half mile upstream of a public water supply intake.

Delete Section 7.2.a.2.

Coyne, Kevin R

From: DEP Comments
Sent: Monday, July 29, 2013 4:48 PM
To: Coyne, Kevin R
Subject: FW: Comments on 47CSR2 proposed changes
Attachments: AEP comments - 47CSR2.pdf

From: Robin J Reash [mailto:rjreash@aep.com]
Sent: Monday, July 29, 2013 4:05 PM
To: DEP Comments
Subject: Comments on 47CSR2 proposed changes

Attached please find American Electric Power (AEP) comments on proposed changes to 47CSR2. Please do not hesitate to contact me if there are any questions.

Rob Reash
American Electric Power

AEP
AMERICAN ELECTRIC POWER

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

West Virginia DEP Public Information Office
West Virginia Department of Environmental Protection
601 57th Street S.E.
Charleston, West Virginia 25304

July 29, 2013

VIA EMAIL

Dear Sir or Madam:

On behalf of Appalachian Power Company and Ohio Power Company, American Electric Power (AEP) is pleased to submit these comments on proposed changes to requirements governing water quality standards, 47CSR2. In general, we believe that the proposed changes made by WV DEP ("the agency") reflect current scientific understanding concerning threshold levels for nutrients, trace metals, and pathogens. We commend the agency for striving to incorporate the most technically robust criteria and implementation procedures in the water quality standard regulations. Comments on specific proposed changes are provided below.

Section 47-2-2 (Definitions)

We believe the revised definitions of cool water lakes and warm water lakes are adequate.

Section 47-2-8, subsection 8.3 (Criteria for Nutrients)

The proposed change states that, in the absence of specific total phosphorus and/or chlorophyll-a water quality data, a warm water lake or a cool water lake may be considered impaired if there is evidence of noncompliance with the narrative water quality criteria provided in 47-2-3, subsection 3.2. While AEP is not opposed to this "backstop" provision, we would like to point out 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.

Appendix E, Table 1 (numeric water quality criteria for the protection of aquatic life and human health)

- Chronic and acute aquatic life criteria for aluminum: AEP supports the new hardness-based criteria, which reflect recent scientific understanding of factors that influence aluminum toxicity. The existing criterion for the B1, B4, and B2 use designation (i.e., 750 µg/L × conversion factor) is overly-protective and has resulted in the construction of waste water treatment units that

provide little or no net environmental benefit concerning aluminum toxicity.

- Revised human health criteria for beryllium (0.0077 µg/L to be replaced by 4 µg/L): AEP supports this change. The existing criterion has a speculative underlying toxicological basis and the implementation of this overly-protective, less than detection value has resulted in permitting and water quality assessment difficulties.

- Replacement of fecal coliform human health criteria with *E. coli* criteria: AEP supports this change as it reflects U.S. EPA's most recent assessment of allowable threshold levels.

AEP appreciates the opportunity to submit these comments. Please do not hesitate to contact me (614-716-1237 or rjreash@aep.com) if you have any questions or comments on the above.

Rob Reash

Rob Reash
Consulting Environment Specialist
Certified Fisheries Professional
Water & Ecological Resource Services

Cc: A. Wood/J. Lukehart/D. Kopec/A. Toole

Coyne, Kevin R

From: DEP Comments
Sent: Monday, July 29, 2013 4:48 PM
To: Coyne, Kevin R
Subject: FW: Comments on 47CSR2 -- Requirment governing Water Quality Standards -- Proposed Rule
Attachments: EPA comments proposal.pdf

From: Hakowski, Denise [mailto:Hakowski.Denise@epa.gov]
Sent: Monday, July 29, 2013 3:01 PM
To: DEP Comments
Subject: Comments on 47CSR2 -- Requirment governing Water Quality Standards -- Proposed Rule

Attached please find EPA's comments on the proposed revisions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUL 29 2013

Public Information Office
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

Dear Sir or Madam:

The U.S. Environmental Protection Agency (EPA), Region III has reviewed the proposed amendments to 47CSR2–Requirement Governing Water Quality Standards. This proposal constitutes West Virginia's current triennial review of its water quality standards, as required by the Clean Water Act (CWA or "the Act") Section 303(c)(1). The purpose of this letter is to provide EPA's comments on the proposal. Please note that the comments and recommendations contained in this letter are strictly for the consideration of the West Virginia Department of Environmental Protection (WVDEP) and do not constitute approval or disapproval decisions under CWA 303(c). Neither are these comments a determination by the EPA Administrator under CWA Section 303(c)(4)(B) that revised or new standards are necessary to meet the requirements of the Act.

Subject to a few comments listed below, EPA is supportive of West Virginia's proposed revisions. EPA recommends that WVDEP consider the following:

- WVDEP is proposing to delete two site-specific criteria, for dissolved oxygen and for temperature, and one variance for chloride. Please confirm the general statewide criteria for dissolved oxygen, temperature and chloride will apply to the surface waters currently subject to the site-specific criteria and the variance following these deletions.

- WVDEP is proposing the adoption of site-specific zinc criteria for Marr Branch in the New River basin (7.2.d.29.1) and the removal of a non-101(a)(2) use (i.e., Category A–Water Supply, Public) for an unnamed tributary of Daugherty Run and Fly Ash Run in the Cheat River basin (7.2.d.8.1). EPA cannot comment on these proposed revisions until we review the rationales for the modifications. Criteria must be based on sound scientific rationale and must protect the designated use.

Thank you for this opportunity to provide comments on West Virginia's triennial review of its water quality standards regulation. EPA would be happy to assist the State as necessary to complete this triennial review. If you have any questions concerning this letter, please contact me at (215)814-2481, or have you staff contact Denise Hakowski at (215)814-5726.

Sincerely,

Helene Drago

for Christopher A. Day
Acting Associate Director
Office of Standards, Assessment & TMDLs
Water Protection Division

Enclosure

cc: Scott Mandirola (WVDEP)
Kevin Coyne (WVDEP)
Kathleen Patnode (USFWS)
John E. Schmidt (USFWS)

Coyne, Kevin R

From:	DEP Comments
Sent:	Tuesday, July 30, 2013 10:07 AM
To:	Coyne, Kevin R
Subject:	FW: Comments for WV Triennial Review
Attachments:	WV.Triennial.Review.Comments.7.29.13.Final.doc.docx

From: Brent Walls [mailto:brent@potomacriverkeeper.org]
Sent: Monday, July 29, 2013 10:27 PM
To: DEP Comments
Subject: Comments for WV Triennial Review

Please except the attached comments for the Triennial Review.

Thank you,

Brent Walls
Upper Potomac Manager
Potomac Riverkeeper Inc.
38 Willowby Ct
Bunker Hill, WV 25413
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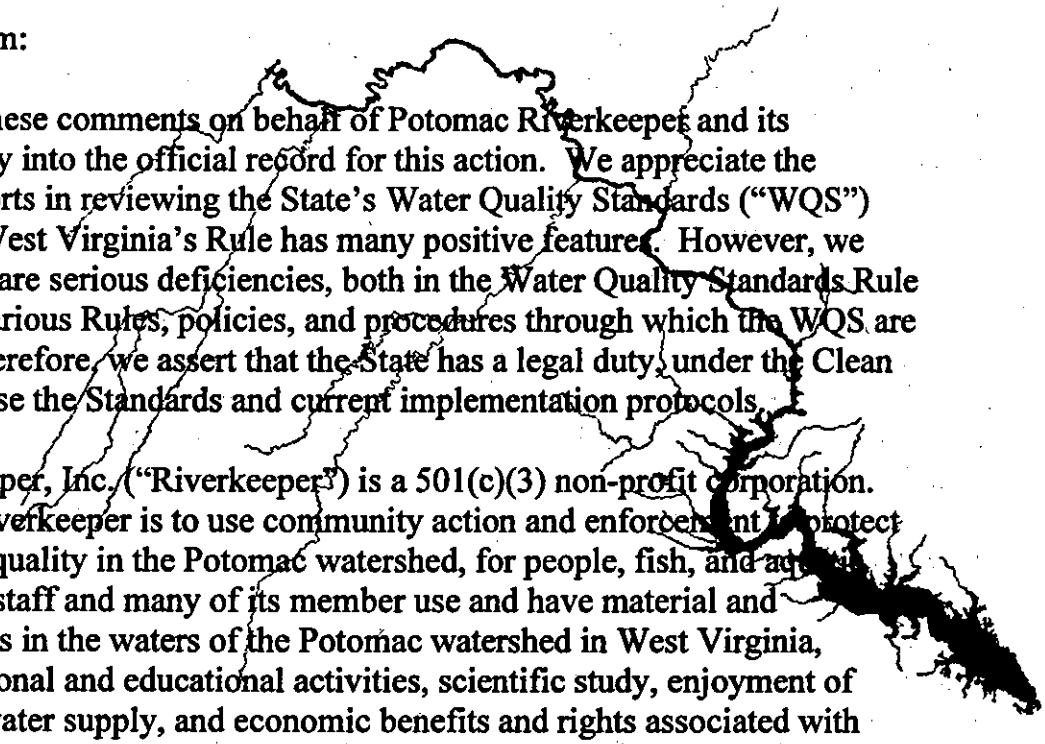
July 29, 2013
Sent Electronically

Public Information Office
West Virginia Department of the Environment
601 57th St., S.E.,
Charleston, WV, 25304
DEP.Comments@wv.gov

Re: Response to Public Notice for 47CSR2 -- Requirement governing Water Quality Standards. Proposed Rule (Triennial Review)

Dear Sir or Madam:

I am submitting these comments on behalf of Potomac Riverkeeper and its members, for entry into the official record for this action. We appreciate the Department's efforts in reviewing the State's Water Quality Standards ("WQS") and believe that West Virginia's Rule has many positive features. However, we also believe there are serious deficiencies, both in the Water Quality Standards Rule itself and in the various Rules, policies, and procedures through which the WQS are implemented. Therefore, we assert that the State has a legal duty, under the Clean Water Act, to revise the Standards and current implementation protocols.



Potomac Riverkeeper, Inc. ("Riverkeeper") is a 501(c)(3) non-profit corporation. The mission of Riverkeeper is to use community action and enforcement to protect and restore water quality in the Potomac watershed, for people, fish, and aquatic life. Riverkeeper staff and many of its member use and have material and immediate interests in the waters of the Potomac watershed in West Virginia, including: recreational and educational activities, scientific study, enjoyment of aesthetic values, water supply, and economic benefits and rights associated with real property. Both Riverkeeper and its members have direct, substantial, past, and ongoing interests that will be affected by this regulatory action.

Narrative Criteria - §47.2.3. Conditions Not Allowable in State Waters.

This section appears to comprise the complete set of narrative criteria in West Virginia's Water Quality Standards ("WQS") Rule. The items listed in paragraph 3.2., which are to be prevented in all waters of the State, are similar to those EPA recommends for inclusion in state Standards.[1] These conditions appropriately prohibit "[d]eposits or sludge banks on the bottom;" "[m]aterials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life;" "[a]lgae blooms or concentrations which are harmful, hazardous or toxic to man, animal or aquatic life;" and a number of other conditions which would be harmful and interfere with designated and existing uses in "waters of the state."

While the State is committed through other Rules and procedures, and through federal law, to apply the narrative criteria to a wide range of regulatory actions, including NPDES permitting, CWA § 401 certifications, and others, the wording and the structure of 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 sub-paragraphs 3.2.a. - 3.2.i.

It would be inappropriate and legally insupportable to limit the coverage of these narrative criteria as the Rule could be read to do and we do not believe that is its intent. The U.S. EPA has stated that it "considers that the narrative criteria apply to all designated uses at all flows and are necessary to meet the statutory requirements of section 303(c)(2)(A) of the CWA."[2]

Paragraphs 3.1. and 3.2. of the WQS Rule must be revised to clearly require that the conditions listed in 3.2. are prohibited in state waters, without regard to their causes. Water Quality Standards are to cover all waters of a State and each State and/or EPA must use them to define impairments and determine whether designated and existing uses are fully supported in any circumstance where the officials have the authority to regulate activities.[3] The definition of "pollution"[4] under the CWA is much broader than the term "wastes" and the application of WQS can only be said to serve the Objective and Purposes of the Act when the Standards are interpreted in light of this broader view.

We recommend that the first sentence of paragraph 3.1. be deleted and that the sentence in paragraph 3.2. be revised to read: "Pollution of waters of the state shall

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[1] *See:* U.S. EPA, Water Quality Standards Handbook, 2nd. Edition, *1994* (with addition of July, 2007 updates), section 3.5.2.; U.S. EPA. NPDES Permit Writers' Manual, EPA-833-K-10-001, September, 2010, p. 6-8.

[2] U.S. EPA, Water Quality Standards Handbook, 2nd. Edition, *1994* (with addition of July, 2007 updates), section 3.5.2

[3] *See:* Federal Register, Vol. 63, No. 129, July 7, 1998, 40 CFR Part 131, Water Quality Standards Regulation, ANPRM, p. 36780. (Stating EPA's opinion that antidegradation policies must apply to activities that are "'regulated' undeer State, Tribal, or federal law"). Though this section deals only with antidegradation, the same rationale must apply equally to WQ criteria and use protections. The antidegradation requirements are integrally related to these criteria and uses.

[4] Sec. 502(19) [33 U.S.C. 1362(19)]: "The term 'pollution' means the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water."

not cause or materially contribute to any of the following conditions: . . . ." To accompany this change in the text of the WQS Rule, the definition of "pollution" included in the CWA should be added to §47-2-2 of the Rule.

Application of Narrative Criteria to Limit or Prohibit Discharges - NPDES and 401
In addition to clarifying that the narrative criteria in its WQS Rule apply to all State waters and all activities regulated by WV agencies, the State must provide and EPA must require an implementation plan for these criteria that will ensure that they will be applied faithfully and effectively. Prior failures of the State in this regard, such as those discussed below, make the preparation and adherence to such an implementation plan especially vital to ensure that West Virginia's WQS provided the minimum levels of protection required by the Clean Water Act.

The fact that the EPA has previously approved the State's WQS and that those Standards, including the narrative criteria, have failed to protect and improve water quality in some very damaging ways, makes the preparation of a detailed implementation plan especially vital. We are concerned that some waters in the Potomac watershed and elsewhere in WV are impaired by nutrient-driven algal blooms and other related pollution problems and note that permit limits based upon those narrative criteria violations have not been effectively and uniformly implemented.

In the case *Mandirola v. White Sulphur Springs,* Civil Action No. 10-AA-132, the Circuit Court of Kanawha County upheld the West Virginia Environmental Quality Board's (EQB's) decision to reject the imposition of nutrient limits in two NPDES permits. The Court held that the WV DEP had not adequately supported the limits they proposed in the wastewater treatment plant permits. Given this outcome, we submit that it is urgent that the DEP develop reliable and well-supported procedures for developing nutrient limits based on narrative criteria, as well as limits that would be adequate to uphold the other parts of those narrative statements. This procedure must be broad enough to guide actions in NPDES, section 401, or other process where the State is obligated to carry out the mandates of their WQS.

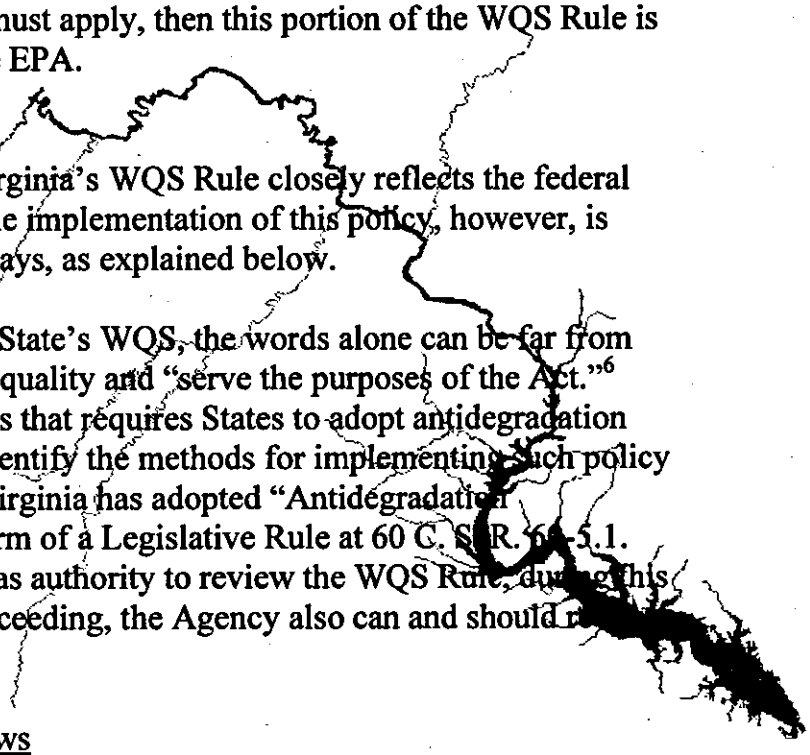
We think the DEP rightly argued in *Mandirola* that 40 CFR § 122.44 requires them to develop such narrative-based limitations and provides options for the procedures to follow. Further, we are confident that the Department can and must fully justify such action in a number of instances across the State.

Another particular area in which the application of narrative criteria has been greatly deficient is in the regulation of moutaintop removal mining. Through development of the document: " Justification and Background for *Permitting Guidance for Surface Coal Mining Operations to Protect West Virginia's Narrative Water Quality Standards, 47 C.S.R. 2 §§ 3.2.e and 3.2.i,* the State of West Virginia purports to have provided adequate technical support for its implementation of the narrative criteria in regard to mining. However, if these criteria are to be the basis

for applying the narrative criteria, then those criteria cannot be deemed adequate to "meet the purposes of the Act," as the federal regulations require all WQS to do.

Perhaps the most prominent and well-documented example of these failures is in relation to the CWA § 404 permit issued by the COE for Spruce No. 1 Mine in Logan County. This operation has been found to cause damages and threats to the Right Fork of Seng Camp Creek, Pigeonroost Branch, Oldhouse Branch, and their tributaries of a nature that clearly violate WV's narrative criteria and yet the State certified the project under its CWA § 401 authority.[5] The narrative criteria violations caused or threatened by the grant of this water quality certification have and would further interfere with or eliminate both designated and existing uses and cannot be upheld.

We assert that, if implementation procedures already drafted are not made to conform to the requirements of the CWA and if adequate implementation procedures are not developed for all of those narrative conditions in relation to all regulated activities to which they must apply, then this portion of the WQS Rule is invalid and must be rejected by the EPA.



§47-2-4. Antidegradation Policy.

The text of this section of West Virginia's WQS Rule closely reflects the federal regulations on antidegradation. The implementation of this policy, however, is extremely deficient in numerous ways, as explained below.

The EPA has recognized that, in a State's WQS, the words alone can be far from adequate to properly protect water quality and "serve the purposes of the Act."[6] The provision in federal regulations that requires States to adopt antidegradation polices also mandates that they "identify the methods for implementing such policy pursuant to this subpart."[7] West Virginia has adopted "Antidegradation Implementation Policies" in the form of a Legislative Rule at 60 C.S.R. 60-5.1. through 60-5-8. Just as the EPA has authority to review the WQS Rule, during this Triennial Review or a separate proceeding, the Agency also can and should review this implementation policy.[8]

Trigger for Antidegradation Reviews

An overriding problem with the WV antidegradation implementation guidance is that it requires the agency to complete the review process only in those instances where a "new or expanded" discharge is proposed.[9] Paragraph §60-5-5.6.a.2. gives the Secretary discretion to conduct the review process in certain additional cases but

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[5] See: U.S. EPA, Final Determination of the U.S. Environmental Protection Agency Pursuant to § 404(c) of the Clean Water Act Concerning the Spruce No. 1 Mine, Logan County, West Virginia, for an extensive and detailed explanation of the water quality damages from this project.

[6] 40 CFR § 131.2

[7] 40 CFR § 131.12(a)

[8] U.S. EPA, Water Quality Standards Handbook, 2nd. Edition, *1994* (with addition of July, 2007 updates), section 4.3.

[9] *See: §60-5-4.8; §60-5.6.a.1..*

does not require it. In fact, 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.

The EPA has stated that "[t]he antidegradation review requirements of this provision of the antidegradation policy [protection of high-quality waters] are triggered by any action that would result in the lowering of water quality in a high-quality water."[10] And while new or expanded discharges are presumed to meet this test under the EPA analysis, the Agency's guidance goes on to state that "no permit may be issued, without an antidegradation review to a discharger to high-quality waters with effluent limits greater than actual current loadings if such loadings will cause a lowering of water quality (USEPA 1989c)."[11]

The definintion of an "expanded" discharge, as that term is used in the Rule is not provided but, in our experience, this has referred to an increase in the "design flow"[12] for a wastewater treatment plant or a greater average flow[13] from an industrial facility. If applied in this manner, the WV policy has and will continue to allow discharges that lower water quality without undergoing any form of antidegration review and this cannot be approved for the future, by the State or by the EPA. This approach improperly focuses on the amount of pollutants permitted by a previous permit versus the actual levels of pollution in the water body.

To illustrate the problems that result from these methods:

If, upon expiration of a current 5-year NPDES permit, an existing discharger applies for a new permit, proposing the same treatment design or average flow as previously used in permitting analyses, we believe that this would not be considered an "expanded" discharge, as we understand WV's procedures. In most cases, the facility will not have reached the average flow for which it was designed or permitted and upon which its permit limits were based. It also will often discharge concentrations well below technology-based or water quality-based limits in the prior permit.

Such permit, if it includes the same effluent limits as before, can result in increased loadings and/or concentrations of pollutants from those that have actually occurred and, therefore, will increase in-stream pollutant levels. Wherever this is a predictable result, a full antidegradation review must be completed by DEP and the water quality may not be lowered unless the required economic and social necessity analyses justifies this change.

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[10] U.S. EPA, Water Quality Standards Handbook, 2nd. Edition, 1994 (with addition of July, 2007 updates), section 4.5. (emphasis added)
[11] Ibid. (citing *Application of Antidegradation Policy to the Niagara River*, 1989.)
[12] U.S. EPA. NPDES Permit Writers' Manual, EPA-833-K-10-001, September, 2010, p. 5-8.
[13] U.S. EPA. NPDES Permit Writers' Manual, EPA-833-K-10-001, September, 2010, p. 5-32.

Antidegradation must be applied to each water body into which discharges are permitted and, if a waterbody has so far been protected and has better quality than the minimum levels specified by criteria, then the water body must be maintained at that high quality. If the agency fails to perform an antidegradation review, just because the owner does not propose to raise the design or average flow, then the water body will often be degraded in situations such as those described.

Existing Uses

At 47 CSR § 60-5-3.3., the Rule states "[t]he Secretary shall determine the existing uses of the water body by identifying the uses set forth in 47 CSR 2-6 that the water body currently supports, or has supported since November 28, 1975." The reference to 47 CSR 2-6 improperly limits the range of possible existing uses to those "Water Use Categories" described in that section of the WQS Rule, which equate to the range of "designated uses" under the WQS.

The WQS rule states that "incidental utilization for whatever purpose may or may not constitute a justification for assignment of a water use category to a particular stream segment."[14] However, "existing uses" are to reflect all uses that have occurred in a water body without regard to those categories defined for designated uses.[15] 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. Certain uses that are not commonly recognized in State WQS as "designated" uses, such as ceremonial uses or use for scientific study, may be important existing uses and should be protected, regardless of WV's view of their importance or significance.

Significant or *De minimis* Water Quality Impacts

At 47 CSR § 5.6.c. states that "[d]egradation forTier2 shall be deemed significant if the activity results in a reduction in the water segment's available assimilative capacity (the difference between the baseline water quality and the water quality criteria) of ten percent or more at the appropriate critical flow condition(s) for parameters of concern." Such a determination of "significant" degradation is not supported by federal law and, in any case, the application of the type of general rule described here for a range of water quality parameters is arbitrary and technically insupportable.

Lack of Legal Support for Significant Degradation Threshholds - Nowhere in the Clean Water Act or in federal regulations are allowances made for so-called "*de minimis*" or insignificant degrees of degradation, by which water quality may be lowered without antidegradation review and justification by economic and social necessity. We recognize that the EPA has approved such measures and provided

[14] §47-2-6.1.
[15] As the definition of "existing uses" makes clear at §47-2-2.

guidance for their implementation but find no legal support or justification for these approvals.

The EPA's primary justification for allowing *de minimis* amounts of degradation is that this procedure "allows States and Tribes to focus limited resources where they may result in the greatest environmental protection"[16] but, by this reasoning, the EPA seems willing to replace the judgement of Congress with *ad hoc* and relatively unbounded value judgements by State agencies. At the same time, the EPA acknowledges that "States or Tribes that define a high threshold of significance may be unduly restricting the number of proposed activities that are subject to a full antidegradation review"[17] but the Agency has failed to define what it considers an appropriate "threshold."

The Supreme Court addressed this issue in *Arkansas v. Oklahoma*, 503 U.S. 91 (1992). In that case a new sewage treatment plant in Arkansas, which was to discharge effluent that would flow downstream through a series of three creeks for 17 miles, enter the Illinois River, and then flow another 22 miles before crossing the border into Oklahoma. The
State of Oklahoma's WQS required that "no degradation" of the upper Illinois River could be permitted.[18]

An Administrative Law Judge had first upheld the permit, finding that there would not be an "undue impact" from the new discharge to a portion of the River in Oklahoma that was already impaired; that there would be no more than "a mere de minimis impact"[19] on the downstream State's waters. The EPA's Chief Judicial Officer also upheld the permit but ruled that a proper interpretation of the federal regulation required a more protective standard, that where the prediction of an impact was merely theoretical but was "not expected to be actually detectable or measurable," the permit should not be denied on that basis. The Supreme Court ruled that EPA's interpretation of the CWA and the regulation was not arbitrary and capricious and upheld the permit.[20]

Given that discharges permitted under WV's implementation procedures would certainly result in detectable negative impacts on receiving waters, under critical conditions, the standard applied by EPA and upheld by the Court in Arkansas v. Oklahoma provides no support for the policy WV proposes in their regulation.

Below we address the lack of technical support for the particular "significance" thresholds proposed by WV but we would submit that similar technical concerns make the designation of any *de minimis* threshold improper. To assume that any level of degradation from the increase of a particular pollutant in a water body is

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[16] Ibid.
[17] Ibid.
[18] *Arkansas v. Oklahoma*, 503 U.S. 91 (1992).
[19] Ibid. at 103.
[20] Ibid. at 103

insignificant would require an analysis not just of "assimilative capacity" for that pollutant.

West Virginia's *De Minimus* Procedures are Arbitrary and Without Technical Rationale

The WV policy that allows a discharge to consume up to 10% of any available assimilative capacity between baseline conditions and a numeric criterion is apparently applicable in relation to all numeric criteria, except a small number of parameters that are addressed through separate provisions in the Rule.[21] Further the Rule allows that

"[d]egradation will also be deemed significant if the proposed activity, together with all other activities allowed after the baseline water quality is established, results in a reduction in the water segment's available assimilative capacity of 20% or more at the appropriate critical flow conditions for the parameters of concern. . . ."[22]

This blanket approach to a wide variety of pollutants is inappropriate is not supported by any analysis provided by the State or by EPA. This practice is especially problematic because the nature of the impacts from increased amounts of various contaminants can be very different. For example, there is a fundamental difference between the ways carcinogens and non-carcinogens are believed to affect human health. Carcinogens are regulated based on an "assumption of non-threshold effects (i.e., no safe level exists below which any increase in exposure does not result in an increased risk of cancer) for carcinogens."[23]

So, in contrast to non-carcinogens, any increase in concentrations of these substances to which humans are exposed is predicted to cause an increased risk in the incidence of cancer and, potentially, mortality. Further, the fact that different carcinogens have different cancer slope risk factors (also known as "potency factors")[24] indicates that the rates at which the increased concentrations of various chemicals increase the threat of tumors is predicted to be extremely variable.

Where EPA has approved significance thresholds in State antidegradation implementation procedures, a wide variety of approaches have been applied and we find no justification in any support documents that justifies these differences. "Significance tests range from simple to complex, involve qualitative or quantitative measures or both, and may vary depending upon the type of pollutant (e.g., the approach may be different for highly toxic or bioaccumulative pollutants)."[25] [26]

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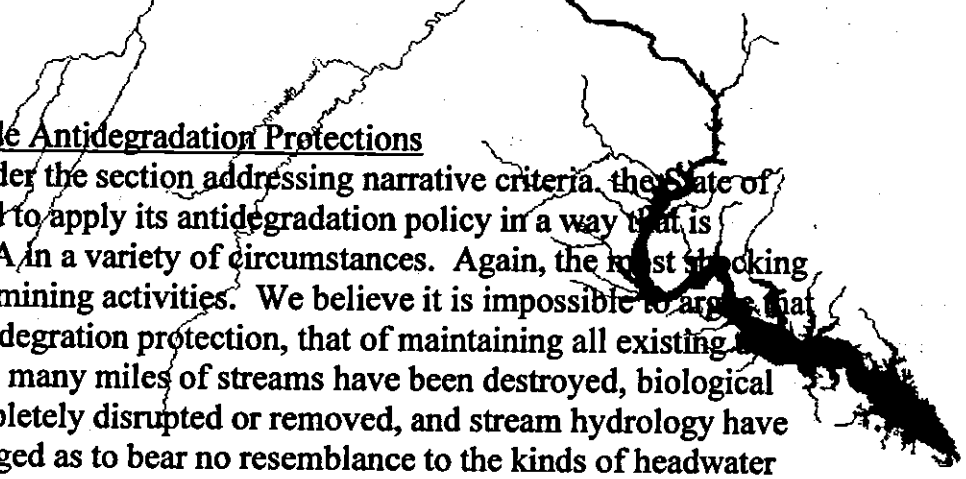
[21] §60-5-5.6.c.
[22] Ibid.
[23] U.S. EPA, Water Quality Standards Handbook, 2nd. Edition, 1994 (with addition of July, 2007 updates), section 3.1.3.
[24] *See:* U.S. EPA, National Recommended Water Quality Criteria: 2002, Human Health Criteria Calculation Matrix, EPA-822-R-02-012.
[25] Federal Register, Vol. 63, No. 129, July 7, 1998, 40 CFR Part 131, Water Quality Standards Regulation, ANPRM, p. 36783.

By failing to even acknowledge factors such as bioaccumulation, bioconcentration, synergistic or additive effects, or many other pertinent technical factors, WV's approach fails to consider important information that is widely available and, thus, its establishment of the significance threshold in the antidegradation implementation procedures (and by reference in the WQS Rule) is arbitrary and capricious.

The State of West Virginia has provided several additional significance thresholds for particular parameters (dissolved oxygen, pH, and fecal coliform bacteria), in addition to the general approach discussed above. Again, these methods, by which water quality degradation may be allowed without a full antidegradation review, are without technical or logical support.

At 47 CSR § 5.6.c.1., the WV Rule states: that, for pH, changes will be considered insignificant where "pH is maintained within the 6.0 to 9.0 range."[27] However, a change in the pH of a water body from one end of the prescribed range could cause very serious water quality problems. A change on the pH scale from 7 standard units ("SU") to 9 SU represents a difference in hydrogen ion concentration of two orders of magnitude - a far from insignificant shift and one that could affect aquatic life quite drastically. The implication of such a change is important for a number of reasons. For example, the unionized form of ammonia, which is especially toxic to fish and other organisms, could rise by over three orders of magnitude with such a pH change.[28]



Other Failures to Provide Antidegradation Protections

As discussed above, under the section addressing narrative criteria, the State of West Virginia has failed to apply its antidegradation policy in a way that is consistent with the CWA in a variety of circumstances. Again, the most shocking examples are related to mining activities. We believe it is impossible to argue that even the most basic antidegration protection, that of maintaining all existing uses, have been upheld where many miles of streams have been destroyed, biological systems have been completely disrupted or removed, and stream hydrology have been so drastically changed as to bear no resemblance to the kinds of headwater streams they once were.

Again also, there is likely no better documented example and explanation of the failure of WV's antidegradation procedures than in the Spruce Mine case cited above. Undeniably high quality streams were, under the State's 401 certification, doomed to degradation on a scale and of a degree that would better be termed

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[26] *Also See:* http://water.epa.gov/scitech/swguidance/standards/adeg/#implement, which provides links to implementation procedures for a number of States (last viewed on July 29, 2013.)

[27] 47 CSR § 5.6.c.2.

[28] Wurts, William A., Ph.D., *Daily pH Cycle and Ammonia Toxicity*, World Aquaculture, 34(2): 20-21.

destruction. The concept of *de minimis* water quality degradation is completely remote and made meaningless by the permanent and irreversible impairments DEP was prepared to allow at this site.

Another area in which antidegradation is almost completely disregarded is in relation to "general" NPDES discharge permits for various types of discharges. The construction stormwater general permit, while being applied to a wide variety of streams across the state does not include any water quality-based controls that could be said to uphold all numeric and narrative criteria, let alone the antidegradation policy.

Definition of "Point Source'

The definition of "point source" in the proposed Rule, at § 47-2-2.1 varies from the federal definition. The terms "concentrated animal feeding operation" and "landfill leachate collection system" should be added.

Exemption from Turbidity Criterion

At Appendix E, Table 1, item 8.33.1 provides an exemption from the turbidity requirements at 8.33 where certain BMPs are being used and maintained. This exemption is unwise, conflicts with federal regulations, and should be eliminated for two reasons. First, 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. Any difference in effluent limits should reflect differences in the waterbodies' abilities to assimilate wastes, not differences in the activities producing the pollution.

Second, water quality-based limits in permits are to be written to meet criteria under critical conditions of stream flow. Under technology-based limits, BMPs are allowed to perform less efficiently under the highest flows in storm events but this may not be allowed when limits are aimed at meeting in-stream criteria (are water quality-based). Thus, 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.

Thank you for considering our comments and please contact me at 443-480-8970 or brent@potomacriverkeeper.org if there are any questions about this submittal.

Sincerely,

Brent Walls
Upper Potomac Manager
Potomac Riverkeeper Inc
38 Willowby Ct.
Bunker Hill, WV 25413

Coyne, Kevin R

From: Angie Rosser <arosser@wvrivers.org>
Sent: Monday, July 29, 2013 10:22 AM
To: DEP Comments
Cc: Coyne, Kevin R
Subject: 47CSR2 Comments
Attachments: 47CSR2 Comments 7.29.13.pdf; Aluminum Summary Report_WV_03182013 Mitchelmore.pdf; Van Gundy WV DEP statement_03 27 13.pdf; Aluminum pH_Analysis.pdf

Please confirm acceptance of this electronic submission of the attached comments and referenced attachments on Rule 47CSR2. Thank you for the opportunity to submit and have these comments considered.

Attachments:

1. July 29, 2013 Comments on Rule 47CSR2
2. March 18, 2013 Opinion Report by Dr. Carys L. Mitchelmore
3. March 27, 2013 Comments by Dr. James Van Gundy
4. Aluminum pH Analysis

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West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 15304
Attn: Kevin Coyne
dep.comments@wv.gov

July 29, 2013

Re: Comments on Rule 47CSR2 Requirements Governing Water Quality Standards

Dear Mr. Coyne,

West Virginia Rivers Coalition submits these comments on behalf of its 2,500 members and in collaboration with the organizations listed on the signatory page of this document. Each signatory has a vested interest in the quality of West Virginia's waters, and believes that strengthening standards are critical to the future health of our water resources and economic development opportunities in the state.

The following comments address the West Virginia Department of Environmental Protection's proposed changes to 47CSR2, Requirements Governing Water Quality Standards. We request the WVDEP act on behalf of the citizens of West Virginia by moving to further protect their water quality. We are supportive of the changes within these standards that move to do this, however, we have several concerns and urge the WVDEP to consider the comments on specific sections of the proposed rule that we provide below.

Section 47-2-5: Mixing Zones

Whether to promulgate policies regarding mixing zones is a matter of state discretion. We remind DEP that the establishment of mixing zones should be in accordance with EPA guidance and policy. This policy must influence DEP's consideration of permit applications that purport to allow the permittee to discharge higher concentrations of a pollutant when a mixing zone is in

place. Mixing zones are not appropriate for relaxing discharge limits when data indicates that a waterbody lacks the assimilative capacity for a biaccumulative pollutant, such as selenium. While we do not recommend a specific change to the provisions governing mixing zones, we strongly suggest that DEP apply these provisions in a manner consistent with the purposes of the federal Clean Water Act.

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

We fully support the removal of this variance.

Section 7.2.d.29.1: Addition of site-specific zinc criteria for Marr Branch

We have general concerns about adding a site-specific zinc criteria and encourage long-term solutions be sought to find effective ways to treat water without the use of zinc.

Section 8.3.a.2.: Criteria for Nutrients - Lakes

We support the changes to the nutrient criteria for lakes.

We would like to see the WVDEP consider nutrient criteria for streams. The West Virginia Rivers Coalition actively participated in DEP's Nutrient Criteria Committee meetings for several years. However, the nutrient committee has not been active on this issue since 2006. Because the far greater volume of nutrients are discharged into and carried by rivers and streams, the development of criteria for rivers and streams is critical to ongoing aquatic health within our state and beyond. West Virginia's rivers and streams transport nutrients downstream to the Chesapeake Bay and Ohio River, and ultimately the Gulf of Mexico. Both the Bay and the Gulf are currently struggling with the environmental consequences of elevated nutrient levels. Under the Federal Clean Water Act, West Virginia has an obligation not to contribute to degradation of its downstream neighbors.

We urge the DEP to reconvene the Nutrient Committee and move the criteria-setting process for rivers and streams forward as expeditiously as possible.

Appendix E Table 1 Section 8.1: Dissolved Aluminum

We strongly oppose the proposed revisions to the aluminum water quality criteria. The revisions are drastic and equate to greater than a 13-fold and 46-fold increase over the current criteria for

acute and chronic aluminum toxicity to aquatic life respectively.[1] The Clean Water Act ("CWA") requires that States "adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use." 40 C.F.R. 131.11(a)(1). Unfortunately as shown below, the proposed rule has failed to comply with this mandate. Thus, the proposed rule must be withdrawn and either the existing standard retained or more extensive scientific research justifying hardness as a mitigating factor in aluminum toxicity carried out.

We include in our comments the attached report by Dr. Carys Mitchelmore, a toxicologist from the University of Maryland and the attached comments of Dr. James Van Gundy submitted in the public comment period during the emergency rule process for this criteria change.

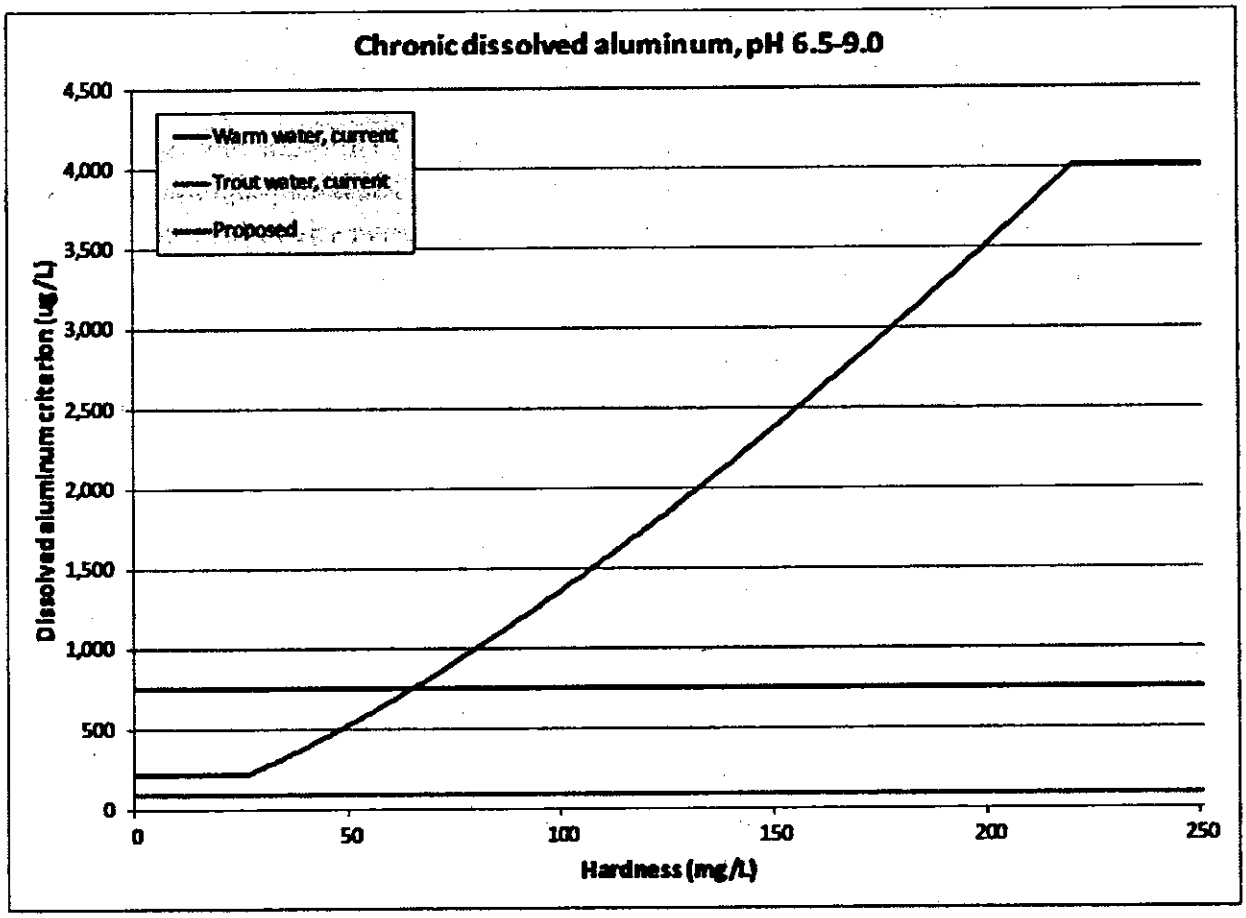
The proposed rule change will significantly weaken the aluminum criteria.

The proposed rule requires the calculation of aluminum criteria based on the hardness of the stream. The new equation in the rule would significantly weaken protections, as compared to the existing rule.

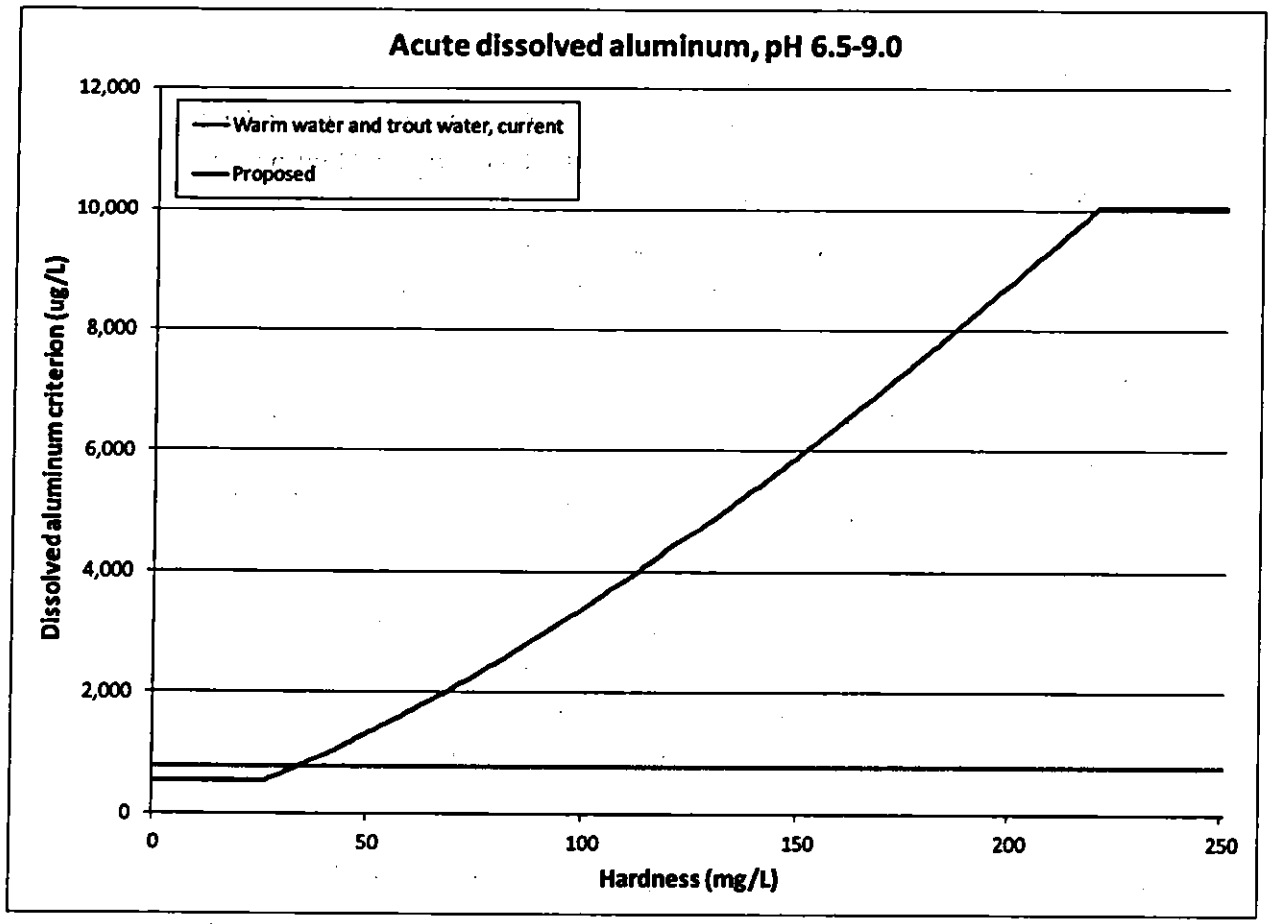
As shown in the first chart below, the emergency rule would weaken the current criterion for trout waters at all hardness values. As hardness increases, it will become increasingly less stringent. Once hardness reaches 220 mg/L, the proposed criterion is more than 46 times less stringent than the current criterion.

The first chart also compares the proposed chronic criterion to the current criterion for warm waters. In this case, the proposed criterion would provide additional protections if hardness is less than 65 mg/L—a condition that might be found in very few streams, and certainly not in streams already impacted by coal mining. However, at all other hardness values, the proposed criterion is weaker than the current criterion. Once hardness reaches 220 mg/L, the proposed criterion is more than 5 times less stringent than the current criterion.

[1] Mitchelmore, Carys. Opinion Report on the West Virginia DEP's Emergency Rule For Changes to the Water Quality Standard for Aluminum. January, 2013 at 2.



Additionally, a single acute criterion currently applies to both trout and warm waters. As shown in the following table, the proposed criterion is slightly more protective in streams with hardness below 34 mg/L— conditions that might be found in very few streams, and certainly not in streams already impacted by coal mining. However, at all other hardness values, the proposed criterion is weaker than the current criterion. Once hardness reaches 220 mg/L, the proposed criterion is more than 13 times less stringent than the current criterion.



In short, in any but the most pristine streams, the emergency rule would weaken the existing aluminum criteria. And in high-hardness conditions witnessed in streams that are impacted by coal mining, the emergency rule represents a significant weakening of the existing criteria—more than 46 times weaker for the chronic trout water criterion, more than 5 times weaker for the chronic warm water criterion, and more than 13 times weaker for the acute criterion.

There lacks sufficient information to promulgate hardness based aluminum criteria.

WVDEP stated that "[d]issolved aluminum toxicity, like other metals, has a direct relationship to hardness, and numerous scientific studies have validated the impact of hardness as it relates to toxicity to the aquatic community."[2] WVDEP, however, has mischaracterized the state of the science. In fact, there are few peer reviewed studies on the effects of hardness on aluminum toxicity. According to Dr. Carys Mitchelmore, an aquatic toxicologist from the University of Maryland:

> changes to the water quality standards for aluminum in West Virginia are inappropriate given the paucity of peer-reviewed studies and definitive data sets that specifically

[2] See WVDEP Secretary of State filing at 5.

> investigate the relationship between aluminum toxicity and water hardness. Studies should include definitive LC50 or EC50 values at multiple and wide-ranging hardness levels. Unlike other metals (e.g. Cd, Cu, Zn), where we have a good understanding of the relationship between water hardness and toxicity, there are very few similar robust data sets regarding this relationship with aluminum. There are indeed hundreds of papers detailing this relationship in the aforementioned metals but very few for aluminum (with the majority of studies having been carried out in the 1970-1980's). Whereas there are studies that suggest this relationship there are others that also disprove this relationship. It is unclear whether differences are due to the specific aquatic species under study (or life-stage) or something else that confounds this relationship (i.e. other water quality parameters such as pH or dissolved organic matter) until more detailed replicate studies in numerous aquatic species are carried out. These studies are also laboratory studies that do not replicate complex field conditions.[3]
>
> Furthermore, many studies were not designed specifically to look at this aluminum/hardness relationship and hence are limited in their use of only a few concentrations of aluminum and often only two (or a small concentration range) of hardness levels were used. This is especially the case for subacute and chronic studies where very little data is available.[4]

Presumably, this is why the Environmental Protection Agency ("EPA") did not promulgate hardness based aluminum criteria at the same time it promulgated them for other metals.

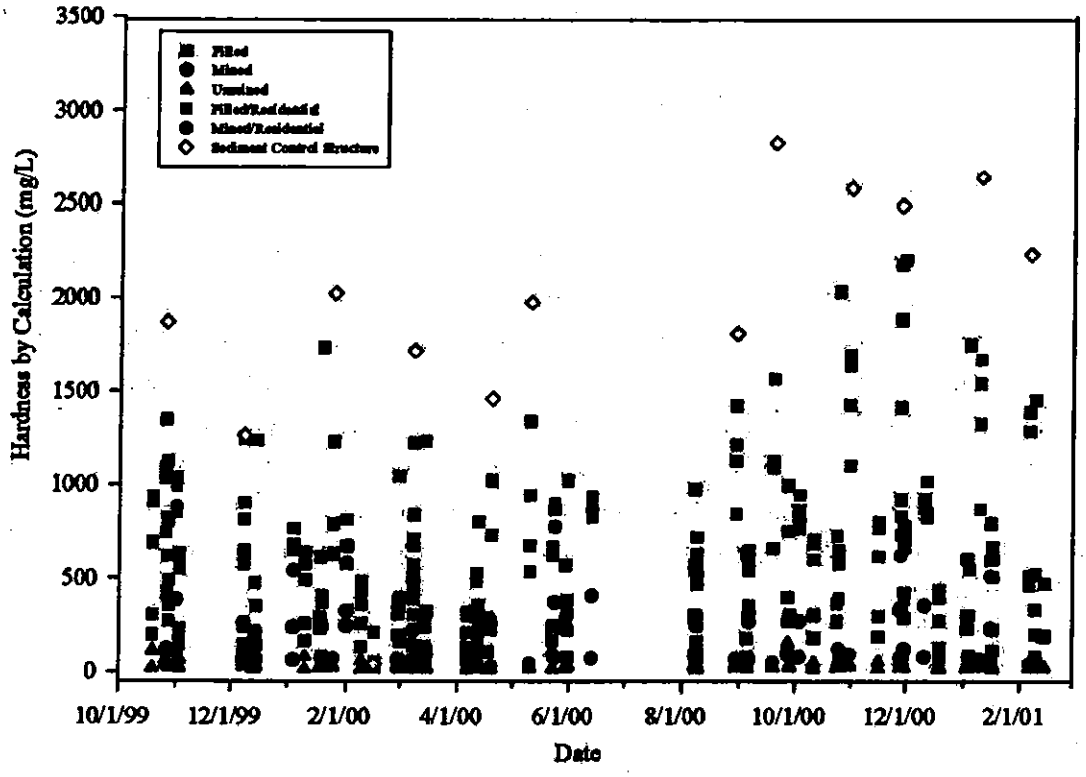
Further, WVDEP apparently (although no specific reference is provided) relied on a report by GEI Consultants done in conjunction with Colorado's hardness based aluminum criteria as its primary justification for the current proposal. The report was sponsored by the Colorado Mining Association and is not peer-reviewed. GEI included data developed after EPA promulgated aluminum criteria 304(a) guidance. In her critique of that report Dr. Mitchelmore explains:

> However, this data is also limited in scope (number of aquatic species, replicated studies, definitive LC50 levels, pH levels differing between studies and often a small range of hardness or only two hardness data points used). Indeed, the GEI report (2010) notes that there are very few LC50 data available in the pH range of 6.5 to 9. Furthermore, in the GEI report (2010) used to derive the chronic aluminum/hardness equation for Colorado it was noted that only a few studies were available and that the hardness values used in the literature only represented a small range (i.e. 7.5-45 mg/L). Furthermore, they present data from a study by Cleveland (see Table 2; Cleveland manuscript reference in GEI, 2010) where the toxicity (using pH 6.5) of aluminum increased with increasing hardness.

[3] Mitchelmore at 2.
[4] Id.

The hardness values evaluated in the GEI report i.e. 7.5-45 mg/l are far lower than those commonly seen in West Virginia downstream from coal mining discharges. For example in the chemistry study done for the Mountain Top Mining Environmental Impact Statement, EPA researchers generally found elevated hardness at coal mining sites versus unmined sites as shown in the chart below.[5]

Figure H-1. Hardness Concentration for All Sites vs. Date



The hardness reported by EPA greatly exceeded values of those addressed in the GEI report sometimes by approximately 50 times.[6] Further, WVDEP has collected a significant amount of hardness data at its ambient water quality monitoring stations across the state; these data demonstrate that hardness values in West Virginia streams are often significantly higher than 45 mg/L.[7] Importantly, there appears to be no study that evaluates aluminum toxicity at the elevated hardness levels common in some West Virginia streams, the very streams where dischargers are asking for relief from aluminum regulation. WVDEP thus has no valid scientific

[5] Bryant, Gary, McPhilliamy, Scott, USEPA Region III. Childers, Hope, Signal Corporation. A Survey of the Water Quality of Streams in the Primary Region of Mountaintop / Valley Fill Coal Mining; October 1999 to January 2001. Mountaintop Mining / Valley Fill Programmatic Environmental Impact Assessment. April 8, 2002 at 44.
[6] From chart at filled sites.
[7] See https://apps.dep.wv.gov/dwwm/wqdatac/

basis or justification to support the proposed revision, which significantly and incrementally weakens the criteria as hardness values rise above 45 mg/L.[8]

The nature of the proposed hardness based criteria also presents circularity that perversely incentivizes pollution. Under this rule, the Aluminum standard becomes increasingly permissive as hardness increases. We know that Total Dissolved Solids (TDS) values, which include those ions that contribute to hardness, rapidly increase within a stream following disturbance of its watershed due to surface mining. Thus, the more Aluminum that is released from a mined or quarried site, the more Aluminum will be permitted to be discharged. It is a dangerous set-up for spiraling degradation the State's water resources, and the provision of the rule that revises the Aluminum criteria must be withdrawn at this time in order to protect the public interest.

Aluminum toxicity is complex and further undermines the proposed rule.

"Aluminum toxicity depends on many factors other than water hardness, for example major drivers include pH and also the amount of dissolved organic material (DOM) in the water (see review by Gensemer and Playle, 1999). The solubility, speciation and/or complexation of aluminum is highly dependent upon multiple ambient water quality characteristics that ultimately determine bioavailability and toxicity."[9] Researchers characterizing the state of the science concluded that "...predicting Al toxicity as pH values increase above 7 may not be a simple matter and is restricted by our limited understanding of Al bioavailability under such conditions. In particular, the toxicity of Al(OH)4 -, which predominates at pH 7, is very poorly understood" (Gensermer and Playle, 1999)."[10]

Dr. James Van Gundy's comments go on to say:

> The current scientific literature dealing with Aluminum toxicity towards aquatic life is not extensive and what does exist deals largely with acute rather than chronic effects. Different Aluminum studies have presented seemingly contradictory results, often due to the fact that inadequate attention was paid to the many factors that may influence Aluminum toxicity. Among these factors are temperature, pH, hardness, dissolved oxygen, dissolved organic materials, and the presence of ionic substances such as sulfate, fluoride, nitrate, silicates, phosphate, and others, In addition, sensitivity to Aluminum is known to vary significantly between species and often between life history stages of the same organism.[11]

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[8] Note: we do not believe the GEI report is sufficient to justify a hardness based criteria in any state but it is particularly problematic in West Virginia where streams have extremely high hardness.
[9] Mitchelmore at 3.
[10] Id.
[11] Van Gundy at 1.

While it has been known for some time that water hardness within a certain range can ameliorate the toxicity of metals such as Zinc and Copper, its effect on Aluminum toxicity is not nearly as clear-cut. Furthermore, DEP's Emergency rule assumes that within the pH range of most natural waters (pH=6.5–9.0) hardness is the only factor that affects the toxicity of Aluminum and this is seldom if ever the case.

The situation is further complicated by the fact that receiving streams are dynamic systems within which conditions change both in time and space. In a stream with significant plant growth for example, pH may vary considerably between daylight and nighttime hours. Seasonal changes in temperature and changes in flow due to precipitation or the lack of it, also affect stream chemistry. The meeting and mixing of streams with different chemistry is of particular concern as at least one study has shown that the toxicity of Aluminum increases within such mixing zones, even at circumneutral pH. The mechanisms behind this observed effect are not well understood.[12]

The proposed rule does not considered any of these complex interactions affecting aluminum toxicity. The WVDEP has not provided justification for the new standard's failure to account for this complexity.

The Colorado and New Mexico criteria are more stringent than the proposed rule.

WVDEP stated that new studies (i.e. GEI report noted above) were used to update and support new hardness based approaches to dissolved aluminum criteria in Colorado and New Mexico. WVDEP mischaracterizes those criteria.

In Colorado, the aluminum criteria are for total aluminum and not dissolved.[13] This means that the Colorado criteria are much more stringent than what is proposed by the WVDEP. For example, monitoring required for two coal mining NPDES permits in West Virginia showed the relationship between dissolved and total aluminum over time for three separate outfalls. On average 42% of total aluminum was dissolved.[14] In other words, on average the Colorado criteria are nearly 2 ½ times more stringent than the proposed criteria.

In New Mexico, the aluminum criteria are based on a modified method for generating dissolved aluminum. Generally in order to analyze a sample for a dissolved parameter the test water is filtered to remove particles. The standard filter size for a dissolved analysis is .45 μm pore.[15] New Mexico aluminum criteria, however, are "...based on analysis of total recoverable

[12] Van Gundy at 2.
[13] Colorado Regulation #31 at 56.
[14] See attached spreadsheet Aluminum_pH analysis. Data obtained through FOIA request.
[15] See http://testamericalabs.blogspot.com/2011/01/what-is-difference-between-toal-metals.html

aluminum in a sample that is filtered to minimize mineral phases as specified by the department" (NMED 2011).[16] A study done by the New Mexico Environment Department concluded that a 10 μm pore size minimized mineral-phase aluminum without restricting amorphous or colloidal phases and that if turbidity was less than 30 NTU, no filtration was needed.[17]

Thirty NTU equates to approximately 46 mg/l total suspended solids ("TSS").[18] In reviewing the TSS associated with the example NPDES monitoring reports noted in the paragraph above, the TSS associated with those discharges are all substantially less than 46 mg/l and thus would not require filtering under the New Mexico criteria. More generally NPDES discharges are usually restricted to an average monthly TSS of 35 mg/l. Thus, in effect, the New Mexico criteria are based on total aluminum and are also nearly 2 ½ times more stringent that what rule is proposing.

The proposed aluminum criteria is flawed and must be abandoned. In the past ten years dischargers have led efforts to make West Virginia's aluminum criteria less and less protective. In each instance the state has complied. It is long past time to reverse this trend and respect the needs of the environment and citizens.

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

We support this revision in that E. coli is determined to be a more accurate criteria and better parameter for bacteria harmful to human health. However, we are concerned with how the transition from one criteria to another will be handled.

There should be a transition period where both the old and the new bacterial criteria run concurrently until WVDEP has adequately collected E. coli data on WV streams. Specifically, all streams listed as impaired based on the existing fecal coliform criterion 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 standard.

Additionally, we have serious concern over the daily maximum criterion included in the proposed revision. Understanding that when WVDEP collects fecal coliform data, it rarely does so more than once a month during routine testing done under the watershed management framework, we are concerned that the proposed daily value for E. coli "not to exceed a concentration level of **1074 cfu/100 ml" is likely to become the default criterion - this would**

[16] New Mexico Aluminum Filtration Study. August 24, 2012 at 2.
[17] Id.
[18] A log-linear model showed strong positive correlation between TSS and turbidity (R2 = 0.96) with a regression equation of ln(TSS) = 1.32 ln(NTU) + C, with C not significantly different than zero for eight of the nine sampled streams. See www.depts.washington.edu/cuwrm/research/tssturb.pdf.

result in criteria less stringent than our existing criteria. This daily maximum criterion should be dropped and the proposed 410 cfu/100 ml should be interpreted the same as the prior fecal coliform criterion i.e, that one sample > than 410 cfu/100 ml is an exceedence of the water quality standard as it would be equal to 10% exceedence even if 10 samples were taken in that month and 9 of those samples were less than 410 cfu/100ml..

The added daily value provision to the Rule is confusing and could be interpreted and applied as a weakening of the current bacteria standard and should be removed.

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

The triennial review fails to update West Virginia's water quality parameters to include numeric standards for total dissolved solids ("TDS") and conductivity. We support the establishment of a TDS standard for aquatic life use for West Virginia. We strongly recommend that the standard be set at 250mg/l, which is the USEPA recommended Human Health Standard for total dissolved solids.[19]

In addition, we believe it is imperative that DEP propose and finalize an aquatic life criterion for conductivity that is consistent with the recent series of peer-reviewed scientific analyses that link high conductivity with harms to aquatic life. USEPA published a draft report that derived a conductivity benchmark of 300 uS/cm in 2010, and after review by its Science Advisory Board, this draft report was finalized in 2011 (EPA Office of Research & Development Final Report: A Field-based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams, May 27, 2011). In 2013, the methods and results from this analysis were published as a series of articles in the peer-reviewed journal, *Environmental Toxicology and Chemistry*, including: "A method for assessing causation of field exposure–response relationships," "A method for deriving water-quality benchmarks using field data," "A method for assessing the potential for confounding applied to ionic strength in Central Appalachian streams," "Derivation of a benchmark for freshwater ionic strength," "Assessing causation of the extirpation of stream macroinvertebrates by a mixture of ions," and "Relationship of land use and elevated ionic strength in Appalachian watersheds."

Many other peer-reviewed analyses have led to consistent conclusions; several of these papers are referenced in the May 6, 2013 Petition for Rulemaking to Set Water Quality Standards to Protect Appalachian Waters from Mining Waste and Harmful Levels of Conductivity, which was submitted to USEPA.

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[19] USEPA, National Recommended Water Quality Criteria available at http://www.epa.gov/waterscience/criteria/wqctable/#A2

The science is clear. USEPA's analysis has undergone USEPA Science Advisory Board and independent peer review. Other research has also undergone independent peer review. 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. Therefore, an enforceable water quality criterion for conductivity is necessary to meet this basic requirement.

We thank the West Virginia Department of Environmental Protection for consideration of our comments.

Sincerely,

Angela Rosser
West Virginia Rivers Coalition

Don Garvin
West Virginia Environmental Council

Cindy Rank
West Virginia Highlands Conservancy

Helen Gibbons
League of Women Voters of West Virginia

Emily Russell
Appalachian Mountain Advocates

James Kotcon
West Virginia Chapter of the Sierra Club

Dianne Bady
Ohio Valley Environmental Coalition

Brent Walls
Potomac Riverkeeper

Coyne, Kevin R

From:	Jason Bostic <JBostic@wvcoal.com>
Sent:	Monday, July 29, 2013 3:55 PM
To:	Coyne, Kevin R; DEP Comments
Cc:	Mandirola, Scott G; Clarke, Thomas L; Halstead, Lewis A; Ward, Harold D
Subject:	WV Coal Association Comments-- Proposed Revisions to 47 CSR, State Water Quality Standards Rule
Attachments:	WVCA Comments- 47CSR 2 July 29, 2013.pdf

July 29, 2013

Mr. Kevin Coyne
West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street
Charleston, WV 25304
Via Electronic Mail: Kevin.R.Coyne@wv.gov
dep.comments@wv.gov

Re: Public Comment Period on Proposed Revisions to 47 CSR 2- State Water Quality Standards

Dear Mr. Coyne:

Pursuant to the public notice published by the West Virginia Department of Environmental Protection (WV DEP), attached please find the comments of the West Virginia Coal Association (WVCA) regarding the agency's proposed revisions to the state's water quality standards rule, 47 CSR 2.

Respectfully Submitted,

Jason Bostic

Vice-President

West Virginia Coal Association

West Virginia Coal Association

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July 29, 2013

Mr. Kevin Coyne
West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street
Charleston, WV 25304
Via Electronic Mail: Kevin.R.Coyne@wv.gov
dep.comments@wv.gov

Re: Public Comment Period on Proposed Revisions to 47 CSR 2- State Water Quality Standards

Dear Mr. Coyne:

Pursuant to the public notice published by the West Virginia Department of Environmental Protection (WV DEP), the West Virginia Coal Association (WVCA) offers the following comments regarding the agency's proposed revisions to the state's water quality standards rule, 47 CSR 2.

The West Virginia Coal Association (WVCA) is a non-profit state coal trade association representing the interests of the West Virginia coal industry on policy and regulation issues before various state and federal agencies that regulate coal extraction, processing, transportation and consumption. WVCA's general members account for 95 percent of the Mountain State's underground and surface coal production. WVCA also represents associate members that supply an array of services to the mining industry in West Virginia. WVCA's primary goal is to enhance the viability of the West Virginia coal

industry by supporting efficient and environmentally responsible coal removal and processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA is the largest state coal trade association in the nation.

Overall, WV DEP is to be commended for the pronounced improvements to the water quality standards rulemaking process since assuming that duty from the Environmental Quality Board in 2005. The professional manner in which WV DEP considers revisions to the program continually improves, as does the agency's commitment to science, public involvement and adherence to the public policy goals established by the West Virginia Legislature. WVCA believes the revised the aluminum and beryllium standards, which are currently effective through an emergency rule filing, further advance the effectiveness of the state's water quality standards program.

On October 12, 2012, WVCA filed comments on the agency's triennial review of the state's water quality standards. The Coal Association would request that WV DEP consider those comments as part of the current rulemaking initiative.

Aluminum Criteria

WVCA fully supports WV DEP's efforts to adopt a hardness-based standard for aluminum to better protect aquatic life and simplify NPDES compliance with the aluminum criteria. While West Virginia has made great strides in revising its water quality standards for aluminum in years past to reflect the prevailing natural conditions within the state's waters, WVCA believes the revisions contemplated in the March 2013

emergency rule and the current rulemaking proposal will finally adopt truly protective aluminum criteria for West Virginia.

Because aluminum is a very common, naturally occurring element, many streams in the state exceed the numeric criteria for aluminum, with no corresponding signs of impairment to the aquatic life. The result is a CWA Section 303(d) list of "impaired waters" with several streams identified as impaired for aluminum, mandating the preparation of Total Maximum Daily Load (TMDL), at state expense, to bring those waters into compliance with a flawed standard. *Additionally, reliance on the current aluminum standard has burdened NPDES permit holders as they struggle to maintain compliance with a standard that, from an aquatic life use protection standpoint, is meaningless.*

As with many other metals, the toxicity of aluminum is inversely related to water hardness. In other words, aluminum's potential toxicity to aquatic life decreases as the water hardness increases. EPA has developed hardness-dependent equations for a number of metals to reflect this relationship. For example, West Virginia has adopted EPA's hardness-dependent equations for other metals such as cadmium, trivalent chromium, copper, lead, nickel, silver, and zinc. *Similar hardness-based criteria, as proposed in the rule should, be adopted for aluminum to reflect the actual toxicity of the constituent.*

Other states have adopted similar hardness-based aluminum standards. New Mexico recently adopted a hardness-based standard that was approved by EPA in April

2012. The State of Colorado received EPA approval of its hardness-based standard in August 2011.

On March 27, 2013 WVCA submitted detailed comments regarding the state's proposed hardness-based aluminum standard. The Coal Association would ask the agency to consider these previous comments during its deliberations on the current rulemaking initiative.

Beryllium Criteria

WVCA completely supports WV DEP's efforts in the proposed rule to adopt the beryllium MCL of 0.004 mg/l as the human health Category A criterion.

WV DEP has historically maintained water quality criteria for beryllium that was proposed, but then specifically rejected, by EPA. West Virginia's public drinking water supply/Category A criterion for beryllium is 0.0077 µg/l. However, the national recommended criterion for beryllium for the protection of human health is 4 µg/l, which is the maximum contaminant level (MCL) for drinking water. The West Virginia beryllium criterion is nearly three orders of magnitude below the EPA recommended standard.

The current West Virginia criterion appears to be based upon a proposed federal criterion published in 1991.[1] ***This proposed rule was never adopted by EPA, and the proposed criterion of 0.0077 µg/l does not appear in any past version of EPA's nationally recommended water quality criteria.*** This discarded proposed federal

[1] 56 Federal Register 58420, November 6, 1991, pg. 58442.

recommendation remains in effect for the state and, as a virtue of its misplaced and illegal application of Category A uses designation (see comments submitted previously by WVCA on October 12, 2012 regarding the 2014 Triennial Review of water quality standards), is being applied to all streams and to all NPDES permits by WV DEP.

Following the publication of the proposed human health water quality criteria, EPA promulgated the beryllium MCL of 0.004 mg/l in July 1992. West Virginia adopted its current beryllium criterion of 0.0077 µg/l in 1993; a full year *after* EPA adopted the beryllium MCL that remains the national recommended criterion to this day. Therefore, West Virginia's beryllium criterion was not based upon the best available science in 1993, and it certainly is no more scientifically justifiable now.

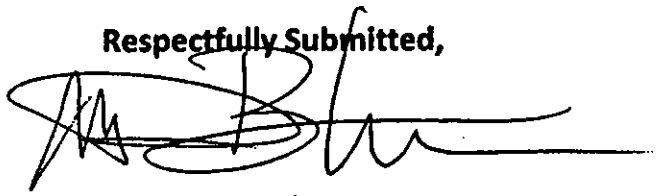
The standard for beryllium embodied in the proposed rule has been reaffirmed by EPA as recently as 2008, when EPA published a draft Integrated Risk Information System (IRIS) reassessment that proposed no changes to the reference dose upon which the beryllium MCL is based.[2]

Continued reliance on the current, unsupported beryllium standard has the potential to create substantial regulatory burdens. If beryllium is detected above the flawed standard, NPDES permit holders could face considerable cost and complications to assure compliance with a meaningless standard.

[2] *See generally* "Toxicological Review of Beryllium and Compounds" published by EPA in April 1998 and available at http://www.epa.gov/iris/subst/0012.htm

WVCA appreciates the opportunity to provide these comments regarding the revisions to the state's water quality standards.

Respectfully Submitted,



Jason D. Bostic
Vice-President

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.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
SUMMARY OF AMENDMENTS
AGENCY APPROVED RULE
"Requirements Governing Water Quality Standards", 47CSR2

The following amendments have been included in the Agency Approved Rule - Requirements Governing Water Quality Standards, 47CSR2:

1. 8.13 and 8.13.1. Recreational criteria (Fecal coliform to E. coli). Proposed revision to remove the fecal coliform bacteria standard and replace with the new EPA recommended E. coli criteria has been removed. This decision was based on some of the concerns raised during the comment period, 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.

2. 8.23. Organics, Indeno (1,2,3-cd) Pyrene - This is a revision to the spelling of "Indeno" which is currently misspelled as "Ideno" in the currently effective rule.