



WEST VIRGINIA RIVERS

August 16, 2024

Water Quality Standards Program
Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE, Charleston, West Virginia 25304

Attn: Dawn A. Newell

Submitted electronically via dawn.a.newell@wv.gov

Dear Ms. Newell,

West Virginia Rivers Coalition, on behalf of our members and the organizations signed below, respectfully submit the following comments on the proposed changes to the West Virginia Department of Environmental Protection's (WVDEP) Rules Governing Water Quality Standards. We recognize that clean water is the foundation of life, and commend WVDEP's commitment to protecting our state's water resources.

1. Transitioning from Total Coliform to *E. coli*

We support the proposed changes to assess bacterial contamination. The proposed change is consistent with EPA's recommendation¹ and is currently implemented in neighboring states such as Virginia.² However, the revised standard does not specify a time period within which to calculate mean values or percentiles. We recommend DEP incorporate a 30-day period for this purpose following EPA guidance.³ Likewise, we recommend that standard 8.13.1 for the Ohio River mainstem retain the 30-day period requirement.

2. Increased Fees for Water Pollution Control Permits

¹ EPA 841F21007F

² 9VAC25-260-170

³ See EPA 820-F-12-058, page 40

We also support the proposed increases in fees associated with water pollution control permits. The increased application and renewal fees, which have not changed since the 1990s, will allow WVDEP to cover costs associated with administering the permits and support WVDEP in their critical undertakings.

3. Human Health Criteria

Further, we support the proposed inclusion of new standards for six organic pollutants, including chemicals recognized as probable human carcinogens such as DDE.⁴ We note that the numeric criteria for the proposed organic compounds are consistent with EPA's national recommended water quality criteria for human health.⁵ A recent study⁶ underscored the importance of such improved water quality standards, finding "a significant association between proximity to chemical contamination and kidney cancer in Kanawha and Mingo counties, as well as breast and soft tissue cancers in Putnam County".

For these reasons we also recommend the inclusion of an additional 24 pollutants that are recognized by EPA as priority pollutants for public health⁷ yet are excluded from WVDEP's proposed water quality standards. We provide additional information on each of these pollutants in Attachment A. It is standard practice to evaluate many organic pollutants as a panel, and doing so generally does not increase analytical costs. For example, ALS laboratory - a West Virginia-certified water quality laboratory located in Pennsylvania - includes a large set of organic parameters in its standard panel, including some pollutants that are currently not listed in the proposed water quality standards rule. Therefore, including the additional EPA priority pollutants would not only serve public health, but would also be cost-effective for taxpayers and dischargers. Even if such additional pollutants are not thought to be present in industrial effluents in West Virginia currently, their inclusion would serve to protect residents in the future as manufacturing processes and industrial effluents change over time.

4. Selenium Variances

The site-specific variances operating in perpetuity could prohibit future restoration projects, especially if restoration projects must demonstrate a pollution load

⁴ <https://www.regulations.gov/document/EPA-HQ-OW-2014-0135-0194>

⁵ <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table>

⁶ <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=17012&context=dissertations>

⁷ <https://www.epa.gov/sites/default/files/2015-09/documents/priority-pollutant-list-epa.pdf>

reduction in a segment where a variance exists. The proposed site-specific variance for selenium contamination in Dingess Run (section 7.2.4.i.2) would increase the standard for whole-body fish tissue from 8.0 to 9.5 ug/g for chronic exposures. We recommend additional analysis to estimate the sample size required to maintain sufficient statistical power to detect a compliance with a 9.5 ug/g threshold. Prior research⁸ has shown that as the true mean concentration of selenium increases in a fish community, so does the among-individual variation in body burdens, and this increase therefore requires additional samples (additional fish) to assess compliance with higher selenium standards while maintaining statistical power for detection. For instance, an eight-fish sample could detect an increase of approximately 1 ug/g Se from a standard of 4 ug/g with 80% power (given $\alpha = 0.05$), but this sample size would be unable to detect such an increase from an 8 ug/g Se standard with more than a coin-flip probability.

5. Limited Use Categories

The proposed changes include a new classification for West Virginia water bodies as “limited aquatic life” (category B3) to be determined through a Use Attainability Analysis (UAA). We recognize that neighboring states have a similar designation, but the language of the proposed standard requires additional clarification. First, the proposal defines category B3 waters as those with “limited capacity to support the aquatic life that would be expected to be present in unimpaired waters,” but it is unclear what “limited” means in this context. We question what waters might be deemed to have limited value.

In order to be allowed a lowered designated use, the Use Attainability Analysis requires that the state demonstrate why attainment of its designated use is not feasible. The regulations list 6 factors that can be assessed to qualify for a lowered designated use via the UAA process; however, it is unclear which factor or factors WVDEP believes can be met to allow a permanent lowering of expectations for aquatic life. Arguably any waterbody could be limited in some way due to natural or anthropogenic causes, and therefore the scope of the category B3 waters is overly broad and would potentially lead to misuse.

Second, the implications of a B3 designation are unclear. The proposed standard states that alternative water quality criteria will be established on a case by case basis only for the parameter(s) causing impairment. There are hundreds of streams that are

⁸ Hitt and Smith, IEAM 1995. <https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.1579>

currently deemed impaired for Aquatic Life Use with a cause of ionic strength. If ionic strength is the parameter that is causing the impairment, WVDEP would need to first establish a base criteria from which to develop an alternative one. We request clarification whether a B3 designation would change the narrative criterion for aquatic life or the numerical standard for the WV stream condition index for benthic macroinvertebrate. WVDEP cannot lower the standards for the measurement of aquatic health.

In order to have a “successful” UAA, one that lowers the expectations for a water, one must demonstrate that the water has not met the designated use since November 28, 1975. The state did not have a monitoring program that directly measures biotic integrity until the mid-1990s, therefore WVDEP does not have the historical information needed to make these existing use determinations. Assuming WVDEP will have to utilize water quality data and land use information, it will be important to establish thresholds regarding the quantity and quality of data used. And as stated before, if ionic strength is to be considered as evidence of not being able to meet the default Aquatic Life Use, a statewide criterion must be set in order to protect other streams from this acknowledged degradation.

We appreciate that extensive research has gone into understanding the ecological effects of ionic pollution on benthic macroinvertebrates in Appalachian streams⁹ and that this research has led to substantial planning and policy negotiations among DEP, EPA, and other parties. For instance, a recent study¹⁰ found limited recovery of benthic macroinvertebrate communities in Appalachian streams following cessation of surface mining activities and concluded that “impacts may remain for decades.” However, this study observed a recovery trend in some locations, and therefore DEP should not conclude that all streams with ionic pollution (e.g., conductivity > 500 uS/cm) should be considered for category B3 designation. Moreover, use designations to B3 would be inappropriate if streams had achieved a higher use (B1 or B2) after the passage of the Clean Water Act amendments in 1975. Although a site-specific UAA, public participation, and EPA concurrence will be required for such use designations, we are concerned that a lack of historical data may reduce confidence in these determinations. To facilitate analysis, site-specific UAAs should incorporate all relevant information,

⁹ https://doi.org/10.1007/978-3-030-57780-3_10

¹⁰ <https://doi.org/10.1016/j.scitotenv.2020.137216>

including data collected by volunteers with the DEP Save Our Streams program as well as non-profit organizations and other governmental agencies.

We have similar concerns for the proposed “limited recreational contact” designation given the cultural and economic importance of West Virginia rivers and streams in this regard. An analysis from 2017¹¹ reported that outdoor recreation in West Virginia directly accounted for 91,000 jobs, \$91B in annual consumer spending, \$2.4B in salaries and wages, and \$660M in local and state tax revenue. Such cultural and economic benefits may suffer from the proposed limited use designations. For instance, brown trout fisheries in southern West Virginia are highly valued by residents and visitors, and a “limited use” designation in such places could jeopardize their cultural and economic values. We also note that in most cases, data limitations will limit DEP’s ability to assess pre- and post-1975 fisheries conditions as required by UAA. Even with such proposed limited use designations, the Clean Water Act retains the fundamental goal for fishable and swimmable waters in West Virginia.

6. Conclusion

In summary, we support some aspects of DEP’s proposed updates to water quality standards, and we provide recommendations to improve protections for public health, aquatic life, and recreation. We appreciate the opportunity to provide comments in the triennial review process and look forward to continued communication with DEP on these vital issues.

Sincerely,

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Town Run Watershed Group

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¹¹ https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_WV.pdf

Potomac Riverkeeper Network

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Attachment A. EPA priority pollutants for public health recommended for inclusion in DEP water quality standards.

Pollutant	CAS #	EPA recommended criterion: consumption of Organism Only (ug/l)	EPA recommended criterion: consumption of Organism + Water (ug/l)	Publication Year
Acrolein	107028	400	3	2015
alpha-Endosulfan	959988	30	20	2015
Asbestos	1332214	—	7 million fibers/L	1991
Benzidine	92875	0.011	0.00014	2015
beta-Endosulfan	33213659	40	20	2015
Bis(2-Chloro-1-methylethyl) Ether	108601	4,000	200	2015
Bis(2-Ethylhexyl) Phthalate	117817	0.37	0.32	2015
Chlorodibromomethane	124481	21	0.8	2015
Chrysene	218019	0.13	0.12	2015
Endrin Aldehyde	7421934	1	1	2015
Hexachlorocyclopentadiene	77474	4	4	2015
Hexachloroethane	67721	0.1	0.1	2015
Isophorone	78591	1,800	34	2015
N-Nitrosodimethylamine	62759	3	0.00069	2002

N-Nitrosodi-n-Propylamine	621647	0.51	0.005	2002
N-Nitrosodiphenylamine	86306	6	3.3	2002
1,1,2-Trichloroethane	79005	8.9	0.55	2015
1,2,4-Trichlorobenzene	120821	0.076	0.071	2015
1,2-Diphenylhydrazine	122667	0.2	0.03	2015
Trans-1,2-Dichloroethylene	156605	4,000	100	2015
1,3-Dichloropropene	542756	12	0.27	2015
3,3'-Dichlorobenzidine	91941	0.15	0.049	2015
3-Methyl-4-Chlorophenol	59507	2,000	500	2015
p,p'-Dichlorodiphenyldichloroethane (DDD)	72548	0.00012	0.00012	2015
