

# Water Quality Standards Quarterly Meeting

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west virginia department of environmental protection

# Agenda

- ▶ **Introductions - WQS Staff, Attendees**
- ▶ **Proposed WQS Rule Changes**
- ▶ **Triennial Review Timeline**
- ▶ **Category A Discussion**

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# Status & Timeline: 2016 WQS Rule Revision

- ▶ View documents on [Sec of State website](#)
- ▶ Contains changes to selenium and aluminum criteria, as well as variances for Martin and Sandy Creek watersheds
- ▶ 2016 Legislative session - WQS rule introduced
  - ▶ [SB 180](#), currently in Energy, Industry and Mining Committee
  - ▶ [HB 4103](#), passed Energy Committee, now in Judiciary
- ▶ Summer 2016 - After passed by Legislature, signed by Governor, and effective date, submit to EPA for approval



# Status & Timeline: WQS Emergency Rule

- ▶ Revisions to aluminum and selenium aquatic life criteria
- ▶ Submitted 6/29/15
- ▶ Approved by Sec of State on 8/10/15
- ▶ Amendment filed by DEP on 9/21/15
- ▶ Amendment approved by Sec of State on 10/22/15
  
- ❑ Submitted to EPA for approval 10/26/15
- ❑ Received by EPA on 11/2/15
- ❑ EPA expected to send decision letter soon

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# Status & Timeline: 2017 Triennial Review

## 2016 Proposed Rule process & 2017 Legislative process

- ▶ **Jan (today)** - Public Meeting on Category A
- ▶ **Feb-March**- Continue technical review of potential revisions
- ▶ **April** - Public Meeting: discuss revisions to be proposed
- ▶ **June** - Advisory Council meets, Public Notice of WQS Triennial revisions
- ▶ **August** - Public hearing, oral and written comments
- ▶ **By August 26<sup>th</sup>** - Submit DEP-proposed rule to Sec of State
- ▶ **2017 Legislative session** - WQS Triennial rule introduced
- ▶ **Summer 2017** - After effective date, submit to EPA for approval

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# Consider Application of Category A

March 12, 2015: [HB 2283](#) passed

“Requirements Governing Water Quality Standards is authorized...”

*Provided*; that the Secretary ... shall consider, for the 2017 triennial review, potential alternative applications for the Category A drinking water use designation to the waters of the state, taking into consideration

- ▶ Stream flow
- ▶ Depth
- ▶ Distance to public water intake



# This has all happened before

## EQB 1995 Ruling - Dupont & Affiliated Construction Trades Foundation vs Office of Water Resources (Appeal nos. 599 & 602)

### I. CATEGORY A CRITERIA

The OWR was correct in basing certain numeric discharge limits upon Category A criteria, per W. Va. Code of State Regulations 46 CSR 1, in this permit. While it may be true that no known public water intakes are located within five miles of the Appellant's discharge, the waters of the Ohio River are used for human consumption. The fact that the Ohio River is used for human consumption triggers the application of Category A criteria. Unless there is a specific exemption or exception listed under 46 CSR 1-7.2, all uses shall apply. It is not logical to apply Category A only in five mile segments. This is especially true since there is another rule, commonly referred to as the five mile rule, which is more stringent than Category A, that applies in these five mile segments. If Category A limits only applied in the five mile segment above public water supplies, and the five mile rule also applies in these segments, the more stringent five mile rule would always apply instead of Category A which would never apply. There would be no purpose for the existence of Category A criteria.

# This has all happened before

March 21 ,1999: HB2533 passed

1 (requirements governing water quality standards, 46 CSR 1), is  
2 authorized until the thirtieth day of October, 1999: **Provided,**  
3 **That the environmental quality board shall review, revise and**  
4 **propose, within this statutory deadline, and in accordance with the**  
5 **provisions of chapter twenty-nine-a of this code, emergency and**  
6 **legislative rules to address the interpretive differences regarding**  
7 **the designation of category A waters and analyze the need for**  
8 **distance prohibitors for the policies of public drinking water**  
9 **intake, with the amendments set forth below:**



West Virginia Legislature





# This has all happened before

2008 DEP-proposed rule change to clarify Category A

## Category A Approach

- Currently applies in all waters of the state to protect waters for human consumption, both public and private.

## Proposed Draft Language

- Sec. 6.2 Clarifies existing and future
- Sec. 6.3-6.7 New language added
- Sec. 6.3 All waters designated water supply except those determined in accordance with specific rule criteria
- Sec. 6.4 Must consult with WVBPH and give notice/comment to public

# Which pollutants *are* “Category A?”

Several are known or suspected carcinogens

Cat A Limiting Parameters:		60	
Cat A Limiting Parameters that are known or suspected carcinogens:		31	
Parameter	Human Health Standard Cat C	Human Health Standard Cat A	
Benzo(a) Anthracene <sup>b</sup> (ug/l)	0.018	0.0038	
Benzo(a) Pyrene <sup>b</sup> (ug/l)	0.018	0.0038	
Benzo(b) Fluoranthene <sup>b</sup> (ug/l)	0.018	0.0038	
Benzo(k) Fluoranthene <sup>b</sup> (ug/l)	0.018	0.0038	
Chrysene <sup>b</sup> (ug/l)	0.018	0.0038	
Dibenzo(a,h)Anthracene <sup>b</sup> (ug/l)	0.018	0.0038	
Indeno(1,2,3-cd)Pyrene <sup>b</sup> (ug/l)	0.018	0.0038	
alpha-BHC (alpha- Hexachloro-cyclohexane) <sup>b</sup> (ug/l)	0.013	0.0039	
beta-BHC(beta- Hexachloro-cyclohexane) <sup>b</sup> (ug/l)	0.046	0.014	
gamma-BHC (gamma- Hexachloro-cyclohexane) <sup>b</sup> (ug/l)	0.063	0.019	
1,1-dichloroethylene <sup>b</sup> (ug/l)	3.2	0.03	
1,2-dichloroethane <sup>b</sup> (ug/l)	99	0.035	
2,4-dinitrotoluene <sup>b</sup> (ug/l)	9.1	0.11	
Heptachlor <sup>b</sup> (ng/l)	0.21	0.21	
Carbon tetrachloride <sup>b</sup> (ug/l)	4.4	0.25	
Pentachlorophenol <sup>b</sup> (ug/l)	8.5	0.28	
Dichlorobromomethane <sup>b</sup> (ug/l)	17	0.55	
Hexachlorobenzene <sup>b</sup> (ng/l)	0.77	0.72	
Tetrachloroethylene <sup>b</sup> (ug/l)	8.85	0.8	
Vinyl chloride <sup>b</sup> (chloroethene) (ug/l)	525	2	
2,4,6-Trichlorophenol <sup>b</sup> (ug/l)	6.5	2.1	
Trichloroethylene <sup>b</sup> (ug/l)	81	2.7	
Bromoform <sup>b</sup> (ug/l)	140	4.3	
Methylene Chloride <sup>b</sup> (ug/l)	590	4.6	
Chloroform <sup>b</sup> (ug/l)	470	5.7	
Toluene <sup>b</sup> (mg/l)	200	6.8	
1,1,1- trichloroethane <sup>b</sup> (mg/l)		12	
Dioxin (2,3,7,8- TCDD) <sup>b</sup> (pg/l)	.014	0.013	
PCB <sup>b</sup> (ng/l)	.045	0.044	
Acrylonitrile <sup>b</sup> (ug/l)	0.66	0.059	
Benzene <sup>b</sup> (ug/l)	51	0.66	

Currently, there are 60 parameters for which the Category A limit is the *driving factor*\*

\* driving factor indicates that Cat A limit is more restrictive than Cat C for these standards

# Which pollutants *are* “Category A?”

## Other Cat A Limiting Parameters

Parameter	Human Health Standard Cat C	Human Health Standard Cat A
1,3-dichlorobenzene (mg/l)	2.6	0.4
1,4-dichlorobenzene (mg/l)	2.6	0.4
2,4-Dichlorophenol (ug/l)	790	93
2,4-Dimethylphenol (ug/l)	2300	540
2,4-Dinitrophenol (ug/l)	14,000	70
2-Chloronaphthalene (ug/l)	1600	1000
2-Chlorophenol (ug/l)	400	120
2-methyl-4,6-Dinitrophenol (ug/l)	765	13.4
Acenaphthene (ug/l)	990	670
Aldrin <sup>b</sup> (ng/l)	0.071	0.071
Anthracene (ug/l)	40,000	8,300
Antimony (ug/l)	4300	14
Barium (mg/l)		1.0
Beryllium (ug/l)		4.0
Chlordane <sup>b</sup> (ng/l)	0.46	0.46
Chlorobenzene (mg/l)	21	0.68
DDT <sup>b</sup> (ng/l)	0.024	0.024
Dieldrin <sup>b</sup> (ng/l)	0.071	0.071
Ethylbenzene (mg/l)	29	3.1
Fluoranthene (ug/l)	370	300
Fluorene (ug/l)	5300	1100
Fluoride (mg/l)		1.4
Lead (ug/l)		50
Manganese (mg/l)		1.0
Methyl Bromide (ug/l)	1500	47
Nickel (ug/l)	4600	510
Nitrate (as Nitrate-N) (mg/l)		10
Phenol (ug/l)	4,600,000	21,000
Pyrene (ug/l)	4000	830
Thallium (ug/l)	6.3	1.7
Total mercury in any unfiltered water sample (ug/l)	.15	.14
Toxaphene <sup>b</sup> (ng/l)	0.73	0.73

# What are other states Public Water Supply (PWS) designations?

## **Pennsylvania**

### **Applied statewide**

Some parameters applied only at intakes: TDS, nitrates, phenolics, fluoride

## **Virginia**

### **Applied 5 miles above intakes**

Of 100,923 total stream miles in VA, 1,462 stream miles designated as PWS

## **Kentucky**

### **Applied 5 miles above intakes (via permitting)**

Although defined as “applicable at existing points of PWS withdrawal”

## **Maryland**

### **Applied on all existing & potential future water sources**

In mid 90’s, examined each watershed to determine potential future use

Rationale was mostly based on volume available

# What the statute says

## §22-11-2. Declaration of policy

(a) It is declared to be the public policy of the state of West Virginia to maintain **reasonable standards of purity and quality** of the water of the state **consistent with**

- (1) **public health and public enjoyment** thereof;
- (2) the **propagation and protection of** animal, bird, fish, **aquatic** and plant **life**; and
- (3) the **expansion of employment opportunities**, maintenance and expansion of agriculture and the provision of a **permanent foundation for healthy industrial development**.



# What the statute says

## §22-11-7b. Water quality standards

(c) In order to carry out the purposes of this chapter, the **secretary shall promulgate legislative rules...** setting standards of water quality...

Standards of quality with respect to surface waters **shall protect** the

- **public** health and welfare,
- **wildlife**, fish and aquatic life and the
- **present and prospective future uses** of the water for
  - domestic,
  - agricultural,
  - industrial,
  - recreational,
  - scenic and
  - other legitimate beneficial uses thereof.

# What the rule says now

## §47-2 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**;
- 6.2.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.

# What does BPH say?

**§64-3-3.16 Public Water System.** -- A public water system is:

3.16.a. Any water supply or system which regularly supplies or offers to supply water for human consumption through pipes or other constructed conveyances, if serving at least an average of twenty-five individuals per day for at least sixty days per year...

**§64-3-5 Permit to Operate a Public Water System**

5.1. A public water system shall be operated in accordance with this rule and the federal regulations adopted in this rule.

# What do we know?

- Where current public drinking water intakes are
- Likely sources of future water intakes, based on flow, location, etc.
- Mean **flow** of WV waters

# What don't we know?

- Where secondary or backup intakes will be established, as required by July 1 (§16-1-9c)
- Where all private intakes are
- **Distance** to future public water intakes

# Discussion



**What  
comments and  
questions  
do you have  
regarding the  
application of  
Category A  
public water  
supply in WV?**

# Next WQS Quarterly Meeting

- Will be in April, after Legislative Session - How about Thursday the 7<sup>th</sup>?



**What other  
comments and questions  
do you have?**

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