

**WEST VIRGINIA
SECRETARY OF STATE
NATALIE E. TENNANT
ADMINISTRATIVE LAW DIVISION**

Form #3

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2010 JUL 23 AM 8:57

OFFICE WEST VIRGINIA
SECRETARY OF STATE

**NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE**

AGENCY: Water Resources DEP- Division of Water and Waste Management TITLE NUMBER: 47

CITE AUTHORITY: 22-12-4

AMENDMENT TO AN EXISTING RULE: YES NO

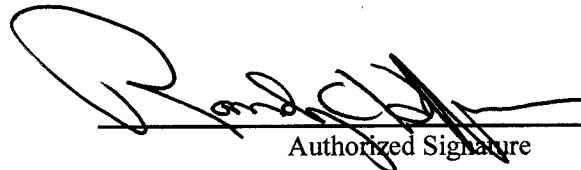
IF YES, SERIES NUMBER OF RULE BEING AMENDED: 12

TITLE OF RULE BEING AMENDED: Requirements Governing Groundwater Standards

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: _____

TITLE OF RULE BEING PROPOSED: _____

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE FOR THEIR REVIEW.


Authorized Signature

QUESTIONNAIRE

(Please include a copy of this form with each filing of your rule: Notice of Public Hearing or Comment Period; Proposed Rule, and if needed, Emergency and Modified Rule.)

DATE: July 23, 2010

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: (Agency Name, Address & Phone No.) WVDEP- Division of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304
(304) 926-0495

LEGISLATIVE RULE TITLE: _____
Requirements Governing Groundwater Standards

1. Authorizing statute(s) citation _____
22-12-4

2. a. Date filed in State Register with Notice of Hearing or Public Comment Period:
June 11, 2010

b. What other notice, including advertising, did you give of the hearing?
WVDEP Web site, press release, Class 1 legal ad in Charleston newspaper

c. Date of Public Hearing(s) *or* Public Comment Period ended:
July 15, 2010

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.
Attached X No comments received _____

- e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

June 11, 2010

- f. **Name, title, address and phone/fax/e-mail numbers** of agency person(s) to receive all *written correspondence* regarding this rule: (Please type)

William Timmermeyer, Program Manager

601 57th Street, SE
Charleston, WV 25304

P- (304) 926-0499, Ext. 1336 F- (304) 926-0496

- g. **IF DIFFERENT FROM ITEM 'f'**, please give **Name, title, address and phone number(s)** of agency person(s) who wrote and/or has responsibility for the contents of this rule: (Please type)

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

- a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

b. Date of hearing or comment period:

c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

d. Attach findings and determinations and reasons:

Attached

FILED

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BRIEFING DOCUMENT

2010 JUL 23 AM 8:57

Rule Title: 47CSR12 Requirements Governing Groundwater Standards OFFICE WEST VIRGINIA
SECRETARY OF STATE

A. AUTHORITY: W. Va. Code 22-12-14

B. SUMMARY OF RULE:

The purpose of this Legislative rule is to update the established minimum standards of purity and quality for groundwater located within this State.

C. STATEMENT OF CIRCUMSTANCES WHICH REQUIRE RULE:

The proposed revisions to the Requirements Governing Groundwater Standards Rule reflect updates/additions made to the United States Environmental Protection Agency's 2009 Edition of the Drinking Water Standards and Health Advisories. Costs of implementing the changes will be absorbed in the agency's current budget.

D. FEDERAL COUNTERPART REGULATIONS - INCORPORATION BY REFERENCE / DETERMINATION OF STRINGENCY:

A federal counterpart to the proposed rule exists. Because proposed revisions are consistent with the federal counterpart regulation, no determination of stringency is required.

E. CONSTITUTIONAL TAKINGS DETERMINATION

In accordance with W. Va. Code §§ 22-1A-1 and 3(c), the Secretary has determined that this rule will not result in taking of private property within the meaning of the Constitutions of West Virginia and the United States of America.

F. CONSULTATION WITH THE ENVIRONMENTAL PROTECTION ADVISORY COUNCIL:

At its meeting on June 3, 2010, the Environmental Protection Advisory Council discussed the proposed rule. See attached minutes for Council's discussion.

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Requirements Governing Groundwater Standards, 47CSR12

Rule Title: _____

Type of Rule:

Legislative Interpretive Procedural

Agency:

West Virginia Department of Environmental Protection

Address:

601 57th Street, SE
Chareleston, WV 25304

Phone Number:

(304) 926-0495

Email: Scott.G.Mandirola@wv.gov

Fiscal Note Summary

Summarize in a clear and concise manner what impact this measure will have on costs and revenues of state government.

No fiscal impacts on state government are anticipated.

Fiscal Note Detail

Show over-all effect in Item 1 and 2 and, in Item 3, give an explanation of Breakdown by fiscal year, including long-range effect.

FISCAL YEAR			
Effect of Proposal	Current Increase/Decrease (use "-")	Next Increase/Decrease (use "-")	Fiscal Year (Upon Full Implementation)
1. Estimated Total Cost	0.00	0.00	0.00
Personal Services	0.00	0.00	0.00
Current Expenses	0.00	0.00	0.00
Repairs & Alterations	0.00	0.00	0.00
Assets	0.00	0.00	0.00
Other	0.00	0.00	0.00
2. Estimated Total Revenues	0.00	0.00	0.00

Rule Title: _____

Rule Title: _____

3. **Explanation of above estimates (including long-range effect):**
Please include any increase or decrease in fees in your estimated total revenues.

None anticipated


MEMORANDUM

Please identify any areas of vagueness, technical defects, reasons the proposed rule would not have a fiscal impact, and/or any special issues not captured elsewhere on this form.

The proposed revisions to the Requirement Governing Groundwater Standards Rule reflect updates/additions made to the United States Environmental Protection's Agency's 2009 Edition of the Drinking Water Standards and Health Advisories. Costs of implementing the changes will be absorbed in the agency's current budget.

Date: June 3, 2010

Signature of Agency Head or Authorized Representative



**TITLE 47
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER RESOURCES**

**SERIES 12
REQUIREMENTS GOVERNING GROUNDWATER STANDARDS**

§47-12-1. General.

1.1. Scope. -- The purpose of this Legislative rule is to establish minimum standards of purity and quality for groundwater located within this State.

1.2. Authority. -- W. Va. Code § 22-12-4

1.3. Filing Date. -- April 22, 2010

1.4. Effective Date. -- July 1, 2010

§47-12-2. Definitions.

As used in this rule:

2.1. "Act" means the Groundwater Protection Act, W. Va. Code §22-12-1, et seq.

2.2. "Constituent" means any chemical or biological substance found in groundwater due to either natural or man-made conditions.

2.3. "Groundwater" means the water occurring in the zone of saturation beneath the seasonal high water table, or any perched water zones.

2.4. "Person" means any industrial user, public or private corporation, institution, association, firm or company organized or existing under the laws of this or any other state or country; the State of West Virginia and any of its political subdivisions, including any county commission or municipal corporation; any governmental agency, including federal facilities; industry; sanitary district; public service district; soil conservation district; watershed improvement district; partnership; trust; estate; person or individual;

group of persons or individuals acting individually or as a group; or any legal entity whatever.

§47-12-3. Groundwater Standards.

3.1. Except as provided in subsections 3.2 and 3.3 below, the standards of purity and quality for groundwater in the state shall be the constituent concentrations found in Appendix A of this rule.

3.2. Concentration of a constituent in excess of otherwise applicable groundwater quality standards shall be governed as follows:

3.2.a. Where the concentration of a constituent exceeds an otherwise applicable groundwater quality standards as a result of natural conditions, the naturally occurring level of that constituent shall become the groundwater quality standard for the affected area.

3.2.b. Where the concentration of a certain constituent exceeds an otherwise applicable groundwater quality standard due to human-induced contamination, no further contamination by that constituent shall be allowed and every reasonable effort shall be made to identify, remove or mitigate the source of such contamination and to strive, where practical, to reduce the level of contamination over time to support drinking water use.

3.3. Constituents in groundwater shall not cause a violation of the standards found at 47CSR2 in any surface water.

3.4. Groundwater quality standards do not apply:

3.4.a. Within areas of geologic formations

that are site-specific to site production or storage zones of crude oil or natural gas and that are utilized for the exploration, development or production of crude oil or natural gas permitted pursuant to W.Va. Code §§ 22-6-1, et seq., 22-7-1, et seq., 22-8-1, et seq., 22-9-1, et seq., or 22-10-1, et seq.; and

3.4.b. Within areas of geologic formations that are site-specific to the injection zones of Class II or III or wells permitted pursuant to the statutes and regulations governing the underground injection control program.

3.4.c. To any constituent or any class of activities for which a variance from groundwater quality standards has been granted by the Secretary pursuant to W. Va. Code § 22-12-5(I).

3.4.d. To coal extraction and earth disturbing activities directly involved in coal extraction that are subject to either or both W. Va. Code §§ 22-3-1, et seq. or 22-11-1, et seq.

3.5. Measurement of inorganic constituents

3.5.a. Compliance with groundwater protection standards for inorganic constituents shall be determined in terms of dissolved concentrations rather than total concentrations, except as specified in subdivision 3.5.b below.

3.5.b. Any groundwater regulatory agency as specified in the Act may determine compliance with groundwater protection standards for inorganic constituents utilizing total concentration values only as necessary to protect human health or the environment. Appropriate situations for utilizing total concentrations values include, but are not limited to, the following:

3.5.b.1. The sample is from a carbonate formation in an area of karst terrane;

3.5.b.2. The sample is from a collection point for groundwater used for private or public water supply;

3.5.b.3. The sample is from a spring

or seep; or

3.5.b.3. The sample is one for which State or Federal regulations require that total inorganic concentrations be measured.

§47-12-4. Hazardous Waste Treatment, Storage or Disposal Facilities.

4.1. Nothing in this rule prohibits the Division of Water and Waste Management, acting in accordance with federal regulations, from using criteria other than the standards specified in this rule for purposes of determining the need for corrective action at hazardous waste treatment, storage or disposal facilities, as provided in 40 C.F.R. Parts 264 and 265, Subpart F.

APPENDIX A

Organic Compounds

<u>Constituent</u>	<u>Limit (mg/L)</u> (except where noted)
Alachlor	0.002
Aldicarb	0.003
Aldicarb sulfone	0.002
Aldicarb sulfoxide	0.004
Atrazine	0.003
Benzene	0.005
Benzo (a) pyrene (PAH)	0.0002
Bromodichloromethane (THM) ¹	0.08
Bromoform (THM) ¹	0.08
Carbofuran	0.04
Carbon tetrachloride	0.005
Chlordane	0.002
Chloroform (THM) ¹	0.08
2, 4-D	0.07
Dalapon	0.2
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.006
Dibromochloromethane (THM) ¹	0.08
Dibromochloropropane (DBCP)	0.0002
Dichloroacetic acid	0.06
Dichlorobenzene p-	0.075
Dichlorobenzene o-	0.6
Dichlorobenzene m-	0.6
Dichloroethane (1, 2)	0.005
Dichloroethylene (1, 1-)	0.007
Dichloroethylene (cis-1, 2-)	0.07
Dichloroethylene (trans-1, 2-)	0.1
Dichloromethane	0.005
Dichloropropane (1, 2-)	0.005
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylbenzene	0.7
Ethylene dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001

Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.04
Monochloroacetic acid ²	0.06
Monochlorobenzene	0.1
Oxamyl (Vydate)	0.2
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated biphenyls	0.0005
Simazine	0.004
Styrene	0.1
2, 3, 7, 8-TCDD (Dioxin)	0.00000003
Tetrachlorethylene	0.005
Toluene	1.0
Toxaphene	0.003
2, 4, 5-TP (Silvex)	0.05
Trichloroacetic acid ²	0.06
Trichlorobenzene (1, 2, 4-)	0.07
Trichloroethane (1, 1, 1-)	0.2
Trichloroethane (1, 1, 2-)	0.005
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes (Total)	10

Inorganic Compounds

<u>Constituent</u>	<u>Limit (mg/L)</u> (except where noted)
Arsenic	0.01
Asbestos	7 MFL ³
Barium	2.0
Beryllium	0.004
Bromate	0.01
Cadmium	0.005
Chloramine	4.0
Chlorine	4.0
Chlorine dioxide	0.8
Chlorite	1.0
Chromium (Total)	0.1
Copper	1.3
Cyanide	0.2
Fluoride	4.0
Lead	0.015
Mercury (Inorganic)	0.002

Nitrate (as N)	10
Nitrite (as N)	1.0
Total Nitrate and Nitrite (both as N)	10
Selenium	0.05
Thallium	0.002

Radionuclides

Beta particle and photon activity	4 mrem ⁴
Gross alpha particle activity	15 pCi/L ⁵
Combined Radium 226 and 228	5 pCi/L
Radon	300 pCi/L
Uranium	30 µg/L ⁶

- 1 - The total of the trihalomethanes (THM) is 0.08 mg/L
- 2 - The total of the haloacetic acids is 0.06 mg/L
- 3 - MFL = million fibers per liter
- 4 - mrem = millirem (rem = roentgen - equivalent - man)
- 5 - pCi = picocurie
- 6 - µg/L = microgram per liter

BEFORE THE WEST VIRGINIA DEPARTMENT
OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

IN THE MATTER OF:

PROPOSED 2010 RULES
47CSR12 - Requirements
Governing Groundwater Standards

TRANSCRIPT OF PROCEEDINGS had or testimony
adduced in the above-entitled matter, on the 15th day of
July, 2009, commencing at 6:04 p.m. and concluding at 6:05
p.m., at the Coopers Rock Training Room, 601 57th Street,
S.E., Charleston, Kanawha County, West Virginia, pursuant
to notice to all interested parties.

BEFORE: KATHY COSCO, Public Information Office

ORIGINAL

NANCY MCNEALY
CERTIFIED COURT REPORTER

Post Office Box 13415
Charleston, West Virginia 25360-0415
(304) 988-2873 FAX (304) 988-1419

I N D E X

Reporter's Certificate.....Page 5

1 MS. COSCO: Good evening. My name is Kathy
2 Cosco and I am with the Public Information Office. Welcome
3 to the DEP and the public hearing on four of the agency's
4 proposed rule changes. This evening, we will be taking
5 comments on changes to 33CSR 20 - *Hazardous Waste*
6 *Management System*; 47CSR12 - *Requirements Governing*
7 *Groundwater Standards*; 47CSR60 - *Monitoring Well Design*
8 *Standards*; and 60CSR2 - *Rules on Freedom of Information Act*
9 *Requests*.

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

15 We have four sign-in sheets at the back of
16 the room. If you wish to speak about all four rules,
17 please make sure your name is on each sign-in sheet.
18 However, if you only want to comment on one rule, your name
19 only needs to be on the sign-in sheet for that rule.

20 The next rule that we will accept comments
21 on this evening is 47CSR12 - *Requirements Governing Water*
22 *Quality Standards*.

23 This rule was promulgated last in the 2010
24 session. The proposed revision to this rule is technical

1 cleanup from last year's revision. Last year's amendment
2 incorrectly set a numeric standard for radon, which the EPA
3 proposed in draft language in 2009 but has not yet
4 finalized. Therefore, West Virginia's adoption of a radon
5 standard for groundwater was premature.

6 Please make sure you have signed in and have
7 indicated whether you are going to make a comment. If you
8 have written comments, please provide them to me when you
9 speak or at the close of this hearing.

10 If everyone is ready, the floor is now open.
11 There being no one wishing to speak, this concludes the
12 public hearing for the proposed rule 47CSR12, regarding
13 *Requirements Governing Groundwater Standards*.

14 The agency will review all comments and
15 prepare a written response which will be filed when the
16 final rule is filed with the Secretary of State.

17 (WHEREUPON, the hearing was concluded.)

BEFORE THE WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF WEST VIRGINIA,
COUNTY OF KANAWHA, to wit:

I, **NANCY MCNEALY**, Certified Verbatim Court Reporter and Commissioner of West Virginia, do hereby certify that the foregoing is, to the best of my skill and ability, a true and accurate transcript of all the proceedings as set forth in the caption hereof.

Given under my hand this 16th day of July, 2010.

My commission expires November 26, 2010.



A handwritten signature in cursive script, appearing to read "Nancy McNealy", written over a horizontal line.

Certified Verbatim Reporter
Commissioner of West Virginia

Timmermeyer, William F

From: Cosco, Kathy on behalf of DEP Comments
Sent: Monday, July 19, 2010 10:04 AM
To: Timmermeyer, William F
Subject: FW: 47CSR12 Requirements Governing Groundwater Standards

From: Henry Deare [mailto:spreadingchestnut@yahoo.com]
Sent: Saturday, July 17, 2010 3:35 PM
To: DEP Comments
Subject: 47CSR12 Requirements Governing Groundwater Standards

I am very concerned about the Marcellus Shale method of gas extraction and I am aware of the effects that this process has on the groundwater in the areas where it is being done. My comment is directed to the preservation of pure water in our beautiful state and that our life supporting, high quality water reserves not be diminished for use in the fraking process or as run off slurries after the gas has been forced out of the ground. There is documentation of gas leaking into homes through the plumbing, and watersheds being polluted when a gas well blows in and explodes. This scenario is too probable and the gas companies have bought up mineral rights from everyone who was foolish enough to sell all over our state. Can the gas industry claim that they have control over the escape of the gas or the waste water through the fractured rock of the Marcellus Shale layer? Could BP protect the life communities in the Gulf of Mexico disaster?

The risk is too high and my recommendation is that the Marcellus Shale fraking not be permitted anywhere near farms, forests, homes, rivers or living lakes and that the permits given for this process be restricted to Mountain Top Removal areas where there is no life supporting environment and the devastation from coal mining is most complete. The most effective protection for our living habitats is to deny permits for gas exploration or extraction anywhere in our state except on the unreclaimed MTR sites.

Water For Life!

Sincerely,

Linda Lee E. Emrich

To: Division of Water and Waste Management
West Virginia Department of Environmental Protection

From: Indian Creek Watershed Association, Board of Directors
Monroe County, West Virginia

Date: July 19, 2010

RE: Comments on Proposed Title 47 Legislative Rules Regarding Water Resources (*Public Comment period ending July 19, 2010*)

We are writing as representatives of the Monroe County Indian Creek Watershed Association (ICWA). An active watershed organization since 1996, ICWA's focus and mission is: "The preservation and protection of Monroe County's abundant, pure water." Our website can be found at: <http://IndianCreekWatershedAssociation.org/>

We commend the West Virginia DEP for taking steps to protect West Virginia's water and water quality. This is an especially important time for new, stronger regulations to be enacted and enforced. In particular, increased Marcellus Shale gas drilling presents unique demands and dangers for our state's water levels and water quality.

We feel strongly, however, that the proposed regulations do not go far enough to create the safeguards needed to protect West Virginia's current and future water resources. Some regulations, in fact, appear to weaken existing quality standards. We make some specific comments on proposed rules below, but our overarching call is that the WVDEP needs strong regulations, as well as the funding and staff required to monitor and enforce those regulations. While Marcellus gas drilling may offer valid economic opportunities for the state and state residents, we do not believe that any West Virginia residents would knowingly agree to put at risk the waters that are used by themselves and their families, as well as their neighbors, communities, livestock and wildlife.

- **West Virginia's waters should not be sacrificed to the current "gas rush" mentality.** The potential for negative environmental impacts of deep gas drilling and its attendant activities are being exposed on a near daily basis. Clearly, the industry has not been directed to put adequate safeguards in place, and we believe that there has not been sufficient environmental impact review.
- **Regulations should protect West Virginia waters at all stages of industrial operations.** Marcellus Shale drilling requires enormous amounts of water, and presents clear dangers to water quality in the transportation and use of toxic chemicals for hydraulic fracturing as well as the "containment" or recycling of contaminated fluids. In particular, Clean Water Act standards that protect streams and watersheds should not be excluded from applying at drilling sites. What is the point of safety regulations if they are waived where they are most needed?
- **Regulations should be adequate to address the full range of West Virginia watersheds and waterways.** West Virginia enjoys a wild, wonderful and diverse set of natural resources and landscapes. Procedures and regulations that might

have served safely in other areas of the country do not necessarily apply in our mountains and valleys.

- **In Monroe County, we have a special concern: the highly vulnerable karst formations that underlie much of our county.** Karst formations – characterized by the presence of sinkholes, caves, and “lost rivers” – have been identified by the EPA as particularly sensitive high-risk aquifers, where water contamination can happen quickly, spread unpredictably, and be extremely difficult to remedy. Ginsburg and Palmer, in their 2002 EPA document, also note that karst varies significantly from region to region, so that guidelines applicable to making source-water assessments in one karst region do not necessarily apply to other karst formations. We believe that the risk of contamination *at any stage* of Marcellus Shale gas drilling operations could present immediate and potentially long-lasting dangers to the region’s water quality. This danger is magnified by the fact it could be difficult for public or private parties to respond effectively to any incident, either to contain the damage or even to alert those whose drinking and agricultural water supplies might be in jeopardy.

We feel strongly that before any gas drilling is pursued in Monroe County, there should be a thorough environmental impact study that looks at the specific issues of water supply and watershed contamination in our karst territory. In particular, the gas companies should be required to assess and report current water quality and quantity in the region where the drilling will occur as part of the permitting process before any permit is issued. This type of study would help protect not only the interests of Monroe County residents, but those of the state and gas companies as well, by avoiding what could be a disastrous, expensive, long-term liability.

With little or no local authority to provide protections, our counties must depend on the WVDEP to fulfill its mission as guardian of West Virginia’s environmental resources. We urge that the strongest possible measures be put in place. At a minimum, WV regulations should meet all federal EPA and Clean Water Act standards – and they should exceed federal standards and regulations where the special needs and interests of West Virginia are at stake.

Following are comments related to specific Proposed Rules:

47CSR2 – Requirements Governing Water Quality Standards Proposed Rule [links to WVDEP]

§47-2-3. Conditions Not Allowable In State Waters – The addition of “certain water withdrawal activities” not allowable in state waters is important, but should be further strengthened. To be protective of both human health and aquatic life, DEP should draft legislation for immediate consideration by the West Virginia Legislature that establishes guidelines and a permit process for water withdrawals.

§47-2-7. West Virginia Waters: 7.2 Applicability of Water Quality Standards – It is not clear that waters in karst formation areas would be adequately protected by existing or proposed standards. We recommend that specific language be added, in this section and/or wherever most appropriate, to address site-specific conditions in karst regions, recognizing that additional testing and permit procedures might be required due to the unusual vulnerability of water resources in karst topography.

§47-2-8. Specific Water Quality Criteria:

8.3.a.3. Criteria for Nutrients in Lakes. We oppose the proposed language that states the “a lake shall not be considered impaired based upon an average total phosphorous concentration in excess of the criterion established ... unless the chlorophyll-a criterion established therein is also exceeded.” WVDEP regulations should follow the EPA guidance and recognize that lakes might be impaired for *either* phosphorous or chlorophyll-a.

8.3.b. Criteria for Nutrients in Streams. We applaud adding specific phosphorous standards for the Greenbrier River. We also agree with the West Virginia Environmental Council (WVEC) that, in addition, the DEP should reconvene its Stakeholders Nutrient Committee and move ahead on the criteria-setting process for rivers and streams overall.

Other areas in which we advocate stronger standards:

- The water quality standard for Iron in Trout Streams should not be changed, and especially not weakened, until more thorough studies are conducted.
- With regard to a statewide quality standard for Total Dissolved Solids,
 - WVDEP should adopt the federal standard for human health of 250mg/l.
 - WVDEP should adopt an aquatic life criterion for conductivity as proposed by EPA. And any criteria for TDS/conductivity should be protective of streams threatened by golden algae.

**47CSR12 – Requirements Governing Groundwater Standards
Proposed Rule**

§47-12-3. Groundwater Standards

We object to regulation 3.4, which *excludes* the WVDEP groundwater quality standards from applying to geologic formations in sites specific to production or storage of crude oil or natural gas, underground injection zones, and coal extraction and earth disturbing activities. These are sites where environmental protection is most needed.

This exclusion appears especially dangerous for karst formations, since contamination at any site would likely pass quickly beyond the borders of the site in unknown directions and to considerable distances. If exploration, production and storage activities are to be permitted in areas of karst formation, adherence to groundwater quality standards should be closely monitored and controlled, not excluded.

47CSR60 – Monitoring Well Design Standards
Proposed Rule

It is not clear whether the guidelines in this regulation are applicable to the engineering requirements of deep-gas drilling and hydraulic fracking. We urge that the strongest reasonable safeguards be put in place for all drilling and groundwater monitoring, and that the unique vulnerabilities of karst formations be given special consideration.

Deep gas drilling and industrial uses of water are discretionary activities, unlike maintaining the quality of water for human and animal use. Too many times, the terms “reasonable” or “best practices” have been used as a cover for “acceptable pollution.” In West Virginia, there are no barriers between the water which would be contaminated by the drilling and fracking process and the water which would be used by people and animals, and in fact, they are one and the same. Consequently, it is of paramount importance that the water quality be preserved to drinking water quality standards.

33CSR20 – Hazardous Waste Management System
Proposed Rule

We urge that WVDEP regulations meet or exceed federal guidelines for hazardous waste management. In particular, we ask WVDEP to ensure that regulations are in place to protect our citizens and waterways from the toxic chemicals and by-products that will be transported, used, stored, recycled, and otherwise introduced into the West Virginia environment in the process of Marcellus Shale drilling for natural gas.

Respectfully,

Judy Azulay, Steve Ellison, Nancy Bouldin, Jill Grace Young, Keveney Bair

Board of Directors and Staff Members, Indian Creek Watershed Association

Contact for questions or follow-up:

Nancy Bouldin, nancy_bouldin@hotmail.com



west virginia department of environmental protection

Division of Water and Waste Management
601 57th St. S.E.
Charleston, WV 25304
Phone 304 926-0495
Fax 304 926-0496

Joe Manchin III, Governor
Randy C. Huffman, Cabinet Secretary
www.wvdep.org

RESPONSIVE SUMMARY

July 23, 2010

The West Virginia Department of Environmental Protection's (WVDEP) would like to take this opportunity to thank those individuals who submitted written comments for 47CSR12-*Requirements Governing Groundwater Standards*.

The Division of Water and Waste Management (DWWM) has received and reviewed the public comments concerning 47CSR12-*Requirements Governing Groundwater Standards*. A summary of comments received and DWWM's responses follow.

Comment: I am very concerned about the Marcellus Shale method of gas extraction and I am aware of the effects that this process has on the groundwater in the areas where it is being done. My comment is directed to the preservation of pure water in our beautiful state and that our life supporting, high quality water reserves not be diminished for use in the fracking process or as run off slurries after the gas has been forced out of the ground. There is documentation of gas leaking into homes through the plumbing, and watersheds being polluted when a gas well blows in and explodes. This scenario is too probable and the gas companies have bought up mineral rights from everyone who was foolish enough to sell all over our state. Can the gas industry claim that they have control over the escape of the gas or the waste water through the fractured rock of the Marcellus Shale layer? Could BP protect the life communities in the Gulf of Mexico disaster? The risk is too high and my recommendation is that the Marcellus Shale fracking not be permitted anywhere near farms, forests, homes, rivers or living lakes and that the permits given for this process be restricted to Mountain Top Removal areas where there is no life supporting environment and the devastation from coal mining is most complete. The most effective protection for our living habitats is to deny permits for gas exploration or extraction anywhere in our state except on the unreclaimed MTR sites.

Response: The Purpose of 47CSR12-*Requirements Governing Groundwater Standards* is to establish minimum standards of purity and quality for groundwater located within the State. This comment is outside the scope of the regulation.

Comment: We object to regulation 3.4, which *excludes* the WVDEP groundwater quality standards from applying to geologic formations in sites specific to production or storage of crude

oil or natural gas, underground injection zones, and coal extraction and earth disturbing activities. These are sites where environmental protection is most needed.

This exclusion appears especially dangerous for karst formations, since contamination at any site would likely pass quickly beyond the borders of the site in unknown directions and to considerable distances. If exploration, production and storage activities are to be permitted in areas of karst formation, adherence to groundwater quality standards should be closely monitored and controlled, not excluded.

Response: The above referenced exclusion is statutory and as such must be written into this regulation. Further, this comment is outside the scope of the proposed amendment to the rule and therefore, no response is necessary.