WEST VIRGINIA
SECRETARY OF STATE
BETTY IRELAND
ADMINISTRATIVE LAW DIVISION

Form #3

Do Not Mark In This Box

FILED

2007 JUL 27 PM 2:46

OFFICE OF WEST VIRGINIA SECRETARY OF STATE

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

AGENCY: WV Department of Environmental Protection, DWWM (Water Resources) TITLE NUMBER: 47

CITE AUTHORITY: W. Va. Code § 22-11-4(a)(16); § 22-11-7b

AMENDMENT TO AN EXISTING RULE: YES X NO ____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 2

TITLE OF RULE BEING AMENDED: Requirements Governing Water Quality 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.

Stephen R. Timmermeyer
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 27, 2007

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM:(*Agency Name, Address & Phone No.*) West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, West Virginia 25304 (304) 926-0495

LEGISLATIVE RULE TITLE: "Requirements Governing Water Quality Standards"

1. Authorizing statute(s) citation §22-11-4(a)(16); §22-11-7b

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

   May 30, 2007

   b. What other notice, including advertising, did you give of the hearing?

   Class I Legal Ad in the Charleston Gazette and Daily Mail
   Agency Mailing List
   Agency Website
   Agency Newsletter

   c. Date of Public Hearing(s) ***or*** Public Comment Period ended:

   Public Hearing: July 16, 2007 Public Comment Period Ended: July 17, 2007

   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)

July 27, 2007

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

Scott G. Mandirola, Assistant Director
Water Quality Standards Program
WV Department of Environmental Protection
601 57th Street SE
Charleston, West Virginia 25304

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.

N/A

b. Date of hearing or comment period:

N/A

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

N/A

d. Attach findings and determinations and reasons:

Attached N/A

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BRIEFING DOCUMENT

Rule Title:

"Requirements Governing Water Quality Standards," 47CSR2

A. AUTHORITY:

W.Va. Code §22-11-4(a)(16); 22-11-7b

B. SUMMARY OF RULE:

This rule establishes requirements governing surface water quality standards for the waters of the State and establishes standards of purity and quality consistent with public health and the enjoyment thereof, the protection of animal, aquatic and plant life and the expansion of employment opportunities, agricultural expansion and a foundation for healthy industrial development.

C. STATEMENT OF CIRCUMSTANCES WHICH REQUIRE RULE:

DEP is proposing several changes to the rule, as follows:

Several clerical corrections and updates have been made. These include the replacing of "streams or stream segments" with "waters" in the definition of "Trout waters". This is to assure that lakes are not excluded from the definition. In numerous places throughout the rule the term "water body" is replaced with "water" or "waters" in an effort to be more consistent with use of the term "waters" in 47-2-1 General Scope section of the rule. Two exceptions listed in subsection 7.2.d were removed because they had expired. Stony River, section 7.2.d.6.1, expired December 31, 1998 and Simmons Creek, section 7.2.d.20.3, expired May 30, 1998. In section 8.4, a correction was made to reference the appropriate paragraphs, "6.1.b.1 through 6.1.b.6". References to "Board" or "rule making authority" have been changed to "Secretary" to reflect current authority. In section 7.2.d.9, the Blackwater River is referred to as a trout stream, which is repetitive since it is listed on the trout list in Appendix A. Therefore, section 7.2.d.9 has been amended.

Section 7.2.d.14. The Categories A and E exclusions on the tributaries of the Youghiogheny River in West Virginia which flow into Maryland have been deleted. A documentation search was done and no justification was found for this exclusion; therefore, it is being removed.

The term "not to exceed" in Table 1 of Appendix E, is being removed from numerous places where it conflicts with aquatic life footnotes 1 and 2. The phrase "Concentration not to be exceeded unless otherwise noted" is being added to footnotes 3 and 4 to assure that the intent of the human health criteria is not changed. Also in Appendix E in section 8.13, the term "Primary Contact Recreation" is being replaced with "Water Contact Recreation" to be consistent with Category C designation as outlined in section 6.4 of the rule.

Nutrients criteria, including phosphorous and chlorophyll-a, for both warm and cool water lakes, have been added to the rule based on a consensus reached by the Nutrients Criteria Committee. A definition of "Cool water lakes" is being added to 47-2-2 Definitions. Section 8.3 has been added to the rule and states the criteria for both warm and cool water lakes with summer residence times greater than 14 days. It was also suggested by the Nutrients Criteria Committee that a representative list of cool water lakes be included in the rule. This representative list consists of lakes on the Appendix A list of trout waters and lakes which DNR is managing as cool water fisheries, again with summer residence times greater than 14 days. The representative list has been added to the rule as Appendix F.

EPA's approval of the aluminum language in 46CSR1 has allowed DEP to begin assessing warmwater streams using the 750 µg/l criteria (e.g. 2006 draft Section 303(d) List.) New permits with discharges into warmwater streams are also being issued with limits protective of the 750 µg/l value. Currently the criterion in warmwater is not to exceed 750 µg/l dissolved aluminum as both a chronic and acute value. For trout waters, the criterion is not to exceed 87 µg/l dissolved aluminum – as a chronic value and 750 µg/l dissolved aluminum – as an acute value.

Pursuant to the recent EPA finding that 750 µg/l dissolved aluminum is protective of warmwater aquatic life, DEP proposes to remove the language from 47CSR2 which effectively only suspends the warmwater chronic aluminum value of 87 µg/l until July 4, 2007. This action is in large part based on the EPA finding "[t]he criteria are protective of the aquatic life regardless of whether they apply temporarily or permanently." Essentially EPA has determined that the revised criterion is protective of West Virginia warmwater aquatic life. Since this is the case, Appendix E footnote "e" is being removed and the dissolved aluminum for warmwater chronic criterion of $87xCF^5$ is being replaced with $750xCF^5$ in Appendix E, Table 1, section 8.1.

The fluoride standard for Category D was changed to Category D1 to better reflect the Environmental Quality Board's intentions as per the 1986 Rationale for revisions to the rule which states "The one comment received, pointed out that criteria for irrigation water has been established at 2.0 mg/l. The Board found this to be correct and agreed to add the additional criteria for the D1 Category use."

The rule also extends the exceptions for Harmon Creek from July 1, 2007 to July 1, 2009 to allow Weirton Steel Corporation (now Mittal Corporation) to continue to operate under to existing variance while it is determined whether the requested "modified use designation" is possible under the provisions of the rule. Additional information is being examined to determine the extent of the required variance and/or use modification needed and its effect on the fish population. Extending the date to 2009 would allow this information to be reviewed and keep the current limits in place.

The rule also extends the exception on the Ward Hollow of Davis Creek variance from July 1, 2008 to July 1, 2010. The exception was approved by EPA in September 2006 and the status of the site and the discharge has not changed since that time. The variance will remain in effect until the next triennial review and at that time will be reevaluated.

A number of changes in Appendix E, Table 1 of the rule have been made to remain consistent with the original rationale used or to update to currently accepted science. The arsenic footnote [b], is removed because the value is not based on a cancer risk of 10^6. The human health criteria of 50ug/l arsenic is based on the drinking water MCL and EPA, on February 22, 2002, promulgated a new EPA MCL of 10ug/l. To remain consistent with the rationale of using the MCL for arsenic, the value has been changed to 10ug/l. Dissolved trivalent arsenic chronic and acute values, in Appendix E, Table 1, have been updated from 360ug/l and 190ug/l to 340ug/l and 150ug/ based on EPA updates. The units (ug/l) were added to the dissolved trivalent arsenic column in Appendix E, Table 1 to clarify the units. The correction factor (CF) is removed for dissolved trivalent arsenic and chromium, dissolved hexavalent because the EPA values are based on dissolved criteria not total; therefore they do not need to be corrected. The rule updates the benzene criterion for Human Health Category C from 71 ug/l to the new EPA value of 51 ug/l. The benzene value that controls the permit limits is the Human Health Category A criterion of 0.66ug/l, which remains unchanged. The selenium criterion for Category A is changed from 10ug/l to 50ug/l to make it consistent with the MCL for Drinking Water. The rule also adds a footnote to the phthalate esters group that clarifies which phthalates are included in the total.

Appendix E, Table 1 of the rule contained two groups of compounds, the halomethanes and the polynuclear aromatic hydrocarbons (PAH), that have been removed and replaced with the individual compounds that make up each group. The four individual halomethanes listed in the rule are based on the list in the Quality Criteria for Water: 1986. EPA 440/5-86-001 (Gold Book). The polynuclear aromatic hydrocarbons (PAH) group is comprised of 17 PAH's listed in the EPA recommended criteria list. One of the compounds is in the current rule and four of the compounds have no EPA recommended limits; therefore 12 compounds are being added. All individual compound limits for both halomethanes and polynuclear aromatic hydrocarbons (PAH) are based on EPA's Current National Recommended Water Quality Criteria.

The formulas in Appendix E for cadmium, copper, nickel, silver, and zinc, which are used to calculate aquatic life limits, are being updated to reflect those recommended by EPA in 2002.

The Fecal Coliform exception for the non-recreational season of November–April on the Ohio River has been changed to include Category A, to be consistent with Ohio River Valley Water Sanitation Commission (ORSANCO). Based on the Rationale document from the Environmental Quality Board (EQB) in 1986, the intent was to replace existing language with that of ORSANCO. By not including the X in Category A column of the exception the Category A statewide limits apply.

The rule also includes a Use Removal of Category A and D1 designations on Pats Branch. Subsection 7.2.d.34.1 states that "Pats Branch from its confluence with the Guyandotte River to a point 1000 feet upstream shall not have Water Use Category A and Category D1 designation." For more information on this addition see attached Use Removal Request Information Sheet.

Finally, the trout water list (in Appendix A of the rule) has been edited to reflect the currently known trout waters of the State, as per the definition of "trout waters" in section 2.18 of 47CSR2. This list is intended to be a representative list and is not meant to exclude any waters that meet the definition

of "trout waters." "Trout waters" are defined as "waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round trout populations."

The list was prepared with the assistance of the West Virginia Division of Natural Resources (DNR), Coldwater Management Section, the State agency with recognized expertise on this subject. The list generally is composed of streams documented as having natural trout reproduction and streams that sustain trout year round, but do not have documented natural reproduction.

The DNR submitted a list of waters as defined in Section 2.18 of 47CSR2 to DEP. This list consisted of streams supporting reproducing populations of rainbow, brown and native brook trout. Additionally, the list contained streams stocked with fingerling trout, primarily browns, that sustain year-round trout populations. The list does not include streams that are stocked with trout solely on a "put and take" basis, but do not support year-round trout populations.

The DNR considers reproducing rainbow, brown, and native brook trout populations as year-round residents because of their lifecycle. Natural reproduction is verified when multiple year classes, including young-of-the-year, are collected during population surveys. However, some streams, particularly native brook trout streams, are considered naturally reproducing if only adults or young-of-the-year are collected in the sample. This is based on knowledge of the stream and its location, and stocking practices in the area.

Fingerling brown trout are stocked into streams that are known or expected to support trout year-round because of the presence of suitable habitat and temperature. After a stream has been stocked with fingerlings for several years, an effort is made to conduct fish population surveys to determine if the stockings are successful in maintaining a year-round population. Again, if multiple year classes are found during sampling, or if reproduction is occurring, but is not at a level to sustain a viable fishery, then the fingerling stockings are continued. In some cases, a stream is considered capable of sustaining a year-round trout population if only one year-class is collected during sampling, prior to that year's scheduled fingerling stocking. A stream may also be considered capable of sustaining a year-round trout population if one year-class is collected during the critical low water, high temperature months of July, August, or September.

Additionally, sections 4.1.a and 6.1.b of 47CSR2 require the protection of existing uses. "Existing uses" are "those uses actually attained in a water body on or after November 28, 1975." The list therefore includes waters where sustained year-round trout populations, or trout reproduction, has been documented since November 28, 1975, regardless of their current condition.

Six (6) waters that were previously listed have been omitted from the current trout list because they were originally listed in error, and do not meet the definition of a "trout waters." There were 337 trout waters added to the list in the current rule because they meet the definition of "trout waters" as described above.

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

Although the State is required by the federal Clean Water Act to adopt water quality standards, there is no direct federal counterpart regulation. Therefore, no determination of stringency is required.

E. CONSTITUTIONAL TAKINGS DETERMINATION:

In accordance with §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 meetings on May 21, 2007 and May 30, 2007, the Environmental Protection Advisory Council discussed this rule. (See attached minutes for Council's discussion.)

west virginia department of environmental protection

Division of Water & Waste Management
601 57th Street SE Charleston, WV 25304
304-926-0499 Fax: 304-926-0496

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

USE REMOVAL REQUEST INFORMATION SHEET

1. APPLICANT

Huntington Alloys Corporation (HAC)
3200 Riverside Drive
Huntington, WV 25705

2. NAME AND LOCATION OF THE STREAM

The stream for which the reclassification of a designated use is requested is Pats Branch from its confluence with the Guyandotte River to a point 1000 feet upstream. Pats Branch (WVOG-0.5), an intermittent stream, originates at the Dietz Hollow Landfill located in Huntington, Cabell County, West Virginia and flows southwest approximately 0.8 stream miles through a residential area. Pats Branch then enters a culvert under a CSX Railroad track, resurfaces, and within a few yards enters a culvert that flows beneath the HAC facility. The reclassification that is requested begins at the culvert that carries Pats Branch beneath the HAC facility and ends at its confluence with the Guyandotte River. HAC operates under a National Pollutant Discharge Elimination System (NPDES) storm water permit, number WV0114618, that discharges into the Pats Branch stream segment for which a reclassification is requested.

3. USE DESIGNATIONS OF THE STREAM

The designated uses applicable to the stream subject to the application are Category A, Public Water Supply; Category B1, Warm Water Fishery; Category C, Water Contact Recreation and Category D, Agriculture and Wildlife. The existing uses that are currently being attained applicable to the stream segment are Category B1, Warm Water Fishery and Subcategory D3, Wildlife.

4. PROPOSED CHANGE BEING REQUESTED FOR THE STREAM

HAC is requesting a determination that the Category A (public water supply) and Subcategory D1 (agriculture irrigation water) uses are not attainable uses nor existing ones and should therefore be removed from the segment of Pats Branch beginning at the point where it flows beneath its facility to its confluence with the Guyandotte River.

west virginia department of environmental protection

Division of Water & Waste Management
601 57th Street SE Charleston, WV 25304
304-926-0499 Fax: 304-926-0496

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

5. SUPPORTIVE DOCUMENTATION DEMONSTRATING THE REVISION IS APPROPRIATE

The stream segment for which the use removal is requested begins at a culvert that carries Pats Branch beneath the HAC facility and ends at its confluence with the Guyandotte River. The culvert beneath the HAC facility consists of a six-foot diameter concrete pipe 600 feet in length. At the end of this culvert, Pats Branch "daylights" for approximately 50 feet before entering another culvert. The second culvert carries Pats Branch approximately 350 feet beneath the flood wall pumping station and Guyan River Road until it is discharged into the Guyandotte River via a submerged pipe. The only location where above-ground contact with the Pats Branch stream segment could occur is located on HAC property within a fenced area that is not accessible to the public, making the use of Pats Branch for drinking water highly unlikely. Based upon the review of construction drawings and the results of a physical survey of the stream segment, no water intake pipes or other evidence reveals that the stream segment is used as a drinking water source or a source of irrigation water. In addition, there are no homes or agricultural areas located adjacent to the stream segment. The physical survey was expanded to include the Guyandotte River stream banks which are located downstream of Pats Branch, and it found no water intake pipes or other evidence that the downstream segment of the Guyandotte River is used as a drinking water or agricultural water source. This was also supported by a database search of EPA's Safe Drinking Water Information System (SDWIS), interviews with personnel at the Cabell-Huntington Health Department as well as information obtained from the local public water supplier, West Virginia American Water Company (WVAWC). A survey was also conducted to determine the presence of drinking water wells in the vicinity of Pats Branch in order to determine the potential for a hydrogeologic connection between the wells and the water of Pats Branch. The search did not identify any groundwater wells within one mile of the downstream segment, making any connection between local wells and the segment of Pats Branch improbable

Despite application of legally-required best management practices at the HAC facility, stormwater outlet 001 at times contains fluoride in excess of the Category A and Subcategory D1 water quality criteria. While it has been documented that neither Category A nor the Subcategory D1 uses are existing in this stream segment, stream monitoring has further demonstrated that there is no measurable impact to the downstream waters (Guyandotte River and Ohio River) by Pats Branch.

Division of Water & Waste Management
601 57th Street SE Charleston, WV 25304
304-926-0499 Fax: 304-926-0496

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

Future attainment of the public water supply use (Category A), as well as the agriculture irrigation water uses, is not feasible in this segment of Pats Branch due to hydrologic modifications that preclude the attainment of the use. The culverts in the application area were constructed 40 or more years ago as a diversion for industrial expansion and go under the City of Huntington floodwall. Culverts in the segment are sub-grade pipes that lack any water intake pipes, and the introduction of water withdrawal pipes into the application area would be impractical. Due to the location of the City of Huntington floodwall, it is not feasible to restore Pats Branch to its original condition. Pats Branch was diverted approximately 3,000 feet in the 1930's as part of the City of Huntington flood wall construction. An examination of alternative control strategies revealed no feasible alternatives for controlling the discharge beyond those in place.

6. **IMPLICATIONS OF THE REVISION FOR THE COMMUNITY AND OTHER USERS OF THE WATERS**

Based upon the results of a physical survey of the stream segment, no water intake pipes or other evidence reveals that the stream segment is used as a drinking water source or a source of irrigation water. From the information provided, this segment of Pats Branch is not now and will not be a suitable public water supply or agriculture water supply given its limited flow, the absence of residences and agricultural areas, and the presence nearby of several large rivers that serve as alternative water sources.

THE APPLICATION AND OTHER SUPPORTING DOCUMENTATION ARE ON FILE AT WVDEP OFFICE AT 601 57TH STREET, SE CHARLESTON, WV. ANYONE WISHING TO REVIEW THE FILE MAY CONTACT WVDEP AT (304)926-0499 EXTENSION 1033.

West Virginia Department of Environmental Protection

ADVISORY COUNCIL MEETING MINUTES

Monday – May 21, 2007
1:00 p.m. – 3:00 p.m.
601 57th Street, SE, Charleston, WV
West Virginia Room – 3rd Floor

ATTENDEES:

Advisory Council Members:

Rick Roberts
Karen Price
Bill Raney
Lisa Dooley
Larry Harris
Jackie Hallinan

DEP:

Randy Huffman, Deputy Cabinet Secretary/Director –Division of Mining & Reclamation
Karen G. Watson, Assistant General Counsel
Ken Ellison, Director - Division of Land Restoration
Lisa McClung, Director – Division of Water and Waste Management
John Benedict, Director – Division of Air Quality
Lewis Halstead, DMR
Ken Politan, DMR
Charlie Sturey, DMR
Jessica Greathouse, Chief Communication Officer – WVDEP – Public Information Office
James Martin, Chief, Office of Oil & Gas
Carroll Cather, DWWM
Pam Nixon, Advocate
David L. Vande Linde, Blasting
Jim Mason, DAQ
Mike Zeto, DWWM – EE
Matt Sweeney, DWWM

VISITORS:

Ann Bradley, Spilman Thomas & Battle
Charlie Burd, IOGA
Don Garvin, WVEC
Dave Yaussy, Robinson & McElwee

Randy Huffman, Deputy Cabinet Secretary - West Virginia Department of Environmental Protection called the meeting to order at 1:00 p.m.

Karen Price stated that the Council did not have enough time to review the rules, therefore was requesting to have another meeting to discuss further and the remaining of the Council agreed. The Council will meet May 30, 2007 at 10:00 a.m. – WVDEP – 601 57th Street, SE – Charleston, WV 25304 – West Virginia Room (3001).

Deputy Cabinet Secretary Huffman apologized for the short time period regarding the rules getting out to Council. Randy Huffman then introduced Karen Watson, Assistant General Counsel to discuss with the Council the DEP bills that had passed in the 2007 Regular Legislative Session:

- SB 337 – Establishing New Greenhouse Gas Inventory Program
  Approved by Governor – April 4, 2007

- SB 425 – Relating to Water Pollution Control Revolving Fund
  Approved by Governor – April 4, 2007

- SB 465 – Establishing Dam Safety Rehabilitation Revolving Fund
  Approved by Governor – March 27, 2007

- SB 490 – Relating to Underground Storage Tank Insurance Fund
  Approved by Governor – April 3, 2007

- SB 524 – Requiring Proof of Lawful Disposal of Solid Waste
  Approved by Governor – March 28, 2007

- SB 588 – Removing Tax Expiration Date on Manufacturing or Production of Synthetic Fuel From Coal
  Approved by Governor – April 4, 2007

Karen Watson then gave a brief summary of each proposed rule for the 2008 legislative session:

Air Quality

45CSR6 – Control of Air Pollution from Combustion of Refuse

SUMMARY

Proposed Rule 6 is now a basic open burning/ incinerator rule. Revised scope includes 'statutory air pollution,' addition of new language for posted operating instructions and open burning or incineration of animal or poultry carcasses during a declared state of emergency. Except for temporary Air Curtain Incinerators for land clearing debris (DOH jobs) and incineration of animal or poultry remains, most Air Curtain Incinerators will now be exempted under Rule 6 and placed under Rule 18.

COMMENT

Mr. Harris: Why does it allow low-level radioactive waste?

DEP Response: To allow crematories to dispose of bodies with chemo drugs. Does not allow high-level radioactive compounds related to research.

Council wanted to know if the agency would accept comments in writing after the meeting (e-mail in comments)

DEP Response: Yes

45CSR8 – Ambient Air Quality Standards

SUMMARY

NAAQS rules 45CSR8, 45CSR9 & 45CSR12 have been combined for the 2008 legislative session. Rule 8 is now the complete NAAQS incorporation by reference rule, and 45CSR9 & 45CSR12 will be repealed and replaced. Revisions to SO_2 & PM NAAQS include correction of SO_2 annual primary standard from 0.003 to 0.030 ppm, addition of annual and 24-hour $PM_{2.5}$ standards, and addition of measurement methods for $PM_{2.5}$. Revisions to CO & Ozone NAAQS include revocation of one-hour ozone standard except for Berkeley & Jefferson counties, identification of one-hour ozone maintenance areas, and addition of 8-hour primary and secondary ozone standards. Revisions to NO_2 and Lead NAAQS include addition of primary and secondary standards for lead, and addition of measurement methods for lead. Revisions also include general language updates, improved citing and consistency.

COMMENT

Mr. Harris: Are we sure we are protecting the public's health? We should not be lowering standards so that our energy being transmitted to other states doesn't pollute our air. Are we aware of EPA's Science Advisory Panel?

DEP Response: CAIR aims to lower emissions at power plants. Utility controls are helping us meet targets earlier. EPA's regional approach has generally been successful and we are seeing tremendous benefits. The agency is aware of the EPA's panel, and EPA is considering more stringent regulations but has not done so yet.

45CSR16 – Standards of Performance for New Stationary Sources

SUMMARY

Revisions to rule incorporate annual incorporation by reference updates and exclusions.

COMMENT

No questions.

45CSR18 – Control of Air Pollution from Combustion of Solid Waste

SUMMARY

CISWI Rule 18 combines and incorporates by reference all current federal Section 111/129 combustion regulation into one rule. Old Rule 24 will be repealed and replaced. New exemption section is consistent with revised Rules 6, 25 and 34. Revisions also include revised scope, extensive federal counterpart language updates, improved citing and consistency.

COMMENT

No questions.

45CSR25 – Control of Air Pollution from Hazardous Waste Treatment, Storage and Disposal Facilities

SUMMARY

Revisions to the proposed rule include general annual incorporation by reference and revisions required to maintain consistency with the DWWM's rule 33CSR20 and federal counterpart regulation. Addition of direct incorporation by reference of new provisions published in the Federal Register. Language for pathological waste incinerators is revised for clarity.

COMMENT

No questions.

45CSR34 – Emission Standards for Hazardous Air Pollutants

SUMMARY

Rule 34 now combines all NESHAP regulations previously adopted under both Rules 15 & 34. Old Rule 15 will be repealed and replaced. Revisions to Rule 34 incorporate annual NESHAP updates under Parts 61 & 63. Some Part 63 standards affecting non-major sources of hazardous air pollutants are being excluded from incorporation by reference: Oil and Natural Gas; Polyvinyl Chloride and Copolymers; Primary Copper Smelting; Secondary Copper Smelting; and Primary Nonferrous Metals.

COMMENT

No questions.

45CSR39 – Control of Annual Nitrogen Oxides Emissions

SUMMARY

Annual CAIR NOx Rule - Incorporates revisions to 40 CFR Part 96.

COMMENT

No questions.

45CSR40 - Control of Ozone Season Nitrogen Oxides Emissions

SUMMARY

Ozone Season CAIR NOx Rule - Incorporates revisions 40 CFR to Part 96.

COMMENT

No questions.

45CSR41 – Control of Annual Sulfur Dioxide Emissions

SUMMARY

Annual CAIR SO_2 Rule - Incorporates revisions to 40 CFR Part 96.

COMMENT

No questions.

45CSR42 – Greenhouse Gas Emissions Inventory Program

SUMMARY

The Greenhouse Gas Inventory Program Rule is authorized by SB337 passed in the 2007 legislative session. The rule establishes a program which requires the reporting and inventory of greenhouse gas emissions by stationary sources which emit more than a *de minimis* amount; inventories greenhouse gas emissions from stationary, area, mobile and biogenic sources, and accounts for reductions, capture and sequestration; provides for: a periodic compilation of a greenhouse gas inventory; a determination whether WV is a net sink or emitter; development of a registry for voluntary reductions; and a determination whether greenhouse gas can be developed as an asset for economic development.

COMMENT

Mr. Raney: Is the exclusion still there for coal preparation activities?

DEP Response: Yes, section 3.2. (45CSR42)

Mr. Raney: How do we quantify sequestration?

DEP Response: Don't think we will get down to stationary source level. Agency will look at area

sources and biogenic activities. Once we get information, we will compile in an inventory.

Division of Water and Waste Management

33CSR9 – Standards for Beneficial use of Filtrate from Water Treatment Plants

SUMMARY

This legislative rule establishes a mechanism and requirements for the permitting, siting, bonding, and use of water treatment plant sludge from water treatment plants that has beneficial properties. This rule applies to the beneficial use of water treatment plant sludge and to any person who seeks approval from the Secretary to beneficially use such sludge within the state. This rule is intended to enhance the resource recovery and recycling goals of article fifteen of chapter twenty-two of the West Virginia Code and to encourage the beneficial use of water treatment plant filtrate. Section 22-15-23 of the West Virginia Code and this rule, and not the provisions of W. Va. Code § 22-15-10 or 33 CSR 1, shall govern the beneficial use of water treatment plant sludge. This rule does not apply to sewage sludge, products derived from sewage sludge, sludges regulated under 33 CSR 8, or materials regulated as hazardous waste under W. Va. Code §§22-18-1, et seq.

COMMENT

Lisa Dooley: Public notice of permits – who bears the cost – there has to be a more efficient way of getting notices out than Class I legal ads. This is a suggestion for the future.

DEP Response: Applicant bears cost – DEP is trying other methods of getting the information out – but not everyone has access to e-mail.

400 people on DEP's mailing list to receive permits by e-mail and we have between 30-40 who receive permits by US mail.

33CSR20 – Hazardous Waste Management System

SUMMARY

This amendment will adopt by reference approximately two years of changes to federal regulations by adopting the federal regulations in effect as of June 1, 2007 consisting of changes that correct errors in previously enacted Dye and Pigment rule and Manifest rule, allow more hazardous waste, allow greater flexibility in SW-846 testing and monitoring, allow more mercury containing devices to be managed as universal waste, streamline permitting process through a standardized permit, allow additional headworks and de minimus waste exemptions, reference Clean Air Act standards for hazardous waste combustors, allow a series of paperwork burden reductions for hazardous waste management facilities, corrects errors in 40 CFR (federal regulations) and excludes cathode ray tubes from the definition of solid waste under certain conditions. Language corrections, updated references and a change as the result of an EPA comment regarding annual groundwater monitoring at corrective action sites are also included in the amended rule. The rule amendment is not projected to require additional operating expenses above current levels as the amendments are generally de-regulatory in nature.

COMMENT

No questions.

33CSR30 – Underground Storage Tanks

SUMMARY

There are several new provisions to reflect the 2005 Federal Energy Act, including: secondary containment requirements for new or replaced thanks or piping; secondary containment requirements for new or replaced fuel dispenser systems; tank eligibility for delivery, deposit or acceptance – enables agency to prevent deposit or delivery to a tank that is not in compliance; and training requirements for individuals who operate, maintain or are responsible to address emergencies from spills or releases from underground storage tank systems.

COMMENT

No questions.

47CSR2 – Requirements Governing Water Quality Standards

SUMMARY

The proposed revisions reflect updates identified during the federally-mandated triennial review of the Water Quality Standards rule. These include proposed additions to the trout water list, new criteria for nutrients, revisions to criteria in Appendix E and a use redesignation in the Guyandotte River Basin.

COMMENT

Mr. Raney: Would like to have the trout water list stay within the agency and be able to discuss the science on a case-by-base basis before the EQB, not the Legislature.

DEP Response: The DEP believes the scientific basis for the proposed trout streams is clear and does not need to be litigated before the EQB.

Mr. Harris: Commented on the changes in Appendix E and asked whether the formula change for copper and cadmium resulted in a more or less stringent standard.

DEP Response: The changes in Appendix E are recommended by EPA, updating MCL's, etc. The revised hardness formulas represent EPA's latest science.

47CSR10 – National Pollutant Discharge Elimination System (NPDES)

SUMMARY

The proposed revisions to the National Pollutant Discharge Elimination System Rule reflect updates/additions made to the various federal regulations that govern the NPDES program. The proposed changes also include specific language in section 14 of the rule relating to the Pretreatment Program to ensure that the rule is consistent with the most recent federal pretreatment regulations in 40 CFR Part 403.

COMMENT

No questions.

47CSR34 – Dam Safety

SUMMARY

The proposed revisions establish requirements governing the disbursement and use of moneys in the Dam Safety Rehabilitation Revolving Fund, authorized by SB 465 in the 2007 legislative session.

COMMENT

Ms. Hallinan: Any progress being made in reducing the number of deficient dams?

DEP Response: Not very much. The fund initiative is badly needed.

60CSR5 – Antidegradation Implementation Procedures

SUMMARY

Antidegradation is a requirement of the federal Clean Water Act intended to preserve the existing quality of the State's waters and to prevent and/or minimize future degradation. The rule was first adopted in 2001 and establishes four levels, or tiers, of protection for state waters, Tiers 1, 2, 2.5 and 3. Each tier provides a graduated level of protection used during the NPDES permit issuance process. The proposed revisions to the rule carry forward the agency's antidegradation implementation efforts, and move the Tier 2.5 streams that had been on the "presumptive" list in Appendix C to a final proposed list in Appendix A. The agency is proposing a total of 156 streams be included on the list. The list of 156 waters is comprised of the 37 waters that did not receive objections in the formal objection period, those waters that contain reproducing trout and are 100% on public land, those waters listed as high quality on public land based on their high biological scores, and Loop Creek.

COMMENT

Mr. Harris: Suggested we file with 309 streams instead of 156 streams because Legislature will further reduce.

Mr. Raney: Suggested we start with 39.

Mr. Harris: Asked about section 2.11 in the definitions regarding "trading" and if it includes cross-pollutant trading.

DEP Response: The definitions were unchanged from the ones the EQB first adopted in 2001. The agency does not think it allows cross-pollutant trading.

Division of Mining and Reclamation

38CSR2 – Surface Mining Reclamation Rule

SUMMARY

§38-2-3.2.g. Notice of Technical Completeness is new language and is to provide the public an opportunity to review the application once technical review is completed. §38-2-5.4.e.1 is removing language that is contrary to returning the natural drainway to its original pattern, profile, and dimensions once drainage control structure is removed. The changes in §38-2-5.6 clarify what operations may be exempt from conducting a "Surface Water Runoff Analysis", monitoring requirements and removes phase-in compliance schedule that expired on June 19, 2006. Changes to §38-2-6 removes duplication of rules for Blasting and after this change, all the requirements for blasting will be contained in Surface Mining Blasting Rule, Title 199 Series 1. New §38-2-11.8 titled "Bond Credit for Reclamation of Bond Forfeiture Site under a No Cost Reclamation Contract" encourages qualified operators to undertake reclamation of bond forfeiture sites for the purpose of eliminating hazards to human health and safety, abating pollution of surface and ground waters and the contribution of sediment to adjacent areas, and restoring land to beneficial uses. Changes in §38-2-14.15.c.2 and 14.15.d.3 are clarifying contemporaneous reclamation rules on excess spoil disposal. The changes in 14.15.e remove a phase-in compliance schedule that expired in 2004. The changes in §38-2-23 are being made to make the mining rule consistent with the proposed changes in the State's NPDES Mining Rules.

COMMENT

No questions.

47CSR5A – Individual State Certification of Activities Requiring a Federal Permit

SUMMARY

The proposed amendments to this rule are being made to adopt into rule requirements that have been applied through past practices for coal related activities requiring mitigation and issuance of a 401 State Certification of a 404 Permit. Ratios for monetary compensation for temporary impacts are detailed. Monetary compensation for permanent impacts to wetlands from coal related activities are made the same as non-coal related. Additional economic and stream measurement information is being requested to be added to the 401 application.

COMMENT

Mr. Harris: How do we determine the "ordinary high water mark" under section 4.2.f.4 and how is it determined on a small stream?

DEP Response: The US Army Corps of Engineers is responsible for determining "waters of the U.S." under the rule.

Mr. Harris: What are the differences between coal and non-coal impacts and how are they determined?

DEP Response: Rule has to be consistent with statute.

47CSR30 – WV/NPDES Rules for Coal Mining Facilities

SUMMARY

The proposed amendments to this rule are being made to allow general clean-up of sections referencing outdated names of agencies and references to the EQB governing rule making. This rule addresses the Secretary as being the person as head of all actions. References to the "Director" are changed to "Secretary" to eliminate the need to distinguish between the Director of Mining and Reclamation and the Director of Water and Waste Management when issuing a coal related WV/NPDES permit. This rule adds provision for storm-water coverage for certain minimal activities without the requirement for modification through application to the permit. This rule also provides for an advanced approval of transfer of a WV/NPDES Permit to coincide with the advanced approval of the corresponding Article 3 Permit. This rule clarifies provisions related to coal remining operations and provides a remining water quality standard variance for any parameter of concern.

COMMENT

No questions.

199CSR1 - Surface Mining Blasting Rule

SUMMARY

The proposed amendments change the following sections: 2.27. Adds the definition of "other structure" (structures built by the permittee); 2.38 Clarifies definition of "surface mine operation"; 3.2.C. Plan for blasting should include seismic monitoring when within 1000 ft of a structure, and performance specifications for blasting seismographs; 3.4. Areas of blasting that will be regulated for shaft and slope development; 3.6.c.3. Requiring field practice guidelines for blasting seismographs; 3.7a Request for alternate limits must have written consent of the owner; 3.9. Minimum qualifications and continuing education requirements for surveyor; 4.1.b. Allows the agency to consider blasting experience of applicants that was gained prior to the last three years; 4.5.d. Requires applicants who have been suspended or revoked in other states to show cause as to why should be issued a certification; 4.9.a.2 process for issuing a temporary suspension to a blaster and appeal rights; 4.13 Clarifies blasters responsibility of training the blasting crew; 5.2.a.3&4 Clarifies

the investigations process on a claim of blasting damage; 6.1 Requiring that any arbitrators that are removed from the list must be done with cause; and 7.3 Detonators and initiation systems are not considered for calculation of fees.

COMMENT

No questions.

Office of Oil and Gas

35CSR3 – Coalbed Methane Wells Rule

SUMMARY

The WVDEP, Office of Oil and Gas is proposing to revise existing rule 35CSR3. Series 3 is a legislative rule in place to enforce the provisions in WV Code §22-21-1 et seq., Coalbed Methane Wells and Units, commonly referred to at the Coalbed Methane Act. The revisions will: Address the establishment of special field rules to promote the orderly development of coalbed methane fields; Protect the correlative rights of all owners located within the geographic area for which special field rules are established; Provide a process by which the Review Board may hold a hearing on an application for special field rules and issue such rules; Insert language (Section 17) which was inadvertently deleted from the rule during the 2006 legislative session. This language existed in the rule prior to the revisions in 2006.

COMMENT

Is this the same rule that went through last year?

DEP Response: Yes, except for two sections that had changes:

16.2.e – advertisement "15 days"

16.1.6.1 – "FOIA" issue that came out of the LRMRC.

Mr. Raney: Is this the product of the stakeholders group?

DEP Response: Yes.

Ms. Hallinan: What is a field rule?

DEP Response: Special spacing procedure for coalbed methane wells. It deals with pooling and royalty issues.

Division of Land Restoration

33CSR10 – Recycling Assistance Grant Program

SUMMARY

This rule sets out guidelines and procedures for providing assistance grants to local governments and other interested parties for the purpose of planning, initiating, expanding, or upgrading recycling programs, provide related public education programs, and assist in recycling market procurement efforts.

COMMENT

No questions.

60CSR3 – Voluntary Remediation and Redevelopment Rule

SUMMARY

This legislative rule establishes the eligibility, procedures, standards and legal documents required for voluntary and brownfield cleanups and updates risk protocol standards, including updates to the deminimis table. It also includes changes to the land use covenant section to incorporate the components of the Uniform Covenant Act.

COMMENT

Ms. Dooley: Are there grant dollars for brownfields?

DEP Response: Yes

The next scheduled Advisory Council Meeting will be on May 30, 2007 at 10:00 a.m. Mr. Huffman asked the Council members to notify the DEP of which rules they want to discuss so the right agency person can be at the meeting. He also asked them to submit comments prior to the meeting if possible.

West Virginia Department of Environmental Protection

ADVISORY COUNCIL MEETING MINUTES

Wednesday – May 30, 2007
10:00 a.m. – 12:00 p.m.
601 57th Street, SE, Charleston, WV
West Virginia Room – 3rd Floor

ATTENDEES:

Advisory Council Members:

Rick Roberts
Karen Price
Bill Raney
Larry Harris - Teleconference
Jackie Hallinan

DEP:

Randy Huffman, Deputy Cabinet Secretary/Director –Division of Mining & Reclamation
Karen G. Watson, Assistant General Counsel
Lisa McClung, Director – Division of Water and Waste Management
John Benedict, Director – Division of Air Quality
Jessica Greathouse, Chief Communication Officer – WVDEP – Public Information Office
Pam Nixon, Advocate
Jim Mason, DAQ
Mike Zeto, DWWM – EE
John Morgan, DWWM
Scott Mandirola, DWWM
Greg Adolfson, PIO

VISITORS:

Dave Yaussy
Brittany Carns
Joe Gollehon
Gregory Hoyer
Jeff Mauzy
Amy Christy

Randy Huffman, Deputy Cabinet Secretary - West Virginia Department of Environmental Protection called the meeting to order at 10:00 a.m. Advisory Council Member Larry Harris joined the meeting via teleconference. Deputy Cabinet Secretary Huffman then turned the meeting over to Karen Watson, Assistant General Counsel for the West Virginia Department of Environmental Protection. Karen informed the Council that the agency had received comments from several Council members and those comments would be appended to the minutes. (see attached) She explained the agency

had representatives from each of the programs to answer questions for the rules identified in those comments. She also explained the agency had made several changes in the rules as a result of those comments.

Air Quality

45CSR6 – Control of Air Pollution from Combustion of Refuse

SUMMARY

Proposed Rule 6 is now a basic open burning/ incinerator rule. Revised scope includes 'statutory air pollution,' addition of new language for posted operating instructions and open burning or incineration of animal or poultry carcasses during a declared state of emergency. Except for temporary Air Curtain Incinerators for land clearing debris (DOH jobs) and incineration of animal or poultry remains, most Air Curtain Incinerators will now be exempted under Rule 6 and placed under Rule 18.

COMMENT

Larry Harris: Had raised the issue of "low-level radioactive waste" in the last meeting.

DEP Response: DEP has removed the chemotherapeutic waste and low-level radioactive waste provisions from the proposed rule. The proposed rule does not in any way affect current medical waste incineration rules now on the books.

45CSR8 – Ambient Air Quality Standards

SUMMARY

NAAQS rules 45CSR8, 45CSR9 & 45CSR12 have been combined for the 2008 legislative session. Rule 8 is now the complete NAAQS incorporation by reference rule, and 45CSR9 & 45CSR12 will be repealed and replaced. Revisions to SO_2 & PM NAAQS include correction of SO_2 annual primary standard from 0.003 to 0.030 ppm, addition of annual and 24-hour $PM_{2.5}$ standards, and addition of measurement methods for $PM_{2.5}$. Revisions to CO & Ozone NAAQS include revocation of one-hour ozone standard except for Berkeley & Jefferson counties, identification of one-hour ozone maintenance areas, and addition of 8-hour primary and secondary ozone standards. Revisions to NO_2 and Lead NAAQS include addition of primary and secondary standards for lead, and addition of measurement methods for lead. Revisions also include general language updates, improved citing and consistency.

COMMENT

Karen Price: Section 4.2.c – $PM_{2.5}$ Maximum 24-Hour Average Concentration. The level for the 24-hour primary and secondary standard states 35 ug/m^3. This should be 65 ug/m^3, pursuant to 40 CFR 50.7.

DEP Response: On October 17, 2006, the federal NAAQS regulation changed from 65 to 35.

Larry Harris: Restated his concern that the standards may not be stringent enough to protect public health. He also restated his question about the antidegradation language struck from the rule.

DEP Response: DEP cannot lower the NAAQS standards below that of federal levels unless the provisions for the stringency test in §22-1-3a are fully met. 45CSR14, in its entirety, has wholly replaced the intent of the relic anti-degradation language struck in proposed Rule 8.

45CSR39 – Control of Annual Nitrogen Oxides Emissions

45CSR40 - Control of Ozone Season Nitrogen Oxides Emissions

Ozone Season CAIR NOx Rule - Incorporates revisions 40 CFR to Part 96.

Annual CAIR NOx Rule - Incorporates revisions to 40 CFR Part 96.

45CSR41 – Control of Annual Sulfur Dioxide Emissions

Annual CAIR SO_2 Rule - Incorporates revisions to 40 CFR Part 96.

COMMENT

Karen Price: Asked why the opt-in language was deleted from each of these rules.

DEP Response: has removed the opt-in provisions in the three CAIR rules so that West Virginia can say that CAIR equals NOx RACT for EGUs under the PM2.5 implementation rule.

45CSR42 – Greenhouse Gas Emissions Inventory Program

SUMMARY

The Greenhouse Gas Inventory Program Rule is authorized by SB337 passed in the 2007 legislative session. The rule establishes a program which requires the reporting and inventory of greenhouse gas emissions by stationary sources which emit more than a *de minimis* amount; inventories greenhouse gas emissions from stationary, area, mobile and biogenic sources, and accounts for reductions, capture and sequestration; provides for: a periodic compilation of a greenhouse gas inventory; a determination whether WV is a net sink or emitter; development of a registry for voluntary reductions; and a determination whether greenhouse gas can be developed as an asset for economic development.

COMMENT

Karen Price and Larry Harris: Both asked about the definitions of "anthropogenic" and "biogenic" in the rule and asked for examples of each.

DEP Response: An example of an anthropogenic source is the coal extraction process and an example of a biogenic source is the erosion of soil exposing a coal seam. The agency does not plan

to ask sources to report biogenic activities. In order to receive credit a source must report all of its emissions.

Karen Price: Can the reporting requirement in section 4.1 be made consistent with the emissions inventory requirements.

DEP Response: The date in the rule is March 31st and is the same as the emissions inventory date.

Karen Price: Does not believe fees should be required for greenhouse gas reporting.

DEP Response: The agency will consider the issue.

Karen Price: The last sentence in section 5.3 allowing the Secretary to request information is not authorized by statute.

DEP Response: It is authorized by the statute.

Karen Price: There should be a reasonable protocol for reporting emissions.

DEP Response: DAQ purposely wrote the rule in a manner flexible to the Secretary, as greenhouse gas reduction quantification protocols are still being developed at this time.

Karen Price: Is WV going to sign on to the climate registry or are we going to have our own?

DEP Response: In order to trade, we have to be consistent with other programs, but we do not want to be more specific in the rule.

Bill Raney: The exemption in section 3.2 includes language referring to sources covered by chapter 22-3 as well as sources required to report emissions. We are concerned this may take the exemption in the statute away.

DEP Response: While the agency did not want to require mining extraction to report emissions, thermal dryers associated with coal prep plants often have huge emissions of greenhouse gases. That is the reason the statute and rule only exempt sources permitted under chapter 22-3.

Division of Water and Waste Management

33CSR9 – Standards for Beneficial use of Filtrate from Water Treatment Plants

SUMMARY

This legislative rule establishes a mechanism and requirements for the permitting, siting, bonding, and use of water treatment plant sludge from water treatment plants that has beneficial properties. This rule applies to the beneficial use of water treatment plant sludge and to any person who seeks approval from the Secretary to beneficially use such sludge within the state. This rule is intended to enhance the resource recovery and recycling goals of article fifteen of chapter twenty-two of the West Virginia Code and to encourage the beneficial use of water treatment plant filtrate. Section 22-

15-23 of the West Virginia Code and this rule, and not the provisions of W. Va. Code § 22-15-10 or 33 CSR 1, shall govern the beneficial use of water treatment plant sludge. This rule does not apply to sewage sludge, products derived from sewage sludge, sludges regulated under 33 CSR 8, or materials regulated as hazardous waste under W. Va. Code §§22-18-1, et seq.

COMMENT

Larry Harris: DEP made changes to this rule during the Interims process last year, and the rule now requires a permit for both short-term and long-term applications. This is a good change. However, we feel that most of the information required in Section 7.3. Permit Application Requirements for long-term permits should also be required for short-term permits.

DEP Response: The requirements of section 7.3 were intended to be directed toward facilities that proposed to land apply filtrate as the beneficial use. It was intended to be applicable to both, if land application was the proposed method of reuse. Section 7.3 will be revised to more clearly reflect the applicability of the requirement for both long-term and short-term, if land application is the proposed beneficial reuse.

Rick Roberts and Larry Harris: Regarding the environmental effects of disposal of sludge are the values in Table 1 of the rule sufficient?

DEP Response: The Table 1 values are the same as the sewage sludge levels in DEP's other rules, and the agency believes they are supported by sound science.

Rick Roberts and Larry Harris: Mr. Harris expressed concern with the distinction between "beneficial reuse" and "disposal." Mr. Roberts believes that his concern is satisfied by the language in section 3.1.b.1.

Rick Roberts: The rule should include general permits as proposed.

Larry Harris: Only individual permits should be allowed under the rule.

DEP Response: There will be public notice in the general permit process.

33CSR30 – Underground Storage Tanks

SUMMARY

There are several new provisions to reflect the 2005 Federal Energy Act, including: secondary containment requirements for new or replaced thanks or piping; secondary containment requirements for new or replaced fuel dispenser systems; tank eligibility for delivery, deposit or acceptance – enables agency to prevent deposit or delivery to a tank that is not in compliance; and training requirements for individuals who operate, maintain or are responsible to address emergencies from spills or releases from underground storage tank systems.

COMMENT

Karen Price: Section 6.1. states "....including any person who accepts a delivery order, accepts payment, delivers or deposits product into an underground storage tank.....". The portion that states "...accepts payment..." should be removed from this section because those individuals within a company who accept payment or make payments most often do not know anything about the underground storage tank (UST), the operation of the UST, or the current regulatory status of the UST.

DEP Response: This language will give the agency a better handle on transporters and middle-men involved in the process.

Karen Price: Section 7.3.a.1. states "....the methodology for verifying attendance, the date, time and location of the course, the name of the offering organization, the credentials of the instructors, and a certification that the technology or methods.....".

1. The portion that states "..the date, time and location of the course,...." should be deleted. For large companies with many UST installations and locations there can be numerous individuals that need to be trained. Training will most likely occur on multiple dates, times, and locations that may not always be known until just prior to the training event. When new employees are hired training might occur on short notice and for one individual. The burden of having to report the dates, time and locations would hinder and slow down the training process and restrict a company's ability to comply.

2. The portion that states "...the credentials of the instructors..." should be removed. Credentials will vary from instructor to instructor new instructors might be utilized, and a company might not know which instructors will be used at the various training sessions until just prior to the training session. In addition, the course content is the main issue of concern and should be the main focus in obtaining State approval of a training program.

DEP Response: Regarding dates, times and location of the training the agency will not require the information prior to the training. As far as the credentials of the instructor the agency needs this information as part of its curriculum review, in this case before the training.

Karen Price: Section 7.3.a.2 - This section states that a nonrefundable application fee of $280 must be submitted with the application. Larger companies may have one training program, but administer the training on multiple dates, times and locations. Having to submit an application for approval of the training program each time the program is administered would be cost prohibitive, burdensome, and would hinder the training process.

DEP Response: The agency agrees and believes the rule only requires a one-time fee.

Rick Roberts: Regarding the $5.00 per ton fee, how does a source measure the tonnage? Perhaps the agency should consider using a cubic-yard approach.

DEP Response: The agency will consider.

47CSR2 – Requirements Governing Water Quality Standards

SUMMARY

The proposed revisions reflect updates identified during the federally-mandated triennial review of the Water Quality Standards rule. These include proposed additions to the trout water list, new criteria for nutrients, revisions to criteria in Appendix E and a use redesignation in the Guyandotte River Basin.

COMMENT

Larry Harris: Does the use removal in section 7.2.d follow the federal Clean Water Act requirements?

DEP Response: Yes, the agency followed all the requirements, federal and state, and required extensive information from the company. The agency also conducted two public meetings.
Bill Raney: Mr. Raney repeated his concern with the listing of trout waters in the rule and the fact that the list has to be approved by the Legislature. Karen Price agreed with this comment. Jackie Hallinan and Larry Harris did not agree with this comment.

Karen Price: Questioned the need for Appendix D, because the Category C use applies to all state waters.

DEP Response: Agency will consider.

Karen Price: Will the agency consider not making use removals go through the legislative process.

DEP Response: The agency decided not to include any language pertaining to this issue at this point in time, but will be subjecting this issue to the public participation process in the coming months.

60CSR5 – Antidegradation Implementation Procedures

SUMMARY

Antidegradation is a requirement of the federal Clean Water Act intended to preserve the existing quality of the State's waters and to prevent and/or minimize future degradation. The rule was first adopted in 2001 and establishes four levels, or tiers, of protection for state waters, Tiers 1, 2, 2.5 and 3. Each tier provides a graduated level of protection used during the NPDES permit issuance process. The proposed revisions to the rule carry forward the agency's antidegradation implementation efforts, and move the Tier 2.5 streams that had been on the "presumptive" list in Appendix C to a final proposed list in Appendix A. The agency is proposing a total of 156 streams be included on the list. The list of 156 waters is comprised of the 37 waters that did not receive objections in the formal objection period, those waters that contain reproducing trout and are 100% on public land, those waters listed as high quality on public land based on their high biological scores, and Loop Creek.

COMMENT

Larry Harris: Scientific criteria should be used to add or delete streams from the Tier 2.5 list.

Rick Roberts: Can the SRF program give priority to facilities impacted by the Tier 2.5 list?

DEP Response: Agency will take this under advisement.

Larry Harris: Is the nomination process adequate?

DEP Response: The agency believes the process is generally adequate and workable. If, however a large number of streams are nominated at one time, the individual notification requirements may be difficult and costly.

At this point in the meeting, Bill Raney submitted written comments regarding several mining rules. (see attached)

60CSR8 - Environmental Excellence Program

Greg Adolfson summarized the rule revisions. He said the changes would provide more flexibility for the agency to approve or disapprove of incentives in the program, as well as other flexibilities.

SUMMARY

Changes are being proposed to the Environmental Excellence Program Rule (60CSR8) to better align with and follow the momentum of the United States Environmental Protection Agency's National Environmental Performance Track Program. Additionally, the primary purpose for the changes is to give more flexibility to the Department of Environmental Protection Cabinet Secretary in areas such as: Eligibility Criteria for Participation (section 4); Environmental Performance Record (section 5); Environmental Management System (section 6); Public Participation (section 8); Incentives (section 9); Procedures for Application (section 10); and Annual Performance Report (section 14). Language, such as "may include, but will not be limited to, the following," has been added to allow for this flexibility.

COMMENT

Rick Roberts: Why is section 6.2 completely deleted?

DEP Response: The section is not completed deleted, just the 1996 standards. This will allow the agency to use the most current standards.

Bill Raney: How many companies are participating in the program?

DEP Response: There are two in the National Program, Toyota and Dow.

Jackie Hallinan: The program is a good idea.

Meeting was adjourned by Deputy Cabinet Secretary Randy Huffman.

Council meeting – 5/30/07
Comments
Submitted
by Bill Raney

Bill...

Here are some preliminary comments provided by the Environmental-Technical Committee on the rules that will be reviewed by the Advisory Council:

Water Quality Standards Rule (47CSR2)

Only concern relates to the Trout Stream List:

Inclusion of a stream in the codified list contained in the rule forever locks in unrealistic WQS on that stream regardless of existing and/or future water quality. The lower standards are very problematic for the coal industry by targeting iron and aluminum.

WVCA believes the list is immaterial to protection of the existing use if it is indeed a trout stream.

WV DEP, in the NPDES permitting process, will apply appropriate trout stream effluent limitations if the agency believes a stream to have a trout population regardless of whether or not it in on the codified list contained in the water quality standards rule or not. The only difference is that in the permitting process, the applicant has the opportunity to present data and sampling to refute the agency's assertion that a stream is a trout stream, and has a right of appeal if they continue to disagree with agency's assignment of trout stream limits. The ability to dispute the trout stream designation is very important, especially since some of the data supporting the current initiative to expand the codified list is decades old.

If a trout stream is included on the codified list approved by the legislature, the only option for removing that designation is to once again pursue a legislative fix. Under those circumstances, it is easier to just challenge the entire expansion of the trout stream list.

The massive expansion of the trout stream list as currently proposed is much more restrictive than the standards found in surrounding states, where the regulatory agencies have developed different levels and categories of trout streams. West Virginia continues to treat all trout streams the same as though they were native, naturally-reproducing, cold water streams that deserve the highest levels of protection. This is simply not true, as many streams in West Virginia are stocked trout streams where the existing, in-stream water quality is lower than the established effluent guidelines for native trout streams.

Mining & Reclamation Rule (38 CSR 2)

Main concern relates to 14.15.c.2, regarding contemporaneous reclamation and valley fills:

This revision will penalize operators that are constructing "bottom-up" valley fills, the agency's preferred method of fill construction by unnecessarily restricting when such fill can be counted as "reclaimed" under the state's contemporaneous reclamation rules. These rules already vastly exceed the federal requirements and those of any other surrounding state, and this change will only make them worse.

Additionally, this proposed revision was deleted during the Legislative session in 2007.

401 Water Quality Certification Rule (47 CSR 5A)

The changes to this rule are totally un-necessary, and add further detail and complication to a state mitigation rule when the Legislature has specifically instructed the agency to better align its mitigation program with that of the Corps of Engineers. Several years ago, the Legislature passed a bill directing WV DEP to provide state mitigation credit for Corps mitigation. While this has occurred, we feel the revisions to this rule will drive the two programs further apart. Additionally, we know of no state statutory revision that necessitates these changes...the state mitigation program has functioned for years without this level of detail, and we question why it's needed now.

Further, we are concerned that the rule seeks to change definitions that should only be revised in the statute with Legislative approval. For example, the revisions jettison the long-used references to stream types and insert reference to ordinary high water mark. This appears to be an effort to expand the definition of "waters of the state" to all cover every erosional feature, regardless of whether or not it actually functions as a stream.

West Virginia Coal Association

PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

July 18, 2006

Mr. Charles Sturey
West Virginia Department of Environmental Protection
Division of Mining & Reclamation
601 57th Street SE
Charleston, WV 25304

Re: Comments on Proposed Revisions to 47 CSR 5A

Dear Mr. Sturey:

Pursuant to the notice filed with the Secretary of State on June 15, 2006, the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's proposed revisions to 47 CSR 5A, "Rules for Individual State Certification of Activities Requiring a Federal Permit".

WVCA is a non-profit state trade association representing the interests of the West Virginia coal industry on policy and regulatory issues before various state and federal agencies that regulate coal extraction, processing, transportation and consumption. WVCA's primary goal is to enhance the viability of West Virginia's coal industry by supporting efficient and environmentally responsible coal extraction and processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA appreciates the opportunity to provide comments regarding the West Virginia Department of Environmental Protection's (WVDEP") proposed revisions to the state's Clean Water Act ("CWA") Section 401 certification rule.

General Comments

WVCA is very concerned about the WVDEP's proposal to add detail to its § 401 mitigation program, particularly at this time. The WVDEP has not articulated any problems with implementation of its existing mitigation program pursuant to this rule, and the WVCA sees no benefit to adding further detail and complexity now. Even more importantly, the WVCA understands the history of the WVDEP's § 401 mitigation program, and believes that the very basis for its development years ago no longer exists. The WVDEP's program has been fully replaced by the federal mitigation program which has developed into a comprehensive program and is the subject of new joint United States Army Corps of Engineers ("Corps") and the United States Environmental Protection Agency ("EPA") rules to update and conform their collective mitigation goals and requirements. The state's mitigation requirements, at least as they relate to mitigation for activities permitted by a CWA § 404 permit, have become obsolete and duplicative.

History of State § 401 Mitigation Requirements.

The state's mitigation program as maintained by the WVDEP and implemented through the § 401 rules is not a required component of the federal § 404 permitting program. The § 401 certification program is intended to insure that

issuance of a federal permit does not result in a violation of state water quality standards:

> CWA section 401 provides that states certify that federal activities or activities requiring federal approvals relative to CWA section 404 would not violate applicable effluent limitations, or other limitations, or other water quality requirements. [1]

Instead, the state has independently required mitigation as a condition of § 401 certification. Implementation of the state's mitigation program and requirements dates from a time when the Corps imposed no federal mitigation requirement on mining operations authorized by the § 404 General Permit for coal mining operations, Nationwide Permit 21("NWP 21"):

> [NWP] 21. Activities associated with surface coal mining activities provided they are authorized by the Department of the Interior, Office of Surface Mining (OSM) or by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977 and provided the permittee notifies the District Engineer in accordance with the "Notification" general condition. **The notification must include an OSM or state-approved mitigation plan** (emphasis added).[2]

Based on the requirements of the NWP 21, a state mitigation plan was required for a mining-related § 404 permit (usually a NWP 21) to be issued by the Corps:

> Prior to reissuance of NWP 21 in January 2002, the COE [Corps] considered mitigation adequate with the inclusion of an OSM or state-approved SMCRA onsite mitigation plan in the permit application. [3]

[1] Programmatic Environmental Impact Statement. Corps, EPA et.al. 2005. page II.C-42.
[2] Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits. U.S. Army Corps of Engineers, Dec. 13, 1996. 61 Fed. Reg. 241.
[3] Programmatic Environmental Impact Statement. Corps, EPA et.al. 2005. Page II.C-52.

West Virginia implemented this program through the § 401 certification program which imposed monetary or in-lieu fee requirements on coal mining related § 404 permits.

In 2002, the Corps revised and reissued NWP 21 adding a condition that the Corps' District Engineer require federal mitigation, reviewed and approved by the Corps in accordance with its joint mitigation rules and regulations maintained with the EPA.[4] The revised and reissued NWP 21 allowed the Corps to consider state mitigation when determining federal mitigation, but removed the automatic acceptance of state-required mitigation as sufficient for § 404 authorization. From this point on, the state mitigation requirements as maintained in the § 401 certification process became duplicative because the Corps was requiring federal mitigation plans as part of the § 404 permitting process.

Federal Mitigation Requirements are Comprehensive.

Coal mining-related § 404 permitting and mitigation has evolved since the Corps's reissuance of NWP 21 in 2002. Most mining projects are now permitted using the Corps' Individual Permit process and mitigation plans are now developed based on the Corps's and EPA's combined preference for on-site, in-kind mitigation to restore the impacted aquatic resource.

As you know, coal mining operations are typically subject to the federal CWA § 404 program and the state § 401 certification program because of

[4] Final Notice of Issuance, Reissuance and Modification of Nationwide Permits. U.S. Army Corps of Engineers, Jan. 15, 2002. 67 Fed. Reg. 10.

activities undertaken in jurisdictional waters. The steeply-sloped terrain of West Virginia is permeated by small ephemeral and intermittent streams that serve to drain natural runoff into larger perennial stream systems. Any development in these areas--coal mining or otherwise--will result in some form of impact to small streams. Unlike many other activities subject to § 404 permitting and § 401 certification, mining activities are mostly temporary in nature, with the reclamation process providing a unique opportunity for reconstruction of impacted stream segments.[5] The Corps has recognized this opportunity for on-site, in-kind replacement/restoration of impacted aquatic resources and issued guidance encouraging this type of mitigation:

> This guidance acknowledges the uniqueness of regional and site-specific conditions, recognizes that features constructed in accordance with the Surface Mining Control and Reclamation Act may contribute to overall mitigation plans, and identifies several appropriate ways to accomplish appropriate mitigation projects.
>
> Surface mining operations can result in the creation of intermittent and and/or perennial streams depending on the on-site hydrologic conditions and the chosen method of dealing with groundwater and/or runoff. Applicants are encouraged to optimize these opportunities for on-site mitigation.
>
> ...Corps staff, Office of Surface Mining staff, and the mining operator should coordinate to explore options for incorporating...features required by SMCRA into compensatory mitigation plans. If successfully implemented, channels and other features will help maintain and potentially improve the physical, chemical and biological integrity of waters of the United States.[6]

---

[5] See pages ____ of attachment "A", comments filed by WVCA concerning the draft federal mitigation rule.

[6] "Mitigation for Impacts to Aquatic Resources from Surface Coal Mining." U.S. Army Corps of Engineers. May 7, 2004

Council Meeting – 5/30/07
Comments
Submitted
by Bill Raney

Bill...

Here are some preliminary comments provided by the Environmental-Technical Committee on the rules that will be reviewed by the Advisory Council:

Water Quality Standards Rule (47CSR2)

Only concern relates to the Trout Stream List:

Inclusion of a stream in the codified list contained in the rule forever locks in unrealistic WQS on that stream regardless of existing and/or future water quality. The lower standards are very problematic for the coal industry by targeting iron and aluminum.

WVCA believes the list is immaterial to protection of the existing use if it is indeed a trout stream.

WV DEP, in the NPDES permitting process, will apply appropriate trout stream effluent limitations if the agency believes a stream to have a trout population regardless of whether or not it in on the codified list contained in the water quality standards rule or not. The only difference is that in the permitting process, the applicant has the opportunity to present data and sampling to refute the agency's assertion that a stream is a trout stream, and has a right of appeal if they continue to disagree with agency's assignment of trout stream limits. The ability to dispute the trout stream designation is very important, especially since some of the data supporting the current initiative to expand the codified list is decades old.

If a trout stream is included on the codified list approved by the legislature, the only option for removing that designation is to once again pursue a legislative fix. Under those circumstances, it is easier to just challenge the entire expansion of the trout stream list.

The massive expansion of the trout stream list as currently proposed is much more restrictive than the standards found in surrounding states, where the regulatory agencies have developed different levels and categories of trout streams. West Virginia continues to treat all trout streams the same as though they were native, naturally-reproducing, cold water streams that deserve the highest levels of protection. This is simply not true, as many streams in West Virginia are stocked trout streams where the existing, in-stream water quality is lower than the established effluent guidelines for native trout streams.

Mining & Reclamation Rule (38 CSR 2)

Main concern relates to 14.15.c.2, regarding contemporaneous reclamation and valley fills:

This revision will penalize operators that are constructing "bottom-up" valley fills, the agency's preferred method of fill construction by unnecessarily restricting when such fill can be counted as "reclaimed" under the state's contemporaneous reclamation rules. These rules already vastly exceed the federal requirements and those of any other surrounding state, and this change will only make them worse.

Additionally, this proposed revision was deleted during the Legislative session in 2007.

401 Water Quality Certification Rule (47 CSR 5A)

The changes to this rule are totally un-necessary, and add further detail and complication to a state mitigation rule when the Legislature has specifically instructed the agency to better align its mitigation program with that of the Corps of Engineers. Several years ago, the Legislature passed a bill directing WV DEP to provide state mitigation credit for Corps mitigation. While this has occurred, we feel the revisions to this rule will drive the two programs further apart. Additionally, we know of no state statutory revision that necessitates these changes...the state mitigation program has functioned for years without this level of detail, and we question why it's needed now.

Further, we are concerned that the rule seeks to change definitions that should only be revised in the statute with Legislative approval. For example, the revisions jettison the long-used references to stream types and insert reference to ordinary high water mark. This appears to be an effort to expand the definition of "waters of the state" to all cover every erosional feature, regardless of whether or not it actually functions as a stream.

West Virginia Coal Association

PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

July 18, 2006

Mr. Charles Sturey
West Virginia Department of Environmental Protection
Division of Mining & Reclamation
601 57th Street SE
Charleston, WV 25304

Re: Comments on Proposed Revisions to 47 CSR 5A

Dear Mr. Sturey:

Pursuant to the notice filed with the Secretary of State on June 15, 2006, the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's proposed revisions to 47 CSR 5A, "Rules for Individual State Certification of Activities Requiring a Federal Permit".

WVCA is a non-profit state trade association representing the interests of the West Virginia coal industry on policy and regulatory issues before various state and federal agencies that regulate coal extraction, processing, transportation and consumption. WVCA's primary goal is to enhance the viability of West Virginia's coal industry by supporting efficient and environmentally responsible coal extraction and processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA appreciates the opportunity to provide comments regarding the West Virginia Department of Environmental Protection's (WVDEP") proposed revisions to the state's Clean Water Act ("CWA") Section 401 certification rule.

General Comments

WVCA is very concerned about the WVDEP's proposal to add detail to its § 401 mitigation program, particularly at this time. The WVDEP has not articulated any problems with implementation of its existing mitigation program pursuant to this rule, and the WVCA sees no benefit to adding further detail and complexity now. Even more importantly, the WVCA understands the history of the WVDEP's § 401 mitigation program, and believes that the very basis for its development years ago no longer exists. The WVDEP's program has been fully replaced by the federal mitigation program which has developed into a comprehensive program and is the subject of new joint United States Army Corps of Engineers ("Corps") and the United States Environmental Protection Agency ("EPA") rules to update and conform their collective mitigation goals and requirements. The state's mitigation requirements, at least as they relate to mitigation for activities permitted by a CWA § 404 permit, have become obsolete and duplicative.

History of State § 401 Mitigation Requirements.

The state's mitigation program as maintained by the WVDEP and implemented through the § 401 rules is not a required component of the federal § 404 permitting program. The § 401 certification program is intended to insure that

issuance of a federal permit does not result in a violation of state water quality standards:

> CWA section 401 provides that states certify that federal activities or activities requiring federal approvals relative to CWA section 404 would not violate applicable effluent limitations, or other limitations, or other water quality requirements. [1]

Instead, the state has independently required mitigation as a condition of § 401 certification. Implementation of the state's mitigation program and requirements dates from a time when the Corps imposed no federal mitigation requirement on mining operations authorized by the § 404 General Permit for coal mining operations, Nationwide Permit 21("NWP 21"):

> [NWP] 21. Activities associated with surface coal mining activities provided they are authorized by the Department of the Interior, Office of Surface Mining (OSM) or by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977 and provided the permittee notifies the District Engineer in accordance with the "Notification" general condition. **The notification must include an OSM or state-approved mitigation plan** (emphasis added).[2]

Based on the requirements of the NWP 21, a state mitigation plan was required for a mining-related § 404 permit (usually a NWP 21) to be issued by the Corps:

> Prior to reissuance of NWP 21 in January 2002, the COE [Corps] considered mitigation adequate with the inclusion of an OSM or state-approved SMCRA onsite mitigation plan in the permit application. [3]

---

[1] Programmatic Environmental Impact Statement. Corps, EPA et.al. 2005. page II.C-42.
[2] Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits. U.S. Army Corps of Engineers, Dec. 13, 1996. 61 Fed. Reg. 241.
[3] Programmatic Environmental Impact Statement. Corps, EPA et.al. 2005. Page II.C-52.

West Virginia implemented this program through the § 401 certification program which imposed monetary or in-lieu fee requirements on coal mining related § 404 permits.

In 2002, the Corps revised and reissued NWP 21 adding a condition that the Corps' District Engineer require federal mitigation, reviewed and approved by the Corps in accordance with its joint mitigation rules and regulations maintained with the EPA.[4] The revised and reissued NWP 21 allowed the Corps to consider state mitigation when determining federal mitigation, but removed the automatic acceptance of state-required mitigation as sufficient for § 404 authorization. From this point on, the state mitigation requirements as maintained in the § 401 certification process became duplicative because the Corps was requiring federal mitigation plans as part of the § 404 permitting process.

Federal Mitigation Requirements are Comprehensive.

Coal mining-related § 404 permitting and mitigation has evolved since the Corps's reissuance of NWP 21 in 2002. Most mining projects are now permitted using the Corps' Individual Permit process and mitigation plans are now developed based on the Corps's and EPA's combined preference for on-site, in-kind mitigation to restore the impacted aquatic resource.

As you know, coal mining operations are typically subject to the federal CWA § 404 program and the state § 401 certification program because of

[4] Final Notice of Issuance, Reissuance and Modification of Nationwide Permits. U.S. Army Corps of Engineers, Jan. 15, 2002. 67 Fed. Reg. 10.

activities undertaken in jurisdictional waters. The steeply-sloped terrain of West Virginia is permeated by small ephemeral and intermittent streams that serve to drain natural runoff into larger perennial stream systems. Any development in these areas--coal mining or otherwise--will result in some form of impact to small streams. Unlike many other activities subject to § 404 permitting and § 401 certification, mining activities are mostly temporary in nature, with the reclamation process providing a unique opportunity for reconstruction of impacted stream segments.[5] The Corps has recognized this opportunity for on-site, in-kind replacement/restoration of impacted aquatic resources and issued guidance encouraging this type of mitigation:

> This guidance acknowledges the uniqueness of regional and site-specific conditions, recognizes that features constructed in accordance with the Surface Mining Control and Reclamation Act may contribute to overall mitigation plans, and identifies several appropriate ways to accomplish appropriate mitigation projects.
>
> Surface mining operations can result in the creation of intermittent and and/or perennial streams depending on the on-site hydrologic conditions and the chosen method of dealing with groundwater and/or runoff. Applicants are encouraged to optimize these opportunities for on-site mitigation.
>
> ...Corps staff, Office of Surface Mining staff, and the mining operator should coordinate to explore options for incorporating...features required by SMCRA into compensatory mitigation plans. If successfully implemented, channels and other features will help maintain and potentially improve the physical, chemical and biological integrity of waters of the United States.[6]

---

[5] See pages ____ of attachment "A", comments filed by WVCA concerning the draft federal mitigation rule.

[6] "Mitigation for Impacts to Aquatic Resources from Surface Coal Mining." U.S. Army Corps of Engineers. May 7, 2004

In addition to the Corps's above-cited guidance for mining, on-site, in-kind mitigation remains the preferred means of performing mitigation for other authorized impacts to aquatic resources:

> In the interest of achieving functional replacement, in-kind compensation of aquatic resources will often be appropriate. [7]
>
> Mitigation should be required, when practicable, in areas adjacent or contiguous to the discharge site. On-site mitigation generally compensates for locally important functions, e.g., local flood control functions or unusual wildlife habitat.[8]
>
> Compensatory mitigation should generally be "in-kind" and occur as close to the site of the adverse impact as practicable in order to minimize losses to the local aquatic ecosystem.[9]

To satisfy the Corps's preference (enunciated in previously-cited Regulatory Guidance Letters issued by the Corps) for in-kind mitigation, or a functional replacement of the impacted resources, a Functional Assessment Protocol, referred to as the "Central Appalachian Protocol", has been used for several years now by the Huntington District to assist in assessing and assigning mitigation requirements for mining-related projects.[10]

Unfortunately, the WVDEP has to date largely ignored the mitigation guidance and requirements developed and imposed by the Corps, as well as the functional assessment protocol. The WVDEP has continued to implement its duplicative § 401 mitigation requirements, and typically requires mitigation above

---

[7] Regulatory Guidance Letter No.01-1. U.S. Army Corps of Engineers, October 31, 2001.
[8] Regulatory Guidance Letter No.02-2. U.S. Army Corps of Engineers, December 24, 2002.
[9] Compensatory Mitigation Guidelines- Huntington District . U.S. Army Corps of Engineers, Huntington, WV District. January 30, 2004.
[10] See attached power point presentation—Central Appalachian Protocol.

and beyond that which is required by the Corps despite the mandate of W. Va. Code § 22-11-7a(a)(2)(C):

> The Director shall provide credit for any mitigation that is a required component of the permit issued by the United States Army Corps of Engineers pursuant to 33 U.S.C. § 1344 to the extent that it satisfies required mitigation pursuant to this section.

Because a comprehensive federal mitigation program is being implemented, the WVDEP's failure to provide credit for such mitigation ***as mandated*** is a serious concern to the WVCA. To the extent a state program is relevant at all, perhaps to address the limited circumstances where the state's definition of "waters of the state" is broader than the CWA definition of "waters of the United States," it should be narrowly tailored to address that need. The WVCA cannot support proposed revisions that are not so narrowly tailored.

WVCA urges WVDEP to postpone pursuit of these proposed revisions at this time and to more fully consider the need for its separate mitigation program in light of (1) the federal mitigation now required as part of a § 404 permit, (2) the possibility of creating inconsistencies with the draft federal Corps and EPA rule for mitigation, (3) the deletion of NWP 21 conditions relating to state mitigation, and (4) the mandate of W. Va. Code § 22-11-7a(a)(2)(C) to rely on and give credit for federally mandated mitigation to satisfy any state mitigation needs.

Specific Comments

Page 4 4.2.f.2.A. Economic Info[redacted]tion about the coal mi[redacted]g operations, including, without limitation, the estimated num[redacted]r of jobs created, the e[redacted]ated proportion of employees who will be residents of Wes[redacted]irginia, the estimated a[redacted]al payroll, the

estimated annual coal production (if applicable), the estimated life of the operation, the estimated severance tax for the operation, the estimated annual property tax, and such other economic information as may be requested by the agency.

WVCA questions why this level of information is needed for the § 401 certification process. Similar information is provided to the Corps under the § 404 permitting program and to the state through the Community Impact Statement. The justification for requiring duplicative information as part of the § 401 certification process is lacking. Further, we are puzzled as to why this information is required only for mining operations. Sections 404 and 401 of the CWA apply to all manner of filling activities, not just coal mining operations. If this information is needed by the WVDEP to properly implement the § 401 certification process, then it should be required for all dredge and fill activities. If it is not, then it should be removed from the proposed revisions. Without further explanation and justification, the WVCA does not support this proposed revision.

4.2.f.4. A Delineation of the Stream to be Impacted. The length, width and depth of the stream segment impacted shall be measured. Width and depth measurements shall be made at one hundred (100)foot intervals. The stream delineation shall indicate the ephemeral and intermittent/perennial segments to be impacted. The stream shall be measured from the farthest downstream disturbance, excluding stream crossings associated with haul roads for surface mining operations, upstream to the beginning of ~~an intermittent stream, as defined in 46 CSR 1-2.9 and/or 38 CSR 2-2.71.~~ the ordinary high water mark. The applicant shall provide a table listing the station number with the corresponding acreage, including the drainage area from the toe of the pond and the toe of the fill.

As proposed, this revision appears to extend the reach of the state's jurisdiction and expand the WVDEP's mitigation requirements under the § 401 certification program. While this change may be motivated by a desire to more closely align the state's mitigation requirements with those of the Corps, the

WVDEP's first and most needed step in that direction is compliance with W. Va. Code § 22-11-7a(a)(2)(C). Until the WVDEP revises its mitigation rules and policies to accept Corps-required mitigation, this proposed change will serve only to increase the amount of in-lieu fee mitigation provided to the state, with no resulting environmental benefit. Further, the proposed change appears to be counter to the authorizing statute which bears no mention of the "ordinary high water mark." The WVCA does not support this proposed revision.

6.2.b.1. Compensatory mitigation shall be required for all permanent and temporary stream impacts resulting from coal related activities in watersheds greater than or equal to two hundred and fifty (250) acres and/or when the activity results in a stream loss or impact exceeding one half (1/2) acre of stream. The drainage area and ½ acre assessments shall be measured starting from the toe of the most downstream permanent or temporary impact (excluding stream crossings) in which the activity occurs.

WVCA believes that this proposed revision extends the authority of the state beyond the authorizing, underlying statute:

> 1) If the applicant's surface coal mining operation will not impact waters of the state designated as national resource waters and streams where trout naturally reproduce and will not impact wetlands of the state in a manner inconsistent with all applicable state or federal standards as the case may be, as required by the federal Clean Water Act, and if the watershed above the toe of the farthest downstream permanent structure authorized pursuant to the United States Army Corps of Engineers permits issued in accordance with 33 U.S.C. §1344 and 33 C.F.R. Parts 323 or 330 is less than two hundred fifty acres, then the director may issue a water quality certification pursuant to the requirements of this section. If the watershed above the toe of the farthest downstream permanent structure impacted is equal to or greater than two hundred fifty acres, the director shall require that mitigation be undertaken. Additionally, the director may require mitigation for temporary impacts to waters of the state as specified in subdivision (2) of this subsection.

(2) If the watershed above the toe of the farthest downstream permanent structure authorized pursuant to the United States Army Corps of Engineers permits issued in accordance with 33 U.S.C. §1344 and 33 C.F.R. Parts 323 or 330 is greater than or equal to two hundred fifty acres and all other necessary requirements are met consistent with this section, the director shall further condition a water quality certification on a requirement that the applicant mitigate the expected water quality impacts under the following conditions…

The above-cited statute contains no reference to "1/2 acre" of stream. Apparently, the agency is attempting to further extend its jurisdiction or merely implementing past policies that existed with respect to coal and non-coal mitigation. Since the statute contains no reference to ½ acre of stream, **WVCA suggests the agency delete this proposed revision. If the agency truly believes that this change is necessary, it should seek a legislative revision to 22-11-7(a) and only then seek to modify the rule.**

6.2.d.1. ~~**Permanent impacts for coal related monetary mitigation will be assessed at $200,000 per acre of impacts in watersheds greater than or equal to two hundred and fifty (250) acres from the toe of the farthest downstream permanent structure, and/or exceeds a ½ acre of loss or impact of stream.**~~ **Monetary compensation for stream impacts resulting from coal related activities shall be assessed as follows:**

6.2.d.1.APermanent impacts for coal related monetary mitigation will be assessed at $200,000 per acre of impacts

6.2.d.1.B Temporary coal related stream impacts resulting from structures (excluding stream crossings) that will be removed prior to final bond release will be assessed at $20,000 per acre of stream impact per each five-year period of impact and/or prorated for each year the impact occurs.

6.2.d.1.CTemporary coal related stream impacts resulting from stream crossings (i.e. culverting) and stream relocations where the stream impact is greater than or equal to two hundred one (201) lineal feet, but less than or equal to four hundred (400) lineal feet and is in place for five years or more, shall be assessed at $20,000 per acre for the first five (5) year period and prorated for each additional year the impact shall occur. A temporary stream impact resulting in more than four hundred (400) linear feet shall be monetary compensated at a rate of $20,000 per acre per each five (5) year term and/or prorated for

each year the impact occurs.

As noted in our general comments, the state § 401 certification program has functioned for several years without the level of minutia and detail presented here, and there appears to be no justification for adding these new provisions to the rule at this time. In addition, because § 404 permit mitigation plans cover both permanent and temporary impacts, there is no need for the duplicative state provision for monetary mitigation. As explained in our general comments, the Corps and EPA have continuously stressed a desire for on-site, in-kind mitigation. Using the "Central Appalachian Protocol", coal mining operations have been providing on-site, in-kind mitigation through the reclamation and stream reconstruction process. These projects have been embraced by the Corps and EPA through mining-specific regulatory guidance.

WVCA questions the need for these revisions, and urges WVDEP to re-evaluate the need for this provisions in light of the federal mitigation now required as part of a § 404 permit and the mandate of W. Va. Code § 22-11-7a(a)(2)(C) to rely on and give credit for federally mandated mitigation to satisfy any state mitigation needs.

6.2.d.1.D Permanent wetland impacts for coal related monetary mitigation will be assessed at the rate $30,000 per acre of wetland replaced based on the ratios in section 6.2.c.

Again, as noted in our general comments, the state § 401 certification program has functioned for several years without the level of minutia and detail presented here, and there appears to be no justification for adding these new provisions to the rule at this time. In addition, § 404 permit mitigation plans cover

both permanent and temporary impacts to all impacted aquatic resources, including wetlands, and there is no need for the duplicative state provision for monetary mitigation for wetland impacts.

To the extent WVDEP nevertheless chooses to pursue this proposed revision, it has no justification for the $30,000 replacement value proposed. In addition, by proposing this specific amount, the WVDEP has excluded any opportunity to determine a monetary mitigation amount for wetlands on a case-by-case basis, which could be either higher or lower than $30,000 per acre.

In-lieu fee payment for wetlands impacts is a desirable option to have, but we question whether the agency will ultimately determine that wetland replacement as already specified in the rule is sufficient. The WVCA cannot support this proposed revision without additional justification and explanation, and again urges the WVDEP to re-evaluate the need for this provisions in light of the federal mitigation now required as part of a § 404 permit and the mandate of W. Va. Code § 22-11-7a(a)(2)(C) to rely on and give credit for federally mandated mitigation to satisfy any state mitigation needs.

Sincerely,

Jason Bostic, Vice President
Regulatory & Technical Affairs

West Virginia Coal Association

PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

Ms. Gloria Shaffer
West Virginia Department of Environmental Protection
Division of Water and Waste Management-
Water Quality Standards Program
601 57th Street SE
Charleston, WV 25304

Via Electronic Mail: Gjshaffer@wvdep.org

Re: Comments on 2007 Triennial Review of Water Quality Standards

Dear Ms. Shaffer:

Pursuant to the September 22, 2005 announcement by the West Virginia Department of Environmental Protection (WV DEP), the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's first triennial review of water quality standards.

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 producing members account for 80 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

criteria. EPA is currently in the process of revising the nationally-recommended selenium criteria.[6] Because of the flawed nature of the current selenium criteria and its inappropriate application to flowing waters in West Virginia, WVCA is supportive of this federal initiative. However, we caution WV DEP to fully analyze the appropriateness of applying any federally-revised standard in West Virginia. Available information seems to indicate that a state-specific selenium standard for West Virginia may be warranted, as fish populations appear to be healthy and diverse in streams with identified selenium concentrations.[7] The pressing nature of selenium also warrants that WV DEP investigate a state-specific criteria for West Virginia since the federal revisions remains pending. The agency has recently completed draft TMDL documents that impose selenium allocations based on the existing water quality criteria, and will continue to develop and implement selenium TMDLs, adding urgency to this important issue.

Trout Streams

In the EQB's last triennial review, it proposed adding some 400 streams to the list of Trout Waters contained in the water quality standards rule. The EQB allowed only a 30-day comment period on this major expansion of the Trout Waters list. The EQB proposal was based only on the recommendations of the

[6] See Attachment "F", October 29, 1999 Federal Register Notice published by EPA regarding revision of the selenium criteria and Attachment "G", December 17, 2004 Federal Register Notice announcing draft criteria and requesting public comments.

[7] See Attachment "H", relevant pages from comments filed by the National Mining Association and WVCA regarding the programmatic Mountaintop Mining/ Valley Fill Environmental Impact Statement and *Fish Communities and Their Responses to Environmental Factors in the Kanawha River Basin, West Virginia, Virginia, and North Carolina*. U.S. Geological Survey, 2001.

West Virginia Division of Natural Resources, with no accompanying data or information on whether or not the streams actually meet the requirements to be classified as trout waters. Based on the lack of information regarding the current status of the proposed trout waters and the limited opportunity for comment provided, the West Virginia Legislature rejected the revision.

The permitting ramifications of classifying streams as trout waters can be significant, as different water quality standards (uniformly more stringent) apply to trout streams. Incorrectly classifying a water as a trout stream can have serious economic impacts for property owners and NPDES dischargers along that streams and should not be taken lightly be WV DEP. Before the agency undertakes any effort as part of its 2007 triennial review to list any additional streams as trout waters, WV DEP should conduct scientific investigations of water quality and fish populations in order to ascertain if a water body meets the criteria required of a trout stream. The agency should also hold hearings in the communities where such streams are located to take comment from the persons most familiar with the conditions of these streams.

We appreciate the agency's consideration of these comments.

Respectfully Submitted,

Jason D. Bostic
West Virginia Coal Association

West Virginia Coal Association

PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

July 17, 2006

Mr. Charles Sturey
West Virginia Department of Environmental Protection
Division of Mining & Reclamation
601 57th Street SE
Charleston, WV 25304

Re: Comments on Proposed Revisions to 38 CSR 2

Dear Mr. Sturey:

Pursuant to the notice filed with the Secretary of State on June 15, 2006, the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's proposed revisions to 38 CSR 2, the state's Mining and Reclamation rules.

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 membership accounts for over 80 percent of the Mountain State's underground and surface coal production. WVCA's primary goal is to enhance the viability of the West Virginia coal industry by supporting efficient and environmentally responsible coal extraction and processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA appreciates the opportunity to provide comments to the West Virginia

Department of Environmental Protection (WV DEP) regarding the proposed revisions to the state's mining and reclamation rule.

Specific Comments

3.2.g. Notice of Technical Completeness. After the Secretary deems a Surface Mine Application technically complete, the Secretary shall cause the applicant to advertise stating such. The notice shall state that the application has been deemed technically complete by the Secretary and include a fifteen (15) day public review period. Provided, however, Notice of Technical Completeness may not be necessary if the application was technically complete prior to the end of the comment period of the original advertisement and a decision is made within ninety (90) day of the end of the comment period or informal conference.

WVCA believes this revision is unnecessary. Existing state rules provide the agency with authority to require re-advertisement:

> 3.2.e. Re-advertisement. After a Surface Mine Application (SMA) has been advertised once a week for four successive weeks, and is determined by the Secretary to have had a limited number of minor changes that do not significantly affect the health, safety or welfare of the public and which do not significantly affect the method of operation, the reclamation plan, and/or the original advertisement, he may require one (1) additional advertisement to be published with a ten (10) day public comment period.

As the above-cited provision reveals, the agency has the authority to require the additional advertisement that appears to be the goal of the proposed revision. The language of 38 CSR 2.3.e restricts the applicability of the provision to "a limited number of minor changes that do not significantly affect the health, safety or welfare of the public and which do not significantly affect the method of operation, the reclamation plan, and/or the original advertisement..." for changes that are substantive WV DEP has always required re-advertisement. Additionally,

the proposed revisions exceed the corresponding federal requirements maintained by the Office of Surface Mining (OSM) at 30 CFR 773.6. Because the agency has already has the authority to require re-advertisement, WVCA suggests that WV DEP delete the proposed revision.

14.15.c.2. Areas within the confines of excess spoil disposal fills which are under construction provided the fill is being constructed in the "conventional" method, i.e., completed from the toe up, or those fills which are being constructed progressively in lifts from the toe up or are being progressively completed from the toe up by constructing benches and appropriate drainage control structures (ditches, flumes, channels, etc.) from the toe up as soon as the ~~area is available to do so;~~ first two lifts are in and are seeded and certified;

WVCA is extremely concerned about this proposed revision and believes that it will unnecessarily restrict operating flexibility and thereby discourage the construction of "bottom-up" valley fills. WVCA strongly suggests the agency delete this proposed revision. This entire section of rules already exceeds the corresponding federal requirements of OSM, but members of WVCA negotiated the rules in good faith to remedy an agency-perceived problem with valley fill construction. These rules have been scrutinized and approved by the West Virginia Legislature and OSM. WVCA is concerned as to why the agency believes this change is necessary, and would be willing to discuss other possible remedies to the situation.

Respectfully Submitted,

Jason D. Bostic, Vice-President
Regulatory & Technical Affairs

Surface Mining 38 CSR 2 (agreement)
401 Certification 47 CSR 5A
TROUT LISTING

45CSR42

2.5 "Biogenic Sources" include COAL

3.2 turned on exemption rule on inclusion

5.3 "Shall provide information"

TITLE 45

LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

SERIES 42
GREENHOUSE GAS EMISSIONS INVENTORY PROGRAM

§45-42-1.General.

1.1. Scope. -- This rule establishes a greenhouse gas emissions inventory program in West Virginia which:

1.1.a. Requires the reporting and inventory of greenhouse gas emissions by stationary sources which emit more than a *de minimis* amount of greenhouse gases on an annual basis;

1.1.b. Inventories greenhouse gas emissions from stationary, area, mobile and biogenic sources, and accounts for reductions and sequestration of greenhouse gas emissions;

1.1.c. Provides for a periodic compilation of a greenhouse gas emissions inventory and a determination whether West Virginia is a net sink or emitter of greenhouse gases;

1.1.d. Provides for development of a registry to record voluntary reductions of greenhouse gas emissions; and

1.1.e. Provides for a determination whether the reduction and sequestration of greenhouse gas emissions can be developed as an asset for economic development.

1.2. Authority. -- W.Va. Code §22-5-19.

1.3. Filing Date. --

1.4. Effective Date. -- June 1, 2008.

§45-42-2. Definitions.

2.1. "Air pollutants" means solids, liquids, or gases which, if discharged into the air, may result in statutory air pollution.

2.2. "Air pollution" or "statutory air pollution" means and is limited to the discharge into the air by the act of man substances (liquid, solid, gaseous, organic or inorganic) in a locality, manner and amount as to be injurious to human health or welfare, animal or plant life, or property, or which would interfere with the enjoyment of life or property.

2.3. "Anthropogenic" means a direct result of human activities or the result of natural processes that have been influenced by human activities.

2.4. "Area source" means, for purposes of this rule, a collection of similar sources of air pollutants within a geographic area. Area sources collectively represent individual sources that are small and numerous, and that typically have not been inventoried as a stationary or mobile source.

2.5. "Biogenic" means a naturally occurring biological source or process that is not significantly affected by human actions or activity.

Biogenic sources include COAL

2.6. "Capture" means the collection of greenhouse gas emissions from a stationary source.

2.7. "*De minimis*" means emissions from a stationary source that are equal to or less than ten thousand tons per year for carbon dioxide, four hundred seventy-six tons per year for methane, thirty-two and six tenths tons per year for nitrous oxide, eight hundred fifty-five thousandths tons per year for hydrofluorocarbons, one and nine hundredths tons per year for perfluorocarbons and forty-two hundredths tons per year for sulfur hexafluoride.

2.8. "Emission" means the release, escape or discharge of regulated air pollutants or greenhouse gases into the air.

2.9. "Greenhouse gas" means the gaseous compounds: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6).

2.10. "Mobile source" means a variety of onroad and nonroad vehicles, engines, locomotives, marine vessels, airplanes and other equipment that generate air pollutants and greenhouse gas emissions, and that move or can be moved from place to place.

2.11. "Regulated air pollutant" means, for purposes of this rule, any air pollutant regulated under rules promulgated by the Secretary pursuant to W.Va. Code §22-5-4.

2.12. "Reservoir" means a geological site where a greenhouse gas is securely stored.

2.13. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§22-1-6 or 22-1-8.

2.14. "Sequestration" means the physical process by which emissions of a greenhouse gas are directly captured for storage in a reservoir, or the biologic process by which a greenhouse gas is indirectly removed from the atmosphere for storage in a sink.

2.15. "Sink" means any process, activity or mechanism which removes a greenhouse gas from the atmosphere. Forests are considered sinks because they remove carbon dioxide through photosynthesis.

2.16. "Source" means, for purposes of this rule, any process or activity which releases a greenhouse gas into the air.

2.17. "Stationary source" means any building, structure, facility, installation, stationary process or process equipment which emits or may emit any regulated air pollutant or greenhouse gas.

2.18. "Ton" means a short ton, or 2000 pounds.

2.19. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in W.Va. Code §22-5-1 et seq.

§45-42-3.Applicability.

3.1. Any stationary source that emits one or more greenhouse gases on an annual basis greater than the *de minimis* amounts listed in the table below, and reports emissions of regulated air pollutants pursuant to the emissions inventory requirements of the Secretary under rule or W.Va. Code §22-5-4(a)(14), shall be an affected source required to report emissions of all greenhouse gases to the Secretary under section 4:

Greenhouse Gas Compound	tons/year
carbon dioxide	10,000
methane	476
nitrous oxide	32.6

Any facility, etc.

hydrofluorocarbons	0.855
perfluorocarbons	1.09

sulfur hexafluoride	0.42

prep plants under Title IV

3.2. Stationary sources which are regulated by the Secretary under W.Va. Code §22-3-1 et seq. and do not report emissions of regulated air pollutants pursuant to the emissions inventory requirements under W.Va. Code §22-5-4(a)(14) are not required to, but may voluntarily report their greenhouse gas emissions under section 4.

n/a Stationary sources

§45-42-4.Reporting Requirements.

4.1. By March 31, 2009, and March 31 of each year thereafter, affected sources shall report to the Secretary the quantity of all greenhouse gases emitted in the previous calendar year.

4.2. Affected sources shall only be required to report annual quantities of anthropogenic non-mobile source greenhouse gas emissions at the source, and shall not be required to report biogenic emissions of greenhouse gases.

4.3. The Secretary shall determine the form and format of the information reported by affected sources under subsection 4.1 to ensure that the information is consistent as possible with developing regional, national, or international greenhouse gas emissions programs.

4.4. Notwithstanding the provisions of subsection 4.3, to satisfy the greenhouse gas emission reporting requirements under this section, affected sources may submit greenhouse gas emissions inventory information from documented greenhouse gas inventories such as those provided to the Environmental Protection Agency's Climate Leaders Program, Chicago Climate Exchange Registry, the International Organization for Standardization and the SF_6 Emissions Reduction Partnership for Electric Power Systems. Greenhouse gas emissions inventory information from other widely recognized and verified greenhouse gas emissions inventory programs may be submitted by affected sources under this subsection, but shall be subject to approval by the Secretary on a case-by-case basis.

4.5. Reports of greenhouse gas emissions submitted to the Secretary under this section shall be signed by a responsible official and shall include the following certification statement: "I, the undersigned, hereby certify that the data transmitted to the West Virginia Department of Environmental Protection is true, accurate, and complete, based upon information and belief formed after reasonable inquiry."

§45-42-5.Greenhouse Gas Emissions Inventory.

5.1. The Secretary shall periodically compile an inventory of greenhouse gas emissions to:

5.1.a. Characterize the relative contributions of greenhouse gas emissions from stationary, area, mobile and biogenic sources in West Virginia; and

5.1.b. Determine the extent to which greenhouse gas emissions are offset by the rate of sequestration, and whether West Virginia is a net sink or emitter of greenhouse gases.

5.2. The greenhouse gas emissions inventory shall include the emissions from stationary sources reported under section 4, and other relevant information regarding significant emissions, reductions, and sequestration of greenhouse gases from stationary, area, mobile

entire surface Area / underground Area is an AREA SOURCE

and biogenic sources requested by the Secretary under subsections 5.3 and 5.4.

5.3. To inventory greenhouse gas emissions reductions, the Secretary shall consult with the citizenry and other entities such as industry trade groups that have information relating to greenhouse gas emissions reductions, and sequestration. Upon request of the Secretary, such entities shall provide relevant information relating to greenhouse gas emissions reductions; capture and sequestration.

5.4. The Department of Agriculture, the Division of Forestry, Marshall University, West Virginia University, West Virginia Geological and Economic Survey, and the Department of Transportation shall enter into interagency agreements with the Secretary and at the Secretary's request provide:

5.4.a. Relevant information relating to greenhouse gas emissions from area, mobile and biogenic sources;

5.4.b. Relevant information relating to greenhouse gas emissions reductions and sequestration; and

5.4.c. Any assistance the Secretary may request during the development of the greenhouse gas emissions inventory.

5.5. The Secretary shall determine the form and format of the information submitted by the entities under subsections 5.3 and 5.4 to ensure that the information is consistent as possible with developing regional, national, or international greenhouse gas emissions programs.

§45-42-6.Greenhouse Gas Emissions Registry Program.

6.1. The Secretary shall develop a registry for the recordation of voluntary reductions of greenhouse gas emissions.

6.2. The greenhouse gas emissions registry program shall be as consistent as possible with developing regional, national, or international programs designed to monitor, quantify and register reductions in greenhouse gas emissions with respect to:

6.2.a. Development of criteria, based on a set of standardized emissions accounting, reporting and verification protocols, to determine baseline emissions and quantification of voluntary reductions in emissions of greenhouse gases;

6.2.b. Public recognition of such voluntary emissions reductions;

6.2.c. Consideration of voluntary greenhouse gas emission reductions when determining baselines and reduction requirements under future federal greenhouse gas emission reduction programs; and

6.2.d. The ability of sources to participate in future greenhouse gas emission trading programs.

§45-42-7.Economic Development Potential.

7.1. Using information obtained, gathered or developed under this rule, the Secretary will determine whether the reduction and sequestration of greenhouse gas emissions can be developed as an asset for economic development in West Virginia.

§45-42-8.Inconsistency Between Rules.

8.1. In the event of any inconsistency between this rule and any other rule of the West Virginia Department of Environmental Protection, the inconsistency shall be resolved by the determination of the Secretary and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

13 results for: *Biogenic*

Displaying 1 best match. Browse all 13 results below.

View results from: Dictionary | Thesaurus | Encyclopedia | All Reference | the Web

Biogenic substance

Wikipedia, the free encyclopedia - Cite This Source

A **biogenic substance** is a substance produced by life processes. It may be either constituents, or secretions, of plants or animals.
Examples

Coal and oil are examples of constituents which have undergone changes over geologic time periods.

Chalk, and limestone are examples of secretions (marine animal shells) which are of geologic age.

Cotton and wood is are biogenic constituents of contemporary origin.

Pearls, silk and ambergris are examples of secretions of contemporary origin.

13 More from Wikipedia »

All 13 results for: *Biogenic*

13 from Wikipedia

From: "Charles Harris" <clharris@hsc.wvu.edu>
To: <jhallinan@hallinanlaw.com>, <rick@lcpsd.com>, <braney@wvcoal.com>, <PWHITE@wvdep.org>, <karen@wvma.com>, <wvml@wvml.org>
Date: 5/24/2007 7:54:40 PM
Subject: Re: May 30, 2007 Meeting

Trish: I received some last minute comments on 33CSR8 that I would like to submit:

§33-9-2. Definitions -- Section 2.5 defines "Beneficial Use" as "the use of a non-hazardous material for a specific beneficial purpose where it is done in a manner that protects groundwater and surface water quality, soil quality, air quality, human health, and the environment." We are concerned that it has not been adequately demonstrated that this filtrate is non-hazardous, and point to the current "inter-sex" fish issue in the Potomac River drainage which illustrates that there are unanswered questions concerning unmonitored pollutants in sludge from both water and waste treatment facilities.

§33-9-2. Definitions - Section 2.5 defines beneficial uses as including "use as a fertilizer substitute, soil amendment, cover material, fill material, mulch or horticultural product, or other purpose approved by the Secretary." However, Section 33-9-3, in sub-Section 3.1.b.1 requires that "The use proposed is a reuse, and not a disposal." We suggest that the use of this filtrate as fill material is actually simply a disposal and not a "reuse." We believe this material should not be used as fill material. This would also require a change to Section 33-9-5, sub-Section 5.2.

§33-9-5. Standards for Beneficial Use of Filtrate - sub-Section 5.3 states, "The Secretary may approve the use of filtrate as fill material within fifty (50) feet of surface water upon submission of information sufficient to show that the fill material will have no significant impact on the quality of runoff reaching the surface water." Even the U.S. Forest Service has adopted stronger stream buffers for sediment runoff. DEP should develop stronger stream buffers for this rule, and there should be no discretion.

§33-9-7. -- DEP made changes to this rule during the Interims process last year, and the rule now requires a permit for both short-term and long-term applications. This is a good change. However, we feel that most of the information required in Section 7.3. Permit Application Requirements for long-term permits should also be required for short-term permits.

§33-9-8. Draft Permits and Public Comment. Section 8.2.a. provides for a 30-day public comment period for long-term permits, but only a 15-day public comment period for short-term permits. We oppose the shortened public notice provisions for short-term permits. The 30-day comment period should apply in both instances.

§ 33-9-11. General permits. We oppose the development of a General Permit to cover the provisions of this rule. Specific individual permits are necessary to inform potentially affected parties of the application of this material.

Appendix A -- Frequency of Monitoring. The Legislative Rule-Making Review Committee last session accepted an amendment proposed by industry that reduced monitoring tests to once a year. While we would prefer even more frequent monitoring than proposed in this rule, we hope DEP will strongly oppose any attempts to reduce the monitoring provisions provided in this rule.

Charles L. Harris
Professor of Biochemistry
West Virginia University
School of Medicine
304-293-7749
>>> "Patricia White" <PWHITE@wvdep.org> 05/21/07 4:21 PM >>>
Please be advised of the following meeting:

Comments on DEP Rules for 2007

Communicated by Larry Harris, Public Advisory Council Member

I would like to commend the staff of the DEP for the hard work and expertise used in preparing and reviewing the rules with Council. As promised, I include below some of the technical and other issues raised during the May 21 meeting of the Council, omitting some questions that were answered at the meeting. Members of the environmental community who reviewed the rules raised some of the questions.

Some of the issues mentioned below are related to the act of valley fills and determining compensation for this process. I have pointed out my view to Council previously that the permitting of valley fills is essentially allowing the destruction of upper tributaries of watersheds. As such the process should be outlawed, in my view.

47CSR2 Water Quality

We learned that the B2 list is essentially the same as submitted previously and includes the definition of trout waters cited on page 2 of the rule.

.Page 11: Why is the temperature regulation on Stony River being removed?

47CSR2 (7.2.d.9) — The removal of variances, etc. on the Blackwater seems to be a strength, but why do these rivers remain "reserved" on the list? Why not just remove them?

47CSR2 (7.2.d.34.1): Adds language for site-specific applicability of water use categories and water quality criteria: "Pats Branch from its confluence with the Guyandotte River to a point 1000 feet upstream shall not have Water Use Category A and Category D1 designation."

* Is this a use removal? Yes was the answer.
* If so, did this go through the appropriate public process and use attainability analysis to justify a use removal . Did the use and attainability

analysis follow the federal Clean Water Act provision. (i.e. how was this decision justified)? Not sure this was fully answered.

47CSR2 (Appendix E):

Are the changes in concentrations for cadmium, copper, and others in Appendix E consistent with EPA changes/ recommendations? Some of the changes in hardness calculations are in response to comments from our groups last year asking DEP to be consistent—so this is good.

47CSR5A

47 CSR 5A (State Certification)

***47CSR5A (4.2.f.4): seems to be weakening the system for determining stream miles (delineation). DEP inserts the language: "The stream shall be measured from the farthest downstream disturbance, excluding stream crossings associated with haul roads for surface mining operations, upstream to the beginning of the ordinary high water mark."

This will result in fewer stream miles being "delineated" as actual stream miles, it seems. Why would you move upstream (where there are fewer inputs) to find a high water mark? Thus, it also seems fewer miles of headwaters will be mitigated for impacts.

47CSR5A (6.2.b): Typo—"loses" should be "losses"

47CSR5A (6.2.d.1): Is there a discrepancy between how monetary compensation for coal versus non-coal impacts is assessed? It may be worth determining that coal is not getting a break, in comparison to non-coal.

For example—why is it lineal miles for coal and acreage for non-coal? If they are going to assess from the high water mark—as discussed above—will this not result in fewer stream miles and thus fewer miles to mitigate/compensate? Also, there is no assessment for non-coal related temporary impacts—why?

60 CSR5 Antidegradation

I made the suggestion that the list of Tier 2.5 streams (156 in the current rule) should be returned to the same number as began the legislative session, which is 309 streams. A scientific process that included expertise

from the WVDNR, which manages trout waters, arrived at the list of 309 streams. The list now submitted with the bill was reduced by the political process. Politics should not determine which streams merit protection from pollution; science should.

Other issues:

2.11 Explanation of the addition of this trading section is needed. Is this similar to EPA rules and consistent with the Clean Water Act?

3.9 Which advisory committee is this phrase referring to:

5.5b is removed. Why?

Is the procedure for nomination and addition of streams to the tier 2.5 list adequate?

Comments from Adam Webster (WVRC)

60CSR5 (2.11) : It's good that DEP provides "upstream controls" and mentions "for the same parameter" in the first sentence of the "trading" definition. Overall, the definition is good, but it is important to remember that the intent of the definition is not to allow cross-pollutant trading. With this in mind, the second sentence—"More than one parameter of concern may be traded on a given stream"—needs to be worded more restrictively (i.e. despite what the first sentence says, the second sentence could be interpreted as if cross-pollutant trading is allowed).

*** 60CSR5 (5.2) : Removes (strikes) the language: "Water segments that support the minimum fishable/swimmable uses and have assimilative capacity remaining for some parameters shall generally be afforded Tier 2 protection".

Does this suggest the default is Tier 1 (if data does not suggest otherwise)? If so,why?

60CSR5 (5.6.c) : The deletion is a response to lawsuit. However, the new 5.6.c suggests they cannot assess assimilative capacity when dealing with pH,

DO, temperature, and fecal coliform. We feel that they can assess these parameters and should not treat them separately.

45CSR42 Greenhouse Gases

The fact that the DEP is beginning to deal with the process of greenhouse gases that lead to global warming is commendable. Some questions on the rule were raised by Dr. Kotcon:

The greenhouse gases emissions inventory rule (45-42-1) needs to be
>strengthened considerably. The sections on emissions inventory
>(section 5, pages 3-4) is so vague as to be meaningless, especially
>as it deals with sequestration for area sources and sinks. I do not
>see how any meaningful data can be generated with this language.
How would the carbon sequestration be estimated? Has there been studies estimating the biogenic incorporation of CO2 per acre of woodland, for example? The rule appears to be a vague in how it would be implemented.

Air Quality and Emission Rules (see below)

45CSR8 Ambient Air Quality Standards

Don Garvin pointed out that the the antidegradation language was removed from this rule, and it was explained that the agency feels these provisions are now covered in 45-CSR-14("Prevention of Significant Deterioration.") However, the language that was stricken does not appear in 45-CSR-14, and the stricken language is the ONLY statement in the rules of West Virginia's antidegradation policy for air quality. The environmental community still believes the stricken language should be restored.

Here is what should be reinstated:

§45-8-2. Anti-Degradation Policy.

2.1. Pursuant to the best interests of the State of West Virginia, it is the objective of the Secretary to obtain and maintain the cleanest air possible, consistent with the best available technology.

2.2. Where the present ambient air is of better quality than the established standards, the Secretary will develop long-range plans to protect the difference between the present quality and the established standards. The plans will be based upon the best available forecasts of probable land and air uses in these areas of high air quality.

2.3. The air quality of these areas will not be lowered unless it has been clearly demonstrated to the Secretary that such a change is justifiable as a result of necessary economic or social development and will not result in statutory air pollution. This will require that any industrial, public, or private project or development which could constitute a new source of air pollutants, within an area of such high air quality, provide the best practicable control available under existing technology as part of the initial project or development.

45CSR41 Control of Annual SO2 emissions

45CSR6 Control of Air Pollution from Refuse Combustion

45CSR39 Nitrogen Oxides

I raised the general concern whether the standards for air quality were consistent with the EPA guidelines or not. Further, were any recognized health authorities consulted when these levels were determined? I also raised the issue that West Virginia is increasing supplying electricity to the population east of our mountains. New transmission lines are proposed that are to be connected with coal burning power plants. Billy Jack Gregg, Consumer Advocate for the WV PSC has pointed out that the states receiving our generated power will not permit generation plants in their region. They are concerned about air pollution and its various effects. But they need power, so they turn to West Virginia. This helps the coal industry and generation plants, but puts the health of West Virginians in jeopardy. I feel that our air quality and emission limits should be even more stringent than the EPA calls for in order to protect our citizens. This should be particularly true for power plants that export electricity.

Dr. Kotcon has raised the following issues:

45-CSR-8 Ambient Air Quality Standards

The standards for PM2.5 and Ozone are not adequately protective. I recommend that the standards be lowered from 15 ug/m^3 to 13 ug/m^3 in section 4.2.b., and from 0.08 ppm to 0.07 ppm in section 4.4.b.

The air standards (45-8-1) retains the standards for PM2.5 and ozone
>that the EPA Clean Air Scientific Advisory Council has already
>determined to be inadequate. Keeping these old standards will kill
>dozens or hundreds of West Virginians each year.

>The rule on refuse combustion (45-6-1) attempts to revise the
>definition of low-level radioactive waste and revives the
>Below-Regulatory_Concern (BRC) issue from some years ago. It also
>creates a large number of exemptions for "temporary" pollution
>sources. I am not yet sure if this re-opens old battles over
>medical waste incineration, but this was a really hot issue a few
>years back.

Comment submitted by Karen Price at Council meeting 5/30/07

Questions/Comments on DEP's 2007 Proposed Rules

- **45 CSR 8 Ambient Air Quality Standards**

Section 4.2.c – $PM_{2.5}$ Maximum 24-Hour Average Concentration. The level for the 24-hour primary and secondary standard states 35 ug/m^3. This should be 65 ug/m^3, pursuant to 40 CFR 50.7.

- **45 CSR 39, 45 CSR 40, 45 CSR 41**

The opt-in unit language is deleted from each of these rules. What is the purpose for the deletion of these provisions?

- **33 CSR 30, Underground Storage Tank Rules**

Section 6.1. states "....including any person who accepts a delivery order, accepts payment, delivers or deposits product into an underground storage tank.....". The portion that states "...accepts payment..." should be removed from this section because those individuals within a company who accept payment or make payments most often do not know anything about the underground storage tank (UST), the operation of the UST, or the current regulatory status of the UST.

Section 7.3.a.1. states "....the methodology for verifying attendance, the date, time and location of the course, the name of the offering organization, the credentials of the instructors, and a certification that the technology or methods.....".

1. The portion that states "..the date, time and location of the course,...." should be deleted. For large companies with many UST installations and locations there can be numerous individuals that need to be trained. Training will most likely occur on multiple dates, times, and locations that may not always be known until just prior to the training event. When new employees are hired training might

occur on short notice and for one individual. The burden of having to repor the dates, time and locations would hinder and slow down the training process and restrict a company's ability to comply.

2. The portion that states "...the credentials of the instructors..." should be removed. Credentials will vary from instructor to instructor new instructors might be utilized, and a company might not know which instructors will be used at the various training sessions until just prior to the training session. In addition, the course content is the main issue of concern and should be the main focus in obtaining State approval of a training program.

Section 7.3.a.2 - This section states that a nonrefundable application fee of $280 must be submitted with the application. Larger companies may have one training program, but administer the training on multiple dates, times and locations. Having to submit an application for approval of the training program each time the program is administered would be cost prohibitive, burdensome, and would hinder the training process. The State should clarify or make provision for a company to submit one application for the training program that will be administered to all company UST facilities. This will make the $280 application fee reasonable and the application process less burdensome.

INDUSTRY'S REVISIONS

45CSR42

TITLE 45
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

SERIES 42
GREENHOUSE GAS EMISSIONS INVENTORY PROGRAM

§45-42-1.General.

1.1 Scope -- This rule establishes a greenhouse gas emissions inventory program in West Virginia which:

1.1.a. Requires the reporting and inventory of greenhouse gas emissions by stationary sources which emit more than a *de minimis* amount of greenhouse gases on an annual basis;

1.1.b Inventories greenhouse gas emissions from stationary, area, mobile and biogenic sources, and accounts for reductions and sequestration of greenhouse gas emissions;

1.1.c. Provides for a periodic compilation of a greenhouse gas emissions inventory and a determination whether West Virginia is a net sink or emitter of greenhouse gases;

1.1.d. Provides for development of a registry to record voluntary reductions of greenhouse gas emissions; and

1.1.e Provides for a determination whether the reduction and sequestration of greenhouse gas emissions can be developed as an asset for economic development.

1.2 Authority -- W Va Code §22-5-19.

1.3. Filing Date --

1.4. Effective Date -- June 1, 2008.

§45-42-2. Definitions.

2.1. "Air pollutants" means solids, liquids, or gases which, if discharged into the air, may result in statutory air pollution

2.2. "Air pollution" or "statutory air pollution" means and is limited to the discharge into the air by the act of man substances (liquid, solid, gaseous, organic or inorganic) in a locality, manner and amount as to be injurious to human health or welfare, animal or plant life, or property, or which would interfere with the enjoyment of life or property.

2.3. "Anthropogenic" means a direct result of human activities or the result of natural processes that have been influenced significantly by human activities.

2.4. "Area source" means, for purposes of this rule, a collection of similar sources of air pollutants within a geographic area. Area sources collectively represent individual sources that are small and numerous, and that typically have not been inventoried as a stationary or mobile source.

2.5. "Biogenic" means a naturally occurring biological source or process that is not significantly affected by human actions or activity.

2.6. "Capture" means the collection of greenhouse gas emissions from a stationary source

2.7. "*De minimis*" means emissions from a stationary source that are equal to or less than ten thousand tons per year for carbon dioxide, four hundred seventy-six tons per year for methane, thirty-two and six tenths tons per year for nitrous oxide, eight hundred fifty-five thousandths tons per year for hydrofluorocarbons, one and nine hundredths tons per year for perfluorocarbons and forty-two hundredths tons per year for sulfur hexafluoride.

2.8. "Emission" means the release, escape or discharge of regulated air pollutants or greenhouse gases into the air.

2.9. "Greenhouse gas" means the gaseous compounds: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6)

2.10. "Mobile source" means a variety of onroad and nonroad vehicles, engines, locomotives, marine vessels, airplanes and other equipment that generate air pollutants and greenhouse gas emissions, and that move or can be moved from place to place.

2.11. "Regulated air pollutant" means, for purposes of this rule, any air pollutant regulated under rules promulgated by the Secretary pursuant to W.Va. Code §22-5-4

2.12. "Reservoir" means a geological site where a greenhouse gas is securely stored.

2.13. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va Code §§22-1-6 or 22-1-8

2.14. "Sequestration" means the physical process by which emissions of a greenhouse gas are directly captured for storage in a reservoir, or the biologic process by which a greenhouse gas is indirectly removed from the atmosphere for storage in a sink

2.15. "Sink" means any process, activity or mechanism which removes a greenhouse gas from the atmosphere Forests are considered sinks because they remove carbon dioxide through photosynthesis.

2.16 "Source" means, for purposes of this rule, any process or activity which releases a greenhouse gas into the air.

2.17 "Stationary source" means any building, structure, facility, installation, stationary process or process equipment which emits or may emit any regulated air pollutant or greenhouse gas.

2.18 "Ton" means a short ton, or 2000 pounds.

2.19. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in W.Va. Code §22-5-1 et seq

§45-42-3.Applicability.

3.1. Any stationary source that emits one or more greenhouse gases on an annual basis greater than the *de minimis* amounts listed in the table below, excluding biogenic emissions, and reports emissions of regulated air pollutants pursuant to the emissions inventory requirements of the Secretary under rule or W.Va. Code §22-5-4(a)(14), shall be an affected source required to report emissions of all greenhouse gases emitted above *de minimis* amounts to the Secretary under section 4:

Greenhouse Gas Compound	tons/year
carbon dioxide	10,000
methane	476

nitrous oxide	32.6
perfluorocarbons	1.09
sulfur hexafluoride	0.42
hydrofluorocarbons	0.855

3.2. Stationary sources which are regulated by the Secretary under W Va. Code §22-3-1 et seq. and do not report emissions of regulated air pollutants pursuant to the emissions inventory requirements under W.Va. Code §22-5-4(a)(14) are not required to, but may voluntarily report their greenhouse gas emissions under section 4.

§45-42-4.Reporting Requirements.

4.1. ~~By March 31, 2009, and March 31 of each year thereafter, affected~~ Affected sources shall report to the Secretary the quantity of all greenhouse gases emitted above *de minimis* amounts in the previous calendar year at the same time such sources are to report emissions of regulated air pollutants pursuant to the emissions inventory requirements of the Secretary under rule or W.Va. Code §22-5-4(a)(14).

4.2. Affected sources shall only be required to report annual quantities of anthropogenic non-mobile source greenhouse gas emissions directly at the source, and shall not be required to report biogenic or mobile emissions of greenhouse gases, or indirect emissions of greenhouse gases, such as emissions occurring offsite from energy consumption.

4.3. The Secretary shall determine the form and format of the information reported by affected sources under subsection 4.1 to ensure that the information is consistent as possible with developing regional, national, or international greenhouse gas emissions programs

4.4. Notwithstanding the provisions of subsection 4.3, to satisfy the greenhouse gas emission reporting requirements under this section, affected sources may submit greenhouse gas emissions inventory information from documented greenhouse gas inventories such as those provided to the Environmental Protection Agency's Climate Leaders Program, Chicago Climate Exchange Registry, the International Organization for Standardization and the SF_6 Emissions Reduction Partnership for Electric Power Systems. Greenhouse gas emissions inventory information from other widely recognized and verified greenhouse gas emissions inventory programs may be submitted by affected sources under this subsection, but shall be subject to approval by the Secretary on a case-by-case basis

4.5. Reports of greenhouse gas emissions submitted to the Secretary under this section shall be signed by a responsible official and shall include the following certification statement: "I, the undersigned, hereby certify that the data transmitted to the West Virginia Department of Environmental Protection is true, accurate, and complete, based upon information and belief formed after reasonable inquiry."

4.6. Greenhouse gases reported under this section are not subject to fees under 45 CSR 30, unless the greenhouse gases are otherwise regulated by the Secretary.

§45-42-5.Greenhouse Gas Emissions Inventory.

5.1. The Secretary shall periodically compile an inventory of greenhouse gas emissions to:

5.1.a. Characterize the relative contributions of greenhouse gas emissions from stationary, area, mobile and biogenic sources in West Virginia; and

5.1 b. Determine the extent to which greenhouse gas emissions are offset by the rate of sequestration, and whether West Virginia is a net sink or emitter of greenhouse gases.

5.2. The greenhouse gas emissions inventory shall include the emissions from stationary sources reported under section 4, and other relevant information regarding significant emissions, reductions, and sequestration of greenhouse gases from stationary, area, mobile and biogenic sources requested by the Secretary under subsections 5.3 and 5.4.

5.3. To inventory greenhouse gas emissions reductions, the Secretary shall consult with the citizenry and other entities such as industry trade groups that have information relating to greenhouse gas emissions reductions, and sequestration. ~~Upon request of the Secretary, such entities shall provide relevant information relating to greenhouse gas emissions reductions, capture and sequestration~~.

5.4. The Department of Agriculture, the Division of Forestry, Marshall University, West Virginia University, West Virginia Geological and Economic Survey, and the Department of Transportation shall enter into interagency agreements with the Secretary and at the Secretary's request provide:

5.4.a. Relevant information relating to greenhouse gas emissions from area, mobile and biogenic sources;

5.4.b. Relevant information relating to greenhouse gas emissions reductions and sequestration; and

5.4.c. Any assistance the Secretary may request during the development of the greenhouse gas emissions inventory.

5.5. The Secretary shall determine the form and format of the information submitted by the entities under subsections 5.3 and 5.4 to ensure that the information is consistent as possible with developing regional, national, or international greenhouse gas emissions programs.

§45-42-6.Greenhouse Gas Emissions Registry Program.

6.1. The Secretary shall develop a registry for the recordation of voluntary reductions of greenhouse gas emissions.

6.2. The greenhouse gas emissions registry program shall be as consistent as possible with developing regional, national, or international programs designed to monitor, quantify and register reductions in greenhouse gas emissions with respect to:

6.2.a. Development of criteria, based on a set of standardized emissions accounting, reporting and verification protocols, to determine baseline emissions and quantification of voluntary reductions in emissions of greenhouse gases;

6.2.b. Public recognition of such voluntary emissions reductions;

6.2.c. Consideration of voluntary greenhouse gas emission reductions when determining baselines and reduction requirements under future federal greenhouse gas emission reduction programs; and

6.2.d. The ability of sources to participate in future greenhouse gas emission trading programs.

§45-42-7.Economic Development Potential.

7.1. Using information obtained, gathered or developed under this rule, the Secretary will determine whether the reduction and sequestration of greenhouse gas emissions can be developed as an asset for net economic development or will result in a deterrent to net economic development in West Virginia.

§45-42-8.Inconsistency Between Rules.

8.1. In the event of any inconsistency between this rule and any other rule of the West Virginia Department of Environmental Protection, the inconsistency shall be resolved by the determination of the Secretary and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule

Summary of Industry's Suggested Changes and Comments on 45 CSR 42, Greenhouse Gas Emissions Inventory Program

- Section 2.3. The definition of "anthropogenic" should be revised to state that it is the "result of natural processes that have been influenced significantly by human activities". Adding the term "significantly" makes the definition consistent with the definition of "biogenic" which means a "naturally occurring biological source or process that is not significantly affected by human actions or activity."

- Section 3.1. Applicability. This section should be revised to clarify that only individual greenhouse gases emitted above the *de minimis* amounts are required to be reported. Otherwise, affected sources that trigger any of the *de minimis* amounts could be required to report emissions of all of the greenhouse gases even if they are below the *de minimis* amounts. We do not believe that this is DEP's intent Also, this section should be revised to clarify that the *de minimis* amounts do not include biogenic emissions.

- Section 4.1. Reporting Requirements. This section should be revised to require reporting of greenhouse gases at the same time the air emissions inventory reporting is required. Sources should not be required to report their emissions at two different times. This section should also be clarified so that only greenhouse gases emitted above the *de minimis* amounts are required to be reported.

- Section 4.2 should be revised so that "mobile" emissions of greenhouse gases are not required to be reported. This section should also be revised to clarify that only direct emissions and not indirect greenhouse gas emissions (e.g., emissions occurring offsite from electricity consumption) are required to be reported. The references in section 4.3 to programs like Climate Leaders could lead sources to include indirect and direct emissions in their reporting. This would lead to double counting of electric generation greenhouse gas emissions and to higher source emissions compared to the *de minimis* amounts.

- Section 4.6 should be added so that sources will not be subject to fees for reporting greenhouse gas emissions, as the purpose of such reporting is to create an inventory, not to generate fees.

- Section 5.3. This section should be revised to delete the requirement that certain entities, including trade associations, must provide relevant information on greenhouse gas emissions, reductions, capture and sequestration to the Secretary upon request. This requirement is not found in the statute and could be interpreted to require such entities to report reductions, which is also not required under the statute.

- Section 7.1. Economic Development Potential This section should be revised to require the DEP to also determine whether reduction and sequestration will result in a deterrent to net economic development – not just whether it will be an asset.

- Additional questions/issues:

    - A reasonable protocol for reporting greenhouse gas emissions from stationary sources should be developed. Affected sources should not be required to report emissions from individual units within a stationary source if such emissions are insignificant. Affected stationary sources should have the option to report all of its greenhouse gas emissions in the aggregate.

    - Over 30 states have signed on to "The Climate Registry". Does West Virginia intend on signing on? The rule indicates that West Virginia will have its own registry independent of "The Climate Registry". Does DEP intend to rely upon any greenhouse gas registry programs, such as the Chicago Climate Exchange Registry, in developing the registry program?

MEMORANDUM

TO: Karen Price

FROM: David L Yaussy

DATE: May 29, 2007

SUBJECT: DEP Advisory Council Rules

A. **Rules for Individual State Certification of Activities Requiring a Federal Permit.**
Title 47, Series 5A.

No comment.

B. **National Pollutant Discharge Elimination System (NPDES) Program.**
Title 47, Series 10.

We would urge the DEP to update the rule. It still contains references to the Chief, rather than the Director (See, for example, Sections 5.13.d.1, 6.2 and 9.1.a.)

Has the DEP updated this rule to reflect changes in the Code of Federal Regulations that were made since it was last comprehensively updated?

C. **Antidegradation Implementation Procedures.**
Title 60, Series 5.

We agree that the State should do away with Section 6.2. There is no need for an initial presumptive listing procedure at this point. As for the 156 (I counted 157, but I may have miscounted) streams in Appendix A, we will disagree with all those listed except the 39 to which no objections were ever lodged.

D. **Requirements Governing Water Quality Standards.**

Title 57, Series 2.

There are a couple of minor errors – Section 2.2 has a "then" that should be "than" and Section 6.1 is missing text

We remain disappointed that the State continues to interpret its water quality standards to apply all uses in all streams at all times. Section 6.1 clearly provides that B and C are the only default, or universal, uses

Appendix D should be eliminated. Category C, Water Contact Recreation, is a default use, and listing all streams with that use assigned to them suggests that there are streams that do not have that designation.

Appendix A. The DEP is listing a huge number of trout streams with no justification for their listing. If streams meet the requirements of trout waters, they qualify as such; if they do not, there is no reason to list them. Unless the DEP can document that each stream has year round, multi-age populations, they should not be listed.

DLY:shb

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Requirements Govering Water Quality Standards, 47CSR2

Type of Rule: [X] Legislative [ ] Interpretive [ ] Procedural

Agency: West Virginia Department of Environmental Protection

Address: 601 57th Street, SE

Charleston, WV 25304

Phone Number: (304) 926-0495 Email: lmcclung@wvdep.org

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: Requirements Govering Water Quality Standards, 47CSR2

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 reflect updates identified during the federally-mandated triennial review of the Water Quality Standards rule. These include proposed additions to the trout water list, new criteria for nutrients, revisions to criteria in Appendix E and a use redesignation in the Guyandotte River basin. Costs of implementing the changes will be absorbed in the agency's current budget.

Date: May 7, 2007

Signature of Agency Head or Authorized Representative

TITLE 47
LEGISLATIVE RULES
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SERIES 2
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

§47-2-1. General.

1.1. Scope. -- These rules establish requirements governing the discharge or deposit of sewage, industrial wastes and other wastes into the waters of the state and establish water quality standards for the waters of the State standing or flowing over the surface of the State. 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, and other 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. (See W. Va. Code §22-11-2.)

1.2. Authority. -- W. Va. Code §22-11-4(a)(16); §22-11-7b

1.3. Filing Date. -- ~~May 10, 2006.~~

1.4. Effective Date. -- ~~June 1, 2006.~~

§47-2-2. Definitions.

The following definitions in addition to those set forth in W. Va. Code §22-11-3, shall apply to these rules unless otherwise specified herein, or unless the context in which used clearly requires a different meaning:

2.1. "Conventional treatment" is the treatment of water as approved by the West Virginia Bureau for Public Health to assure that the water is safe for human consumption.

2.2. "Cool water lakes" are lakes managed by the West Virginia Division of Natural Resources for cool water fisheries, with summer residence times greater than 14 days.

~~2.2.~~ 2.3. "Cumulative" means a pollutant which increases in concentration in an organism by successive additions at different times or in different ways (bio-accumulation).

~~2.3.~~ 2.4. "Designated uses" are those uses specified in water quality standards for each ~~water body~~ water or segment whether or not they are being attained. (See sections 6.2 - 6.6, herein)

~~2.4.~~ 2.5. "Dissolved metal" is operationally defined as that portion of metal which passes through a 0.45 micron filter.

~~2.5.~~ 2.6. "Existing uses" are those uses actually attained in a ~~water body~~ water on or after November 28, 1975, whether or not they are included in the water quality standards.

~~2.6.~~ 2.7. The "Federal Act" means the Clean Water Act (also known as the Federal Water Pollution Control Act) 33 U.S.C. § 1251 - 1387.

~~2.7.~~ 2.8. "High quality waters" are those waters whose quality is equal to or better than the minimum levels necessary to achieve the national water quality goal uses.

~~2.8.~~ 2.9. "Intermittent streams" are streams which have no flow during sustained periods of no precipitation and which do not support aquatic life whose life history requires residence in flowing waters for a continuous period of at least six (6) months.

~~2.9.~~ 2.10. "Outstanding national resource waters" are those waters whose unique character, ecological or recreational value or pristine nature constitutes a valuable national or State resource.

~~2.10.~~ 2.11. "Natural" or "naturally occurring" values or "natural temperature" shall mean for all of the waters of the state:

~~2.10.a.~~ 2.11.a. Those water quality values which exist unaffected by -- or unaffected as a consequence of -- any water use by any person; and

~~2.10.b.~~ 2.11.b. Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance from any point source or non-point source.

~~2.11.~~ 2.12. "Non-point source" shall mean any source other than a point source from which pollutants may reach the waters of the state.

~~2.12.~~ 2.13. "Persistent" shall mean a pollutant and its transformation products which under natural conditions degrade slowly in an aquatic environment.

~~2.13.~~ 2.14. "Point source" shall mean any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

~~2.14.~~ 2.15. "Representative important species of aquatic life" shall mean those species of aquatic life whose protection and propagation will assure the sustained presence of a balanced aquatic community. Such species are representative in the sense that maintenance of water quality criteria will assure both the natural completion of the species' life cycles and the overall protection and sustained propagation of the balanced aquatic community.

~~2.15.~~ 2.16. "Secretary" shall mean the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W. Va. Code §§22-1-6 or 22-1-8.

~~2.16.~~ 2.17. The "State Act" or "State Law" shall mean the West Virginia Water Pollution Control Act, W. Va. Code §22-11-1 et seq.

~~2.17.~~ 2.18. "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, as amended June 15, 1990 and March 26, 2007, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

~~2.18.~~ 2.19. "Trout waters" are ~~streams or stream segments~~ waters which sustain year-round trout populations. Excluded are those ~~streams or stream segments~~ waters which receive annual stockings of trout but which do not support year-round trout populations.

~~2.19.~~ 2.20. "~~Water~~ Waters of special concern" are those waters occurring in the categories outlined in section 4.1.c. of the antidegradation policy. This designation provides an intermediate level of antidegradation protection between high quality waters and outstanding national resource waters.

~~2.20.~~ 2.21. "Water quality criteria" shall mean levels of parameters or stream conditions that are required to be maintained by these regulations. Criteria may be expressed as a constituent concentration, levels, or narrative statement, representing a quality of water that supports a designated use or uses.

~~2.21.~~ 2.22. "Water quality standards" means the combination of water uses to be protected and the water quality criteria to be maintained by these rules.

~~2.22.~~ 2.23. "Wetlands" are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

~~2.23.~~ 2.24. "Wet weather streams" are streams that flow only in direct response to precipitation or whose channels are at all times above the water table.

§47-2-3. Conditions Not Allowable In State Waters.

3.1. Certain characteristics of sewage, industrial wastes and other wastes cause pollution and are objectionable in all waters of

the state. Therefore, the Secretary does hereby proclaim that the following general conditions are not to be allowed in any of the waters of the state.

3.2. No sewage, industrial wastes or other wastes present in any of the waters of the state shall cause therein or materially contribute to any of the following conditions thereof:

3.2.a. Distinctly visible floating or settleable solids, suspended solids, scum, foam or oily slicks;

3.2.b. Deposits or sludge banks on the bottom;

3.2.c. Odors in the vicinity of the waters;

3.2.d. Taste or odor that would adversely affect the designated uses of the affected waters;

3.2.e. Materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life;

3.2.f. Distinctly visible color;

3.2.g. Concentrations of bacteria which may impair or interfere with the designated uses of the affected waters;

3.2.h. Requiring an unreasonable degree of treatment for the production of potable water by modern water treatment processes as commonly employed; and

3.2.i. Any other condition, including radiological exposure, which adversely alters the integrity of the waters of the State including wetlands; no significant adverse impact to the chemical, physical, hydrologic, or biological components of aquatic ecosystems shall be allowed.

§47-2-4. Antidegradation Policy.

4.1. It is the policy of the State of West Virginia that the waters of the state shall be maintained and protected as follows:

4.1.a. Tier 1 Protection. Existing water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Existing uses are those uses actually attained in a ~~the water body~~ water on or after November 28, 1975, whether or not they are included as designated uses within these water quality standards.

4.1.b. Tier 2 Protection. The existing high quality waters of the state must be maintained at their existing high quality unless it is determined after satisfaction of the intergovernmental coordination of the state's continuing planning process and opportunity for public comment and hearing that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. If limited degradation is allowed, it shall not result in injury or interference with existing stream water uses or in violation of state or federal water quality criteria that describe the base levels necessary to sustain the national water quality goal uses of protection and propagation of fish, shellfish and wildlife and recreating in and on the water.

In addition, the Secretary shall assure that all new and existing point sources shall achieve the highest established statutory and regulatory requirements applicable to them and shall assure the achievement of cost-effective and reasonable best management practices (BMPs) for non-point source control. If BMPs are demonstrated to be inadequate to reduce or minimize water quality impacts, the Secretary may require that more appropriate BMPs be developed and applied.

4.1.b.1. High quality waters are those waters meeting the definition at section ~~2.7~~ 2.8 herein.

4.1.b.2. High quality waters may include but are not limited to the following:

4.1.b.2.A. Streams designated by the West Virginia Legislature under the West Virginia Natural Stream Preservation Act, pursuant to W. Va. Code §22-13-5; and

4.1.b.2.B. Streams listed in West Virginia High Quality Streams, Fifth Edition, prepared by the Wildlife Resources

Division, Department of Natural Resources (1986).

4.1.b.2.C. Streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.

4.1.c. Tier 2.5 Protection. Waters of special concern include all of those waters listed in 60 C.S.R. 5, Appendix A. Waters of special concern may include, but are not limited to naturally reproducing trout streams, federally designated rivers under the "Wild and Scenic Rivers Act," 16 U. S.C. §§ 1271 et seq., waters in state parks and forests, waters in National parks and forests, waters designated under the "National Parks and Recreation Act of 1978," and waters with unique or exceptional aesthetic, ecological, or recreational value. Waters may be nominated for inclusion in this category by any interested party or by the ~~Board~~ Secretary on ~~its~~ his or her own initiative.

In addition to the Waters of Special Concern outlined in 60 CSR 5 - "Antidegradation Implementation Procedures", Appendix A, the following streams are classified as Waters of Special Concern:

4.1.c.1. Watkins Run (Preston County) ~~and;~~

4.1.d. Tier 3 Protection. In all cases, waters which constitute an outstanding national resource shall be maintained and protected and improved where necessary. Outstanding national resource waters include, but are not limited to, all streams and rivers within the boundaries of Wilderness Areas designated by The Wilderness Act (16 U.S.C. §1131 et seq.) within the State.

Additional waters may be nominated for inclusion in that category by any interested party or by the Secretary on his or her own initiative. To designate a nominated water as an outstanding national resource water, the Secretary shall follow the public notice and hearing provisions as provided in 46 C.S.R. 6.

4.1.e. All applicable requirements of section 316(a) of the Federal Act shall apply to modifications of the temperature water quality criteria provided for in these rules.

§47-2-5. Mixing Zones.

5.1. In the permit review and planning process or upon the request of a permit applicant or permittee, the Secretary may establish on a case-by-case basis an appropriate mixing zone.

5.2. The following guidelines and conditions are applicable to all mixing zones:

5.2.a. The Secretary will assign, on a case-by-case basis, definable geometric limits for mixing zones for a discharge or a pollutant or pollutants within a discharge. Applicable limits shall include, but may not be limited to, the linear distances from the point of discharge, surface area involvement, volume of receiving water, and shall take into account other nearby mixing zones. Mixing zones shall take into account the mixing conditions in the receiving stream (i.e: whether complete or incomplete mixing conditions exist). Mixing zones will not be allowed until applicable limits are assigned by the Secretary in accordance with this section.

5.2.b. Concentrations of pollutants which exceed the acute criteria for protection of aquatic life set forth in Appendix E, Table 1 shall not exist at any point within an assigned mixing zone or in the discharge itself unless a zone of initial dilution is assigned. A zone of initial dilution may be assigned on a case-by-case basis at the discretion of the Secretary. The zone of initial dilution is the area within the mixing zone where initial dilution of the effluent with the receiving water occurs, and where the concentration of the effluent will be its greatest in the water column. Where a zone of initial dilution is assigned by the Secretary, the size of the zone shall be determined using one of the four alternatives outlined in section 4.3.3 of US EPA's Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001 PB91-127415, March 1991). Concentrations of pollutants shall not exceed the acute criteria at the edge of the assigned zone of initial dilution. Chronic criteria for the protection of aquatic life may be exceeded within the mixing zone but shall be met at the edge of the assigned mixing zone.

5.2.c. Concentrations of pollutants which exceed the criteria for the protection of

human health set forth in Appendix E, Table 1 shall not be allowed at any point unless a mixing zone has been assigned by the Secretary after consultation with the Commissioner of the West Virginia Bureau for Public Health. Human health criteria may be exceeded within an assigned mixing zone, but shall be met at the edge of the assigned mixing zone. Mixing zones for human health criteria shall be sized to prevent significant human health risks and shall be developed using reasonable assumptions about exposure pathways. In assessing the potential human health risks of establishing a mixing zone upstream from a drinking water intake, the Secretary shall consider the cumulative effects of multiple discharges and mixing zones on the drinking water intake. No mixing zone for human health criteria shall be established on a stream which has a seven (7) day, ten (10) year return frequency of 5 cfs or less.

5.2.d. Mixing zones, including zones of initial dilution, shall not interfere with fish spawning or nursery areas or fish migration routes; shall not overlap public water supply intakes or bathing areas; cause lethality to or preclude the free passage of fish or other aquatic life; nor harm any threatened or endangered species, as listed in the Federal Endangered Species Act, 15 U.S.C. §1531 et seq.

5.2.e. The mixing zone shall not exceed one-third (1/3) of the width of the receiving stream, and in no case shall the mixing zone exceed one-half (1/2) of the cross-sectional area of the receiving stream.

5.2.f. In lakes and other surface impoundments, the volume of a mixing zone shall not affect in excess of ten (10) percent of the volume of that portion of the receiving waters available for mixing.

5.2.g. A mixing zone shall be limited to an area or volume which will not adversely alter the existing or designated uses of the receiving water, nor be so large as to adversely affect the integrity of the ~~water body~~ water.

5.2.h. Mixing zones shall not:

5.2.h.1. Be used for, or considered as, a substitute for technology-based requirements of the Act and other applicable state and federal laws.

5.2.h.2. Extend downstream at any time a distance more than five times the width of the receiving watercourse at the point of discharge.

5.2.h.3. Cause or contribute to any of the conditions prohibited in section 3, herein.

5.2.h.4. Be granted where instream waste concentration of a discharge is greater than 80%.

5.2.h.5. Overlap one another.

5.2.h.6. Overlap any 1/2 mile zone described in section 7.2.a.2 herein.

5.2.i. In the case of thermal discharges, a successful demonstration conducted under section 316(a) of the Act shall constitute compliance with all provisions of this section.

5.2.j. The Secretary may waive the requirements of subsections 5.2.e and 5.2.h.2 above if a discharger provides an acceptable demonstration of:

5.2.j.1. Information defining the actual boundaries of the mixing zone in question; and

5.2.j.2. Information and data proving no violation of subsections 5.2.d and 5.2.g above by the mixing zone in question.

5.2.k. Upon implementation of a mixing zone in a permit, the permittee shall provide documentation that demonstrates to the satisfaction of the Secretary that the mixing zone is in compliance with the provisions outlined in subsections 5.2.b, 5.2.c, 5.2.e, and 5.2.h.2, herein.

5.2.l. In order to facilitate a determination or assessment of a mixing zone pursuant to this section, the Secretary may require a permit applicant or permittee to submit such information as deemed necessary.

§47-2-6. Water Use Categories.

6.1. These rules establish general Water Use Categories and Water Quality Standards for the waters of the State. 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 Federal Act goals. Incidental utilization for whatever purpose may or may not constitute a justification for assignment of a water use category to a particular stream segment.

6.1.a. Waste assimilation and transport are not recognized as designated uses. The classification of the waters must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation.

Subcategories of a use may be adopted and appropriate criteria set to reflect varying needs of such subcategories of uses, for example to differentiate between trout water and other waters.

6.1.b. At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under section 301(b) and section 306 of the Federal Act and use of cost-effective and reasonable best management practices for non-point source control. Seasonal uses may be adopted as an alternative to reclassifying a ~~water body~~ water or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria will be adjusted to reflect the seasonal uses; however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season. A designated use which is not an existing use may be removed, or subcategories of a use may be established if it can be demonstrated that attaining the designated use is not feasible because:

6.1.b.1. Application of effluent limitations for existing sources more stringent than those required pursuant to section 301 (b) and section 306 of the Federal Act in order to attain the existing designated use would result in substantial and widespread adverse economic and social impact; or

6.1.b.2. Naturally-occurring pollutant concentrations prevent the attainment of the use; or

6.1.b.3. Natural, ephemeral, intermittent or low flow conditions of water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met; or

6.1.b.4. Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

6.1.b.5. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the ~~water body~~ water to its original condition or to operate such modification in a way that would result in the attainment of the use; or

6.1.b.6. Physical conditions related to the natural features of the ~~water body~~ water, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses.

6.1.c. The State shall take into consideration the quality of downstream waters and shall assure that its water quality standards provide for the attainment of the water quality standards of downstream waters.

6.1.d. In establishing a less restrictive use or uses, or subcategory of use or uses, and the water quality criteria based upon such uses, the Secretary shall follow the requirements for revision of water quality standards as required by W. Va. Code §22-11-7b and section 303 of the Federal Act and the regulations thereunder. Any revision of water quality standards shall be made with the concurrence of EPA. The Secretary's administrative procedural regulations for applying for less restrictive uses or criteria shall be followed.

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.

6.3. Category B -- Propagation and maintenance of fish and other aquatic life. --

This category includes:

6.3.a. Category B1 -- Warm water fishery streams. -- Streams or stream segments which contain populations composed of all warm water aquatic life.

6.3.b. Category B2 -- Trout Waters. -- As defined in section ~~2.20~~ 2.19, herein (See Appendix A for a representative list.)

6.3.c. Category B4 -- Wetlands. -- As defined in section ~~2.24~~ 2.23, herein; certain numeric stream criteria may not be appropriate for application to wetlands (see Appendix E, Table 1).

6.4. Category C -- Water contact recreation. -- This category includes swimming, fishing, water skiing and certain types of pleasure boating such as sailing in very small craft and outboard motor boats. (See Appendix D for a representative list of category C waters.)

6.5. Category D. -- Agriculture and wildlife uses.

6.5.a. Category D1 -- Irrigation. -- This category includes all stream segments used for irrigation.

6.5.b. Category D2 -- Livestock watering. -- This category includes all stream segments used for livestock watering.

6.5.c. Category D3 -- Wildlife. -- This category includes all stream segments and wetlands used by wildlife.

6.6. Category E -- Water supply industrial, water transport, cooling and power. -- This category includes cooling water, industrial water supply, power production, commercial and pleasure vessel activity, except those small craft included in Category C.

6.6.a. Category E1 -- Water Transport. -- This category includes all stream segments modified for water transport and having permanently maintained navigation aides.

6.6.b. Category E2 -- Cooling Water. -- This category includes all stream segments having one (1) or more users for industrial cooling.

6.6.c. Category E3 -- Power production. -- This category includes all stream segments extending from a point 500 feet upstream from the intake to a point one half (1/2) mile below the wastewater discharge point. (See Appendix C for representative list.)

6.6.d. Category E4 -- Industrial. -- This category is used to describe all stream segments with one (1) or more industrial users. It does not include water for cooling.

§47-2-7. West Virginia Waters.

7.1. Major River Basins and their Alphanumeric System. All streams and their tributaries in West Virginia shall be individually identified using an alphanumeric system as identified in the "Key to West Virginia Stream Systems and Major Tributaries" (1956) as published by the Conservation Commission of West Virginia and revised by the West Virginia Department of Natural Resources, Division of Wildlife (1985).

7.1.a. J - James River Basin. All tributaries to the West Virginia - Virginia State line.

7.1.b. P - Potomac River Basin. All tributaries of the main stem of the Potomac River to the West Virginia - Maryland - Virginia State line to the confluence of the North Branch and the South Branch of the Potomac River and all tributaries arising in West Virginia excluding the major tributaries hereinafter designated:

7.1.b.1. S - Shenandoah River and all its tributaries arising in West Virginia to the West Virginia - Virginia State line.

7.1.b.2. PC - Cacapon River and all its tributaries.

7.1.b.3. PSB - South Branch and all its tributaries.

7.1.b.4. PNB - North Branch and all tributaries to the North Branch arising in West Virginia.

7.1.c. M - Monongahela River Basin. The Monongahela River Basin main stem and all its tributaries excluding the following major tributaries which are designated as follows:

7.1.c.1. MC - Cheat River and all its tributaries except those listed below:

7.1.c.1.A. MCB - Blackwater River and all its tributaries.

7.1.c.2. MW - West Fork River and all its tributaries.

7.1.c.3. MT - Tygart River and all its tributaries except those listed below:

7.1.c.3.A. MTB - Buckhannon River and all its tributaries.

7.1.c.3.B. MTM - Middle Fork River and all its tributaries.

7.1.c.4. MY - Youghigheny River and all its tributaries to the West Virginia - Maryland State line.

7.1.d. O Zone 1 - Ohio River - Main Stem. The main stem of the Ohio River from the Ohio - Pennsylvania - West Virginia state line to the Ohio - Kentucky - West Virginia State line.

7.1.e. O Zone 2 - Ohio River - Tributaries. All tributaries of the Ohio River excluding the following major tributaries:

7.1.e.1. LK - Little Kanawha River. The Little Kanawha River and all its tributaries excluding the following major tributary which is designated as follows:

7.1.e.1.A. LKH - Hughes River and all its tributaries.

7.1.e.2. K - Kanawha River Zone 1. The main stem of the Kanawha River from mile point 0, at its confluence with the Ohio River, to mile point 72 near Diamond, West Virginia.

7.1.e.3. K - Kanawha River Zone 2. The main stem of the Kanawha River from mile point 72 near Diamond, West Virginia and all its tributaries from mile point 0 to the headwaters excluding the following major tributaries which are designated as follows:

7.1.e.3.A. KP - Pocatalico River and all its tributaries.

7.1.e.3.B. KC - Coal River and all its tributaries.

7.1.e.3.C. KE - Elk River and all its tributaries.

7.1.e.3.D. KG - Gauley River. The Gauley River and all its tributaries excluding the following major tributaries which are designated as follows:

7.1.e.3.D.1. KG-19 - Meadow River and all its tributaries.

7.1.e.3.D.2. KG-34 - Cherry River and all its tributaries.

7.1.e.3.D.3. KGC - Cranberry River and all its tributaries.

7.1.e.3.D.4. KGW -

Williams River and all its tributaries.

7.1.e.3.E. KN - New River. The New River from its confluence with the Gauley River to the Virginia - West Virginia State line and all tributaries excluding the following major tributaries which are designated as follows:

7.1.e.3.E.1. KNG - Greenbrier River and all its tributaries.

7.1.e.3.E.2. KNB - Bluestone River and all its tributaries.

7.1.e.3.E.3. KN-60 - East River and all its tributaries.

7.1.e.3.E.4. K(L)-81-(1) - Bluestone Lake.

7.1.e.4. OG - Guyandotte River. The Guyandotte River and all its tributaries excluding the following major tributary which is designated as follows:

7.1.e.4.1. OGM - Mud River and all its tributaries.

7.1.e.5. BS - Big Sandy River. The Big Sandy River to the Kentucky - Virginia - West Virginia State lines and all its tributaries arising in West Virginia excluding the following major tributary which is designated as follows:

7.1.e.5.1 BST - Tug Fork and all its tributaries.

7.2. Applicability of Water Quality Standards. The following shall apply at all times unless a specific exception is granted in this section:

7.2.a. Water Use Categories as described in section 6, herein.

7.2.a.1. Based on meeting those Section 6 definitions, tributaries or stream segments may be classified for one or more Water Use Categories. When more than one use exists, they shall be protected by criteria for the use category requiring the most stringent protection.

7.2.a.2. Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of one half (1/2) mile or to the headwater, must be protected by prohibiting the discharge of any pollutants in excess of the concentrations designated for this Water Use Category in section 8, herein. In addition, within that one half (1/2) mile zone, the Secretary may establish for any discharge, effluent limitations for the protection of human health that require additional removal of pollutants than would otherwise be provided by this rule. (If a watershed is not significantly larger than this zone above the intake, the water supply section may include the entire upstream watershed to its headwaters.) Until September 1, 2010, or until action by the Secretary to revise this provision, whichever comes first, the one-half (1/2) mile zone described in this section shall not apply to the Ohio River main channel (between Brown's Island and the left descending bank) between river mile points 61.0 and 63.5 for the Category A criterion for iron as set forth in §8 herein. Weirton Steel Corporation shall conduct monthly monitoring of the treated water at its drinking water plant for iron and submit the results of such monitoring to the West Virginia Bureau for Public Health and the Office of Water Resources of the West Virginia Department of Environmental Protection. In addition, Weirton Steel Corporation shall submit a written report regarding the status of its drinking water plant and the issues pertaining thereto to the Secretary on or before March 1, 2007.

7.2.b. In the absence of any special application or contrary provision, water quality standards shall apply at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10). NOTE: With the exception of section 7.2.c.5 listed herein exceptions do not apply to trout waters nor to the requirements of section 3, herein.

7.2.c. Exceptions: Numeric water quality standards shall not apply: (See section 7.2.d, herein, for site-specific revisions)

7.2.c.1. When the flow is less than 7Q10;

7.2.c.2. In wet weather streams (or intermittent streams, when they are dry or have no measurable flow): Provided, that the existing and designated uses of downstream waters are not adversely affected;

7.2.c.3. In any assigned zone of initial dilution of any mixing zone where a zone of initial dilution is required by section 5.2.b herein, or in any assigned mixing zone for human health criteria or aquatic life criteria for which a zone of initial dilution is not assigned; In zones of initial dilution and certain mixing zones: Provided, That all requirements described in section 5 herein shall apply to all zones of initial dilution and all mixing zones;

7.2.c.4. Where, on the basis of natural conditions, the Secretary has established a site-specific aquatic life water quality criterion that modifies a water quality criterion set out in Appendix E, Table 1 of this rule. Where a natural condition of a ~~waterbody~~ water is demonstrated to be of lower quality than a water quality criterion for the use classes and subclasses in section 6 of this rule, the Secretary, in his or her discretion, may establish a site-specific water quality criterion for aquatic life. This alternate criterion may only serve as the chronic criterion established for that parameter. This alternate criterion must be met at end of pipe. Where the Secretary decides to establish a site-specific water quality criterion for aquatic life, the natural condition constitutes the applicable water quality criterion. A site-specific criterion for natural conditions may only be established through the legislative rulemaking process in accordance with W.Va. Code §29A-3-1 et seq. and must satisfy the public participation requirements set forth at 40 C.F.R. 131.20 and 40 C.F.R. Part 25. Site-specific criteria for natural conditions may be established only for aquatic life criteria. A public notice, hearing and comment period is required before site-specific criteria for natural conditions are established.

Upon application or on its own initiative, the Secretary will determine whether a natural condition of a ~~waterbody~~ water should be approved as a site-specific water quality criterion. Before he or she approves a site-specific water quality criterion for a natural condition, the Secretary must find that the natural condition will fully protect existing and designated uses and ensure the protection of aquatic life. If a natural condition of a ~~waterbody~~ water varies with time, the natural condition will be determined to be the actual natural condition of the ~~waterbody~~ water measured prior to or concurrent with discharge or operation. The Secretary will, in his or her discretion, determine a natural condition for one or more seasonal or shorter periods to reflect variable ambient conditions; and require additional or continuing monitoring of natural conditions.

An application for a site-specific criterion to be established on the basis of natural conditions shall be filed with the Secretary and shall include the following information:

7.2.c.4.A. A U.S.G.S. 7.5 minute map showing the stream segment affected and showing all existing discharge points and proposed discharge point;

7.2.c.4.B. The alphanumeric code of the affected stream, if known;

7.2.c.4.C. Water quality data for the stream or stream segment. Where adequate data are unavailable, additional studies may be required by the Secretary;

7.2.c.4.D. General land uses (e.g. mining, agricultural, recreation, residential, commercial, industrial, etc.) as well as specific land uses adjacent to the waters for the affected segment or stream;

7.2.c.4.E. The existing and designated uses of the receiving waters into which the segment in question discharges and the location where those downstream uses begin to occur;

7.2.c.4.F. General physical characteristics of the stream segment, including, but not limited to width, depth, bottom composition and slope;

7.2.c.4.G. Conclusive information and data of the source of the natural condition that causes the stream to exceed the water quality standard for the criterion at issue.

7.2.c.4.H. The average flow rate in the segment and the amount of flow at a designated control point and a statement regarding whether the flow of the stream is ephemeral, intermittent or perennial;

7.2.c.4.I. An assessment of aquatic life in the stream or stream segment in question and in the adjacent upstream and downstream segments; and

7.2.c.4.J. Any additional information or data that the Secretary deems necessary to make a decision on the application.

7.2.c.5. For the upper Blackwater River from the mouth of Yellow Creek to a point 5.1 miles upstream, when flow is less than 7Q10. Naturally occurring values for Dissolved Oxygen as established by data collected by the dischargers within this reach and reviewed by the Secretary shall be the applicable criteria.

7.2.d. Site-specific applicability of water use categories and water quality criteria - State-wide water quality standards shall apply except where site-specific numeric criteria, variances or use removals have been approved following application and hearing, as provided in 46 C.S.R. 6. (See section ~~8.3~~ 8.4 and section ~~8.4~~ 8.5, herein) The following are approved site-specific criteria, variances and use reclassifications:

7.2.d.1. James River - (Reserved)

7.2.d.2. Potomac River

7.2.d.2.1. ~~Except that a~~ A site-specific numeric criterion for aluminum, not to exceed 500 ug/l, shall apply to the section of Opequon Creek from Turkey Run to the Potomac River.

7.2.d.3. Shenandoah River - (Reserved)

7.2.d.4. Cacapon River - (Reserved)

7.2.d.5. South Branch - (Reserved)

7.2.d.6. North Branch - (Reserved)

~~7.2.d.6.1 Except that the Stony River downstream from the limit of the thermal mixing zone (as established by Environmental Quality Board Order of 11/20/75) for the Mount Storm Lake wastewater treatment facility to its confluence with the North Branch of the Potomac River is exempt from the 5°F above natural temperature rise; however, the maximum temperature outside the mixing zone shall not exceed 87°F at any time during the months of May through November and not exceed 73°F at any time during the months of December through April. This exception shall apply until the successful completion of a study conducted pursuant to section 316(a) of the Federal Act or December 31, 1998, whichever comes first.~~

7.2.d.7. Monongahela River

7.2.d.7.1. ~~Except that flow~~ Flow in the main stem of the Monongahela River, as regulated by the Tygart Reservoir, operated by the U. S. Army Corps of Engineers, is based on a minimum flow of 345 cfs at Lock and Dam No. 8, river mile point 90.8. This exception does not apply to tributaries of the Monongahela River.

7.2.d.8. Cheat River

7.2.d.8.1. ~~Except that in~~ In the unnamed tributary of Daugherty Run, approximately one mile upstream of Daugherty Run's confluence with the Cheat River, a site-specific numeric criterion for iron of 3.5 mg/l shall apply and the following frequency and duration requirements shall apply to the chronic numeric criterion for selenium (5ug/l): the four-day average concentration shall not be exceeded more than three times every three years (36 months), on average. Further, the following site-specific numeric criteria shall apply to Fly Ash Run of Daugherty Run: acute numeric criterion for aluminum: 888.5 ug/l and manganese: 5 mg/l.

7.2.d.9. Blackwater River - ~~The Blackwater River below Davis, West Virginia shall be classified as a trout water, Category B2.~~ (Reserved)

7.2.d.10. West Fork River - (Reserved)

7.2.d.11. Tygart River - (Reserved)

7.2.d.12. Buckhannon River - (Reserved)

7.2.d.13. Middle Fork River - (Reserved)

7.2.d.14. Youghiogheny River - (Reserved)

~~7.2.d.14.1 Water Use Categories A and E are excluded from the tributaries of the Youghiogheny River in West Virginia which flow into Maryland.~~

7.2.d.15. Ohio River Main Stem - (Reserved)

7.2.d.16. Ohio River Tributaries.

7.2.d.16.1. ~~Except that site-specific~~ Site-specific numeric criteria shall apply to the stretch of Conners Run (0-77-A), a tributary of Fish Creek, from its mouth to the discharge from Conner Run impoundment, which shall not have the Water Use Category A and may contain selenium not to exceed 62 ug/1; and iron not to exceed 3.5 mg/1 as a monthly average and 7 mg/1 as a daily maximum.

7.2.d.16.2. ~~Except that a~~ A socio-economic variance shall apply to that segment of Harmon Creek (0-97) from its confluence with the Ohio River to a point 2.2 miles upstream, which shall not have water use Category A designation, and which shall have the following instream criteria: Lead 14 ug/l, Daily Maximum, Temperature 100 degree F (monitored per Footnote 12 of the permit); Iron 4.0 mg/l, monthly average and 8.0 mg/l Daily Maximum (monitored per Footnote 12 of the permit). Weirton Steel Corporation shall continue to submit to the Secretary, on an annual basis summary reports on the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation during the previous year to improve the quality of the discharge. These exceptions shall be in effect until action by the Secretary to revise the exceptions or until July 1, ~~2007~~ 2009, whichever comes first.

7.2.d.17. Little Kanawha River - (Reserved)

7.2.d.18. Hughes River - (Reserved)

7.2.d.19. Kanawha River Zone 1 - Main Stem

7.2.d.19.1. For the Kanawha River main stem, Zone 1, Water Use Category A shall not apply; and

7.2.d.19.2. The minimum flow shall be 1,960 cfs at the Charleston gauge.

7.2.d.19.3. ~~Except that a~~ A variance pursuant to 46 CSR 6, Section 5.1, based on naturally occurring pollutant concentrations, shall apply to Union Carbide Corporation's discharge to Ward Hollow of Davis Creek, which shall have the instream criteria for chlorides of 310 mg/l for Category A and C waters and for Category B1 (chronic aquatic life protection). This exception shall be in effect until action by the ~~appropriate rulemaking authority~~ Secretary to revise the exception or until July 1, ~~2008~~ 2010, whichever comes first.

7.2.d.20. Kanawha River Zone 2 and Tributaries.

7.2.d.20.1. For the main stem of the Kanawha River only, the minimum flow shall be 1,896 cfs at mile point 72.

7.2.d.20.2. ~~Except the~~ The stretch between the mouth of Little Scary Creek (K-31) and the Little Scary impoundment shall not have Water Use Category A. The following site-specific numeric criteria shall apply to that section: selenium not to exceed 62 ug/1 and copper not to exceed 105 ug/1 as a daily maximum nor 49 ug/1 as a 4-day average.

~~7.2.d.20.3. Except for Simmons Creek (K-54) from its mouth to a point 1200 feet upstream to which the following site-specific numeric criteria shall apply: a maximum daily temperature not to exceed 38°C (100°F) nor a monthly average temperature to exceed 34°C. This exception shall apply until the successful completion of a study conducted pursuant to section 316(a) of the Federal Act or May 30, 1998, whichever comes first.~~

7.2.d.21. Pocatalico River - (Reserved)

7.2.d.22. Coal River - (Reserved)

7.2.d.23. Elk River - (Reserved)

7.2.d.24. Gauley River - (Reserved)

7.2.d.25. Meadow River - (Reserved)

7.2.d.26. Cherry River - (Reserved)

7.2.d.27. Cranberry River - (Reserved)

7.2.d.28. Williams River - (Reserved)

7.2.d.29. New River - (Reserved)

7.2.d.30. Greenbrier River - (Reserved)

7.2.d.31. Bluestone River - (Reserved)

7.2.d.32. Bluestone Lake - (Reserved)

7.2.d.33. East River - (Reserved)

7.2.d.34. Guyandotte River - ~~(Reserved)~~

7.2.d.34.1. Pats Branch from its confluence with the Guyandotte River to a point 1000 feet upstream shall not have Water Use Category A and Category D1 designation.

7.2.d.35. Mud River - (Reserved)

7.2.d.36. Big Sandy River - (Reserved)

7.2.d.37. Tug Fork River - (Reserved)

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

8.1. Charts of specific water quality criteria are included in Appendix E, Table 1.

8.1.a. Specific state (i.e. total, total recoverable, dissolved, valence, etc.) of any parameter to be analyzed shall follow 40 CFR 136, Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act, as amended, June 15, 1990 and March 26, 2007. (See also 47 C.S.R. 10, section 7.3 - National Pollutant Discharge Elimination System (NPDES) Program.)

8.1.b. Compliance with aquatic life water quality criteria expressed as dissolved metal shall be determined based on dissolved metals concentrations.

8.1.b.1. The aquatic life criteria for all metals listed in Appendix E, Table 2 shall be converted to a dissolved concentration by multiplying each numerical value or criterion equation from Appendix E, Table 1 by the appropriate conversion factor (CF) from Appendix E, Table 2.

8.1.b.2. Permit limits based on dissolved metal water quality criteria shall be prepared in accordance with the U.S. EPA document "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion, EPA 823-B-96-007 June 1996.

8.1.b.3. NPDES permit applicants may petition the Secretary to develop a site-specific translator consistent with the provisions in this section. The Secretary may, on a case-by-case basis require an applicant applying for a translator to conduct appropriate sediment monitoring through SEM/AVS ratio, bioassay or other approved methods to evaluate effluent limits that prevent toxicity to aquatic life.

8.1.c. An "X" or numerical value in the use columns of Appendix E, Table 1 shall represent the applicable criteria.

8.1.d. Charts of water quality criteria in Appendix E, Table 1 shall be applied in accordance with major stream and use applications, sections 6 and 7, herein.

8.2. Criteria for Toxicants

8.2.a. Toxicants which are carcinogenic

have human health criteria (Water Use Categories A and C) based upon an estimated risk level of one additional cancer case per one million persons (10^{-6}) and are indicated in Appendix E, Table 1 with an endnote ([b]).

8.2.b. A final determination on the critical design flow for carcinogens is not made in this rule, in order to permit further review and study of that issue. Following the conclusion of such review and study, the Legislature may again take up the authorization of this rule for purposes of addressing the critical design flow for carcinogens: Provided, That until such time as the review and study of the issue is concluded or until such time as the Legislature may again take up the authorization of this rule, the regulatory requirements for determining effluent limits for carcinogens shall remain as they were on the date this rule was proposed.

8.3. Criteria for Nutrients in Lakes

8.3.a. This subsection establishes nutrient criteria designed to protect Water Use Categories B and C. The following cool water nutrient criteria shall apply to cool water lakes. (See Appendix F for a representative list.) The following warm water nutrient criteria shall apply to all other lakes with a summer residence time greater than 14 days.

8.3.b. Total phosphorus shall not exceed 50 µg/l for warm water lakes and 30 µg/l for cool water lakes based on an average of four or more samples collected during the period May 1–October 31. In lieu of such sampling, impairment may be evidenced at any time by noncompliance with section 3.2, as determined by the Secretary. Chlorophyll-a shall not exceed 30 µg/l for warm water lakes and 15 µg/l for cool water lakes based on an average of four or more samples collected during the period May 1–October 31. In lieu of such sampling, impairment may be evidenced at any time by noncompliance with section 3.2, as determined by the Secretary.

~~8.3.~~ 8.4. Variances from Specific Water Quality Criteria. A variance from numeric criteria may be granted to a discharger if it can be demonstrated that the conditions outlined in ~~subsections 6.1.b.A — F~~ paragraphs 6.1.b.1 through 6.1.b.6, herein, limit the attainment of one or more specific water quality criteria. Variances shall apply only to the discharger to whom they are granted and shall be reviewed by the Secretary at least every three years. In granting a variance, the requirements for revision of water quality standards in 46 CSR 6 shall be followed.

~~8.4.~~ 8.5. Site-specific numeric criteria. The Secretary may establish numeric criteria different from those set forth in Appendix E, Table 1 for a stream or stream segment upon a demonstration that existing numeric criteria are either over-protective or under-protective of the aquatic life residing in the stream or stream segment. A site-specific numeric criterion will be established only where the numeric criterion will be fully protective of the aquatic life and the existing and designated uses in the stream or stream segment. The site-specific numeric criterion may be established by conducting a Water Effect Ratio study pursuant to the procedures outlined in US EPA's "Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals" (February 1994); other methods may be used with prior approval by the Secretary. In adopting site-specific numeric criteria, the requirements for revision of water quality standards set forth in 46 CSR 6 shall be followed.

§47-2-9. Establishment Of Safe Concentration Values.

When a specific water quality standard has not been established by these rules and there is a discharge or proposed discharge into waters of the State, the use of which has been designated a Category B1, B2, B3 or B4, such discharge may be regulated by the Secretary where necessary to protect State waters through establishment of a safe concentration value as follows:

9.1. Establishment of a safe concentration value shall be based upon data obtained from relevant aquatic field studies, standard bioassay test data which exists in substantial available scientific literature, or data obtained from specific tests utilizing one (1) or more representative important species of aquatic life designated on a case-by-case basis by the Secretary and conducted in a water environment which is equal to or closely approximates that of the natural quality of the receiving waters.

9.2. In those cases where it has been determined that there is insufficient available data to establish a safe concentration value for a pollutant, the safe concentration value shall be determined by applying the appropriate application factor as set forth below to the 96-hour LC 50 value. Except where the Secretary determines, based upon substantial available scientific data that an alternate application factor exists for a pollutant, the following appropriate application factors shall be used in the determination of safe concentration values:

9.2.a. Concentrations of pollutants or combinations of pollutants that are not persistent and not cumulative shall not exceed 0.10 (1/10) of the 96-hour LC 50.

9.2.b. Concentrations of pollutants or combinations of pollutants that are persistent or cumulative shall not exceed 0.01 (1/100) of the 96-hour LC 50.

9.3. Persons seeking issuance of a permit pursuant to these rules authorizing the discharge of a pollutant for which a safe concentration value is to be established using special bioassay tests pursuant to subsection 9.1 of this section shall perform such testing as approved by the Secretary and shall submit all of the following in writing to the Secretary:

9.3.a. A plan proposing the bioassay testing to be performed.

9.3.b. Such periodic progress reports of the testing as may be required by the Secretary.

9.3.c. A report of the completed results of such testing including, but not limited to, all data obtained during the course of testing, and all calculations made in the recording, collection, interpretation and evaluation of such data.

9.4. Bioassay testing shall be conducted in accordance with methodologies outlined in the following documents: U.S. EPA Office of Research and Development Series Publication, Methods for Measuring the Acute Toxicity (EPA/600/4-90/027F, August 1993, 4th Edition) or Short Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/600/4-89/001), March 1989; Standard Methods for the Examination of Water and Wastewater (18th Edition); or ASTM Practice E 729-88 for Conducting Acute Toxicity Tests with Fishes, Macroinvertebrates and Amphibians as published in Volume 11.04 of the 1988 Annual Book of ASTM Standards. Test waters shall be reconstituted according to recommendations and methodologies specified in the previously cited references or methodologies approved in writing by the Secretary.

APPENDIX A
CATEGORY B-2 - TROUT WATERS

This list contains known trout waters and is not intended to exclude any waters which meet the definition in Section ~~2.20~~ 2.19.

River Basin	County	Stream
James River		
J-1-A	Mercer	Ewin Run
J-3	Monroe	Cove Creek
J-1-D	Monroe	North Fork of Potts Creek
J-1-E	Monroe	South Fork Potts Creek
Potomac River		
P-5	"Berkeley	~~Hartland~~Harland Run
P-4-J	"Berkeley	Middle Creek (Above Route 30 Bridge)
P-4-M	"Berkeley	Mill Creek
P-6-B	"Berkeley	Mill Run
P-4	Berkeley	Opequon Creek
P-6-A	"Berkeley	Tillance Creek
P-4-C	"Berkeley	Tuscarora Creek (Above Martinsburg)
P-3	"Jefferson	Rocky Marsh Run
P-2.3	Jefferson	Town Run
P-9-B	Morgan	Meadow Branch
SNF-1	Hardy	Capon Run
~~P~~S-6	"Jefferson	Big Bullskin Run
~~P~~S-2	"Jefferson	Cattail Run
~~P~~S-4	"Jefferson	Evitt's Run
~~P~~S-1	Jefferson	Flowing Springs Run (Above Halltown)
~~P~~S-7	"Jefferson	Long Marsh Run
PC-9	Hampshire	Cold Stream
PC-11	"Hampshire	Dillons Run
PC-10	"Hampshire	Edwards Run ~~and Impoundment~~
PC-17	Hampshire	Hawk Run of Cacapon
PC-24-E-1	"Hardy	Camp Branch
PC-24	Hardy	Lost River
PC-24-H	"Hardy	Lower Cove Run of Lost River
PC-20	"Hardy	Moores Run
PC-7	"Hardy	North River (Above Rio)
PC-23-A-1-(L1)	"Hardy	Rock Cliff Lake (Impoundment)
PC-23-A-1-(L2)	"Hardy	Trout Pond (Impoundment)
PC-23	"Hardy	Trout Run of Cacapon
PC-22	"Hardy	Waites Run
~~PC~~	"	~~Warden Lake (Impoundment)~~
PSB-28-A-1	Grant	Big Run of Jordan Run
PSB-28-E	Grant	High Ridge Run of North Fork
PSB-28-A-2	Grant	Laurel Run of Jordan
PSB-26-E	Grant	North Fork Lunice Creek
PSB-29	Grant	Redman Run
PSB-28-B	Grant	Samuel Run of North Fork
PSB-25-C-2	"Grant	Spring Run of South Mill Creek

River Basin	County	Stream
Potomac River		
PSB-26-D	"Grant	South Fork Lunice Creek
PSB-25-C	"Grant	South Mill Creek (Above Hiser)
PSB-28	Grant-Pendleton	North Fork South Branch
PSB	Grant- "Pendleton	South Branch (Above North Fork)
PSB-9	Hampshire	Mill Creek
PSB-13	"Hampshire	Mill Run of South Branch
PSB-21-F	Hardy	Dumpling ~~Creek~~ Run
PSB-28-EE-2-A	Pendleton	Back Run of Sawmill Branch
PSB-28-EE	"Pendleton	Big Run of North Fork
PSB-28-R	Pendleton	Blizzard Run
PSB-28-S	Pendleton	Brier Gap Run
PSB-32	Pendleton	Briggs Run of South Branch
PSB-28-C	Pendleton	Broad Run of North Fork
PSB-28-K-1	Pendleton	Brushy Run of Seneca Creek
PSB-28-EE-4	Pendleton	Elk Run of Big Run
PSB-21-X	Pendleton	Hawes Run (Impoundment)
PSB-28-K-3	Pendleton	Horsecamp Run of Seneca Creek
PSB-28-GG	"Pendleton	Laurel Fork of North Fork - to VA line
PSB-28-T	Pendleton	Laurel Run of North Fork
PSB-21-GG	"Pendleton	Little Fork
PSB-28-GG-1-B	Pendleton	Little Low Place Hollow of Laurel Fork
PSB-28-K-2-B	Pendleton	Long Run of Roaring Creek
PSB-28-I	Pendleton	Powdermill Run of North
PSB-33	Pendleton	Reeds Creek
PSB-28-K-2	Pendleton	Roaring Creek of Seneca Creek
PSB-21-K	Pendleton	Rough Run of South Branch
PSB-28-GG-1-A	Pendleton	Sams Run of Laurel Fork
PSB-28-EE-2	Pendleton	Sawmill Branch of Big Run
PSB-28-EE-3	Pendleton	Teeter Camp Run
PSB-28-K	"Pendleton	~~Senena~~ Seneca Creek
PSB-28-K-4	Pendleton	Strader Run of Seneca Creek
PSB-47	Pendleton	Thorn Creek
PSB-28-K-6-B	Pendleton	Upper Gulf Run of Whites Run
PSB-28-GG-1	Pendleton	Vance Run of Laurel Fork
PSB-28-K-3-B	Pendleton	Wamsley Run
PSB-28-K-6	Pendleton	Whites Run of Seneca Creek
PSB-21-I-1	Pendleton	Wilson Run of Kettle Creek
PNB-18	Grant	Difficult Creek of North Branch
PNB-17	Grant	Stony River Upstream of Mount Storm Lake
PNB-23	Grant	Wilsonia Run of North Branch
PNB-16-B-1	Grant	Wycroff Run of Abrams Creek
PNB-15-A	Mineral	Cranberry Run of Deep Creek Run
PNB-15	Mineral	Deep Run of North Branch
~~PNB~~	"	~~Fort Ashby (Impoundment)~~
PNB-14	Mineral	Howell Run of North Branch
PNB-4-S	"Mineral	Mill Creek (Above Markwood)
PNB-7	"Mineral	New Creek
PNB-7-H-(L1)	"Mineral	New Creek Dam 14 (Impoundment)
PNB-4-EE	Mineral	North Fork Patterson Creek
PNB	Pendleton	North Branch of Potomac
PNB-16-B	Grant	Johnnycake Run of Wycroff Run

River Basin	County	Stream
Ohio River		
O-98-A	Hancock	North Fork of Kings Creek
O-88-D-2	Ohio	Middle Wheeling Creek
Monongahela River		
M-16	Monongalia-Marion	Whiteday Creek (Above Smithtown)
MC-2-0.5A	"Monongalia	Blaney Hollow
MC-6-(L1)	"Monongalia	Coopers Rock (Impoundment)
MC-2	Monongalia	Morgan Run
MCS-56	Pocahontas	Oats Run of Shavers Fork
MC-12	Preston	Big Sandy
MC-33	"Preston	Buffalo Creek
MC-12-B-5	Preston	Cherry Run of Little Sandy
MC-20	"Preston	Elsey Run
MC-33-A	Preston	Flag Run of Buffalo Creek
MC-12-A	Preston	Laurel Run of Big Sandy
MC-12-B	Preston	Little Sandy
MC-12-B-6	Preston	Mill Run of Little Sandy
MC-17	Preston	Muddy Creek
MC-12-B-4.5	Preston	Piney Run of Little Sandy
~~MT~~ MC-18	Preston	Roaring Creek (Above Little Lick Branch)
MC-32	"Preston	Saltlick Creek
MC-36	"Preston	Wolf Creek
MC-41	Preston-Tucker	Long Run
MC-54-K	Preston-Tucker	Twelvemile Run of Clover
MC-60-K-6	Randolph	Baker Camp Run
MC-60-T-8	Randolph	Big Run of Gandy
MC-60-T-13	Randolph	Big Run of Gandy (above the sinks)
MC-60-O-1	Randolph	Big Run of Red Creek
MC-60-N-10	Randolph	Camp Five Run
MC-60-K-14	Randolph	Daniels Creek
MC-60-T-10.5	Randolph	Devers Run of Gandy
MC-60	"Randolph	Dry Fork (Above Otter Creek)
MC-60-K-17	"Randolph	East Fork Glady Fork (Above C & P Compressor Station)
MC-60-K-4	Randolph	Five Lick
MC-60-O-2	Randolph	Flatrock Run
MC-60-T-(S)	"Randolph	Gandy Creek ~~(Above Whitmer)~~
MC-60-K	"Randolph	Glady Fork
MC-60-T-9	Randolph	Grants Branch
MC-60-Q	Randolph	Horsecamp Run
MC-60-N	"Randolph	Laurel Fork
MC-60-T-1	Randolph	Lower Two Spring Run
MC-60-K-11	Randolph	McCray Creek
MC-60-T-10	Randolph	Narrow Ridge Run
MC-60-K-2	Randolph	Panther Camp Run
MC-60-T-10-(L1)	"Randolph	Spruce Knob Lake (Impoundment)
MC-60-P	Randolph	Spruce Run
MC-60-T-3	Randolph	Swallow Rock Run
MC-60-T-6	Randolph	Taylor Run
MC-60-K-1	"Randolph	Three Spring Run
MC-60-R	Randolph	Tory Camp Run
MC-60-T-2	Randolph	Upper Two Spring Run

River Basin	County	Stream
Monongahela River		
MC-60-T-11	Randolph	Warner Run
MC-60-K-16	Randolph	West Fork of Glady - exclude lower 2 miles
MC-60-K-5	Randolph	Woodford Run
MCS	Randolph-Pocahontas	Shavers Fork (Above Little Black Fork)
MC-60-K-17-0.5A	Randolph	White Run of East Fork of Glady
MC-60-L	Tucker	Big Run of Dry Fork
~~MC~~	"	~~Blackwater River (Above Davis)~~
MC-60-D	"Tucker	Blackwater River ~~(Below Davis)~~
MCS-7.5	Tucker	Canoe Run
MC-51	Tucker	Clover Run
MC-55	Tucker	Dry Run
MC-60-C	"Tucker	Elklick Run of Black Fork
MC-60-J	Tucker	Elklick Run of Dry Fork
MC-60-O-3	Tucker	Gandy Run of Red Creek
MC-54-D	Tucker	Hyle Run of Horseshoe Run
MC-51-B-5	Tucker	Indian Run
MC-54-I	Tucker	Leadmine Run of Horseshoe Run
MC-51-B	Tucker	Left Fork of Clover Run
MC-54-E	Tucker	Lick Drain
MC-54-G	Tucker	Lynn Run
MC-54-C	"Tucker	Maxwell Run of Horseshoe
MC-54-A	Tucker	Mike Run of Horseshoe
MC-56	Tucker	Mill Run of Cheat River
MC-60-I	Tucker	Mill Run of Dry Fork
MC-51-B-2	Tucker	Mill Run of Left Fork of Clover
MC-52	Tucker	Minear Run of Cheat
MC-60-O	"Tucker	Red Creek
MC-60-G	Tucker	Red Run
MC-46-B	Tucker	Right Fork of Bull Run
MC-51-A	Tucker	Right Fork of Clover Run
MC-60-D-10	Tucker	Sand Run
MC-56-B	"Tucker	Slip Hill Mill Branch
MC-60-D-3-(L1)	"Tucker	Thomas Park (Impoundment)
MC-54-H	Tucker	Thunderstruck Run of Horseshoe
MC-45	Tucker	Tobes Run
MC-60-K-0.5	Tucker	Two Spring Run of Glady Fork
MC-51-B-4	Tucker	Valley Fork
MC-57	Tucker	Wolf Run of Cheat River
MC-60-D-11	Tucker	Yoakum Run
MC-54	"Tucker-Preston	Horseshoe Run (Headwaters) to Leadmine
MCS-54	Pocahontas	Second Fork
MCS-53	Randolph	Beaver Creek
MCS-57	Randolph	Black Run
MCS-47	Randolph	Blister Run
MCS-14	Randolph	Clifton Run
MCS-50	Randolph	First Fork
MCS-48	Randolph	Fish Hatchery Run
MCS-33	Randolph	Fishing Hawk Creek
MCS-43	Randolph	Glade Run
MCS-16	Randolph	Johns Run
MCS-49	Randolph	Lambert Run

River Basin	County	Stream
Monongahela River		
MCS-13	Randolph	Little Black Fork
MCS-12	Randolph	Little Laurel Run
MCS-9	Randolph	Nail Run
MCS-15	Randolph	Rattlesnake Run
MCS-46	Randolph	Red Run of Shavers Fork
MCS-22-A	Randolph	Stalnaker Run
MCS-22	Randolph	Taylor Run
MCS-44	Randolph	Whitmeadow Run
MCS-40	Randolph	Yokum Run
MCS-4	Tucker	Jobs Run
MCS-5	Tucker	Laurel Run of Shavers Fork
MCS-3-A	Tucker	South Branch of Haddix Run
MCS-6-B	Tucker	Aarons Run
MCS-7	Tucker	Stonelick Run
~~MW~~	~~Harrison~~	~~Dog Run (Pond)~~
MW-38-(L1)	Lewis	Stonecoal Lake
MT-23-C	Barbour	Brushy Fork (Above Valley Furnace)
MT-23-F	"Barbour	Mill Run
MT-23-H	Barbour	Mill Run of Teter Creek
~~MT~~	"	~~Teter Creek Lake (Impoundment)~~
MT-38	Barbour	Zebs Creek
MT-12-G-3	Preston	Boyds Run
MT-12-G	Preston	Fields Creek
MT-18-E-4-B	Preston	Frog Run
MT-12-D	Preston-Taylor-Monongalia	Laurel Run of Threeforks
MT-66-C	Randolph	Back Fork of Riffle Creek
MT-47	Randolph	Beaver Creek
MT-50-A	Randolph	Right Fork Files Creek
MT-68	Randolph	Becky Creek from secondary Rt 56 bridge upstream
MT-68-A	Randolph	Big Branch of Becky Creek
MT-81	"Randolph	Big Run of Tygart
MT-73	Randolph	Clay Run
MT-77	Randolph	Conley Run
MT-74	"Randolph	Elkwater Fork above Mowry Run
MT-50	Randolph	Files Creek (Rt. FK-MT-50-A) from compressor station upstream
MT-64-C	Randolph	Glade Run
MT-72	Randolph	Hamilton Run
MT-50-B	Randolph	Left Fork of Files Creek
MT-50-A-1	Randolph	Limekiln Run
MT-74-B	Randolph	Limekiln Run of Elkwater
MT-80	Randolph	Logan Run
MT-44	Randolph	Mathais Run
MT-66-B	Randolph	McGee Run
MT-64-E	Randolph	Meatbox Run
MT-64	Randolph	Mill Creek upstream at end of Co. Rt. 46/4
MT-50-A-2	Randolph	Millstone Run Right Fork of Files Creek
MT-74-A	Randolph	Mowry Run
MT-64-F	Randolph	Potatohole Fork
MT-67	Randolph	Rafe Run
MT-78	Randolph	Ralston Run

River Basin	County	Stream
Monongahela River		
MT-66	Randolph	Riffle Creek - above McGee Run
MT-45-C	Randolph	Right Fork of Chenoweth Creek
MT-61	Randolph	Shavers Run
MT-75	Randolph	Stewart Run
MT	Randolph	Tygart River (Above Huttonsville)
MT-79	Randolph	Windy Run
MT-(T1)	Taylor-Barbour	Tygart Lake Tailwaters (Above Route 119 Bridge)
MTB-32-H	Randolph	Beech Run
MTB-31-I	Randolph	Devil Fork
MTB-31-C	Upshur	Alec Run
MTB-28	Upshur	Big Run of Buckhannon (Above DLM drain)
MTB	Upshur	Buckhannon River (Above Beans Mill)
MTB-18	Upshur	French Creek
MTB-32-E	Upshur	Lick Run
MTB-31-D	Upshur	Millsite Run
MTB-27	Upshur	Panther Fork (headwaters) - from 2 miles above Co. Rt. 32
MTB-31-B	Upshur	Reger Run
MTB-25-A	Upshur	Right Fork of Tenmile Creek - except lower ½ mile
MTB-32-D	Upshur-Randolph	Bearcamp Run
MTB-32	Upshur-Randolph	Left Fork Buckhannon
MTB-31-F	Upshur-Randolph	Left Fork Right Fork
MTB-31	Upshur-Randolph-Lewis	Right Fork Buckhannon River
MTM-26	Randolph	Birch Fork of Middle Fork
MTM-16	Randolph	Cassity Fork (Upper) - above Mulberry Run
MTM-28	Randolph	Kittle Creek
MTM-23	Randolph	Laurel Branch
MTM-22	Randolph	Laurel Run of Middle Fork
MTM-13	Randolph	Long Run
MTM	Randolph	Middle Fork River (Above Cassity)
MTM-27	Randolph	Mitchell Lick Fork
MTM-16-A	Randolph	Panther Run of Cassity Fork (Upper) except lower 1/4 mile
MTM-21	Randolph	Pleasants Run
MTM-26-B	Randolph	Rocky Run of Birch Fork
MTM-25	Randolph	Schoolcraft Run
MTM-24-A	Randolph	Spice Run
MTM-24	Randolph	Sugar Run
MTM-11-E	Upshur	Jenks Fork
~~MTN~~ MTM-11	Upshur	Right Fork Middle Fork River
MTM-11-D	Upshur-Randolph	Jackson Fork
MY-5	Preston	Maple Run
MY-4	Preston	Rhine Creek
MY-2	Preston	Snowy Creek
MY	Preston	Youghiogheny River
Little Kanawha River		
LK-131	Upshur	Getout Run
LK-115-H	Upshur	Left Fork-Right Fork (Little Kanawha River)
LK	Upshur-Lewis	Little Kanawha River (Above Wildcat)

River Basin	County	Stream
Kanawha River		
K-80	Fayette	Falls Creek
K-76	Fayette	Loop Creek
K-65-H	Fayette	Ash Branch
K-76-M	Fayette	Open Fork
K-65	Fayette	Paint Creek(Pax to Burnwell)
K-76-N-1	Fayette	Taylor Branch
KC-31-B	Boone	Hopkins Fork
KC-47	Raleigh	Clear Fork
KC-46	"Raleigh	Marsh Fork (Above Sundial)
KC-46-Q-1-(L1)	Raleigh	Stephens Lake (Impoundment)
KE-102-A	Braxton	Camp Creek (Centralia)
~~KE~~	"	~~Sutton Lake Tailwaters (Above Route 38/5 Bridge)~~
~~KE~~	~~Braxton~~	~~Sutton Reservoir~~
KE-91	Braxton	Wolf Creek (Centralia)
KE-43	Clay	Blue Knob Creek
KE-69	Clay	Groves Creek
KE-50-1	Clay	Rockcamp Run
KE-74	Clay	Strange Creek
KE-76-Q	Nicholas	Poplar Creek
KE-76-L-5	Nicholas	Tug Fork
KE-135	Pocahontas	Big Run of Elk
KE-138	Pocahontas	Big Spring Fork
KE-139-B	Pocahontas	Crooked Fork
KE-138-B	Pocahontas	Cup Run
KE-133	Pocahontas	Dry Fork
KE-137	Pocahontas	Laurel Run of Elk
KE-136	Pocahontas	Props Run
KE-139-0.5A	Pocahontas	Slaty Fork
KE-130	Randolph	Chimney Rock Run
KE-129	Randolph	Valley Fork
KE-117-B	Randolph-Webster	Right Fork of Leatherwood
KE-111	Webster	Back Fork of Elk
KE-127	Webster	Big Run of Elk
KE-98-B-16	"Webster	Desert Fork (Headwaters) above Roaring Run
KE	"Webster	Elk River (Above Webster Springs)
KE-98-C-14	"Webster	Fall Run
KE-102	Webster	Laurel Creek (Erbacon)
KE-98-C-11	"Webster	Laurel Fork of Left Fork of Holly
KE-98-C	"Webster	Left Fork Holly River
KE-111-K-2	Webster	Little Sugar Creek
KE-111-K	"Webster	Sugar Creek (Headwaters) above Little Sugar
KE-118	Webster-Randolph	Bergoo Creek
KG-19-J	Fayette	Brackens Creek
KG-19-A	Fayette	Dogwood Creek
KG-19-E	Fayette	Glade Creek
KG-6	Fayette	Rich Creek
KG-19-O.7	Fayette	Surbaugh Creek

River Basin	County	Stream
Kanawha River		
KG-34-H-14	Greenbrier	Bear Run
KG-34-G-8	Greenbrier	Becky Run
KG-34-E-8	Greenbrier	Beech Run
KG-19-U	Greenbrier	Big Clear Creek
KG-34-G-13	Greenbrier	Big Run of South Fork of Cherry
KG-34-G-2	Greenbrier	Briery Run
KG-19-U-1	Greenbrier	Brown Creek
KG-34-H-5	Greenbrier	Coats Run
KG-34-G-10	Greenbrier	Cold Knob Fork
KG-34-E-13	Greenbrier	Cold Spring Branch
KG-34-G-5	Greenbrier	Elklick Run
KG-34-E-9	Greenbrier	Hogcamp Run
KG-34-F-2	Greenbrier	Improvement Branch
KG-19-U-2-D	Greenbrier	Job Knob Branch
KG-19-V-7	Greenbrier	Kuhn Branch
KG-19-V	"Greenbrier	Little Clear Creek ~~and Laurel Run~~
KG-19-V-5	Greenbrier	Laurel Creek
~~KG~~KNG-28-P	"Greenbrier	Meadow Creek
KG-34-E-11	Greenbrier	Middle Branch
KG-19-U-2-C	Greenbrier	Old Field Branch
KG-34-G-6	Greenbrier	Rocky Run
KG-19-U-3	Greenbrier	Sam Creek
KG-34-H-5-(L1)	Greenbrier	Summit Lake
KG-34-E	Greenbrier-Nicholas	Laurel Creek
KG-34-H	"Greenbrier-Nicholas	North Fork Cherry River
KG-34-G	Greenbrier-Nicholas	South Fork Cherry River
KG-19-G	"Nicholas	Anglins Creek (Headwaters) - 41/9 bridge upstream
KG-26-K	Nicholas	Brushy Fork
KG-24-E-2	Nicholas	Brushy Meadow Creek
KG-34	Nicholas	Cherry River
KG-20	Nicholas	Collison Creek
KG-32-J	Nicholas	Cranenest Run
KG-24-B	Nicholas	Deer Creek
KG-24-E	Nicholas	Grassy Creek
KG-24	Nicholas	Hominy Creek
KG-32	Nicholas	Panther Creek
KG-13	Nicholas	Peters Creek
KG-24-H.8	Nicholas	Price Fork
KG-(L1)	Nicholas	Summersville Reservoir (Impoundment)
KG-(T)	"Nicholas	Summersville Tailwaters (Above Collison Creek)
KG-34-F	Nicholas-Greenbrier	Little Laurel Creek
KG-34-H-4	Nicholas-Randolph	Hunters Run
KG-34-H-17	Pocahontas	Darnell Run of North Fork of Cherry
KG-72	Randolph-Pocahontas	Middle Fork of Gauley
KG-73	Randolph-Pocahontas	North Fork of Gauley
KG	Randolph-Webster	Gauley River (Above Moust Coal Tipple)
KG-45	Webster	Big Laurel Creek
KG-59	Webster	Big Run of Gauley
KG-70	Webster	Big Run of Gauley
KG-61	Webster	Hughes Run
KG-58	Webster	Laurel Creek of Gauley
KG-57	Webster	Miller Mill Run

River Basin	County	Stream
Kanawha River		
KG-60-A	Webster	Right Fork of Turkey Creek of Gauley
KG-67	Webster	Straight Creek of Gauley
KG-60	Webster	Turkey Creek
KG-65	Webster	Williams Camp Run
KGC-3	Nicholas	Jakeman Run
KGC-4-A	Nicholas	Little Barrenshe
KGC-4	Pocahontas	Barrenshe Run
KGC-24	Pocahontas	North Fork of Cranberry (Only the Catch & Release Area)
KGC-23-C	Pocahontas	Red Run of South Fork of Cranberry
KGC-23	Pocahontas	South Fork Cranberry River
KGC	Pocahontas-Webster-Nicholas	Cranberry River
KGC-19	Randolph	Dogway Fork
KGC-9	Webster	Aldrich Run
KGC-8	Webster	Foxtree Run
KGC-15	Webster	Hanging Rock Branch
KGC-7	Webster-Nicholas	Bee Run
KGW-26	Pocahontas	Black Mountain Run
KGW-25	Pocahontas	Day Run
KGW-20-A	Pocahontas	Lick Creek
KGW-22	Pocahontas	Little Laurel Creek
KGW-27	Pocahontas	Mountain Lick Run
KGW-21	Pocahontas	Sugar Creek
KGW-20	Pocahontas	Tea Creek
KGW-10	Pocahontas-Webster	Middle Fork of Williams
KGW	Pocahontas-Webster	Williams River ~~(Above Dyer)~~
KGW-1	Webster	Craig Run
KGW-2	Webster	Jonathan Run
KGW-9	Webster	Lick Branch
KGW-3	Webster	Sawyer Run
KGW-4	Webster	Spice Run
KGW-8	Webster	White Oak Fork
KN-23	Fayette	Buffalo Creek
KN-27-C	Fayette	Chestnut Knob Fork of Laurel
KN-22	Fayette	Dunloup Creek ~~(Downstream from Harvey Sewage Treatment Plant)~~
KN-17-A	Fayette	Glade Creek of Manns
KN-27	"Fayette	Laurel Creek ~~(Above Cotton Hill)~~ of New River
KN-7	Fayette	Mill Creek
~~KG~~ KN-10	Fayette	Wolf Creek
KN-60	Mercer	East River (Above Kelleysville)
KN-60-B	"Mercer	Pigeon Creek
KN-51-H-(S)	Monroe	Laurel Creek
KN-61	Monroe	Rich Creek
KN-51-O	"Monroe	Turkey Creek
KN-26-F	Raleigh	Beaver Creek
KN-26-B	Raleigh	Fat Creek
KN-29	Raleigh	Glade Creek of New River
KN-29-E	Raleigh	Pinch Creek
KN-26	Raleigh	Piney Creek
KN-32	Summers	Meadow Creek

River Basin	County	Stream
Kanawha River		
KNB-13	"Mercer	Camp Creek
KNB-30	Mercer	Crane Creek
KNB-12-B	Mercer	Laurel Creek (Bluestone)
KNB-13-D-1	Mercer	Marsh Fork
KNB-3	Summers	Little Bluestone River
KNG-28	"Greenbrier	Anthony Creek (Above Big Draft)
KNG-30-0.5A-1-A	Greenbrier	Burns Run
KNG-30-0.5A-1-(S)	Greenbrier	Culverson Creek
KNG-22-E-1-B	Greenbrier	Flynn Creek
KNG-22-E-1-A-(S)	Greenbrier	Hughart Creek
KNG-22.7-A-1-(S)	"Greenbrier	Milligan Creek
KNG-28-P	Greenbrier	North Fork Anthony Creek
KNG-30-0.5A-1-C-1-(S)	Greenbrier	Roaring Creek
KNG-30	"Greenbrier	Spring Creek
KNG-28-P-2	Greenbrier	Twomile Run
KNG-23	Greenbrier-Monroe	Second Creek (Rt. 219 Bridge to Nickell's Mill)
KNG-23-G	Monroe	Kitchen Creek (Above Gap Mills)
KNG-78-L	"Pocahontas	Abes Run
KNG-53-G	Pocahontas	Barclay Run
KNG-47	"Pocahontas	Beaver Creek
KNG-68-A-5	Pocahontas	Black Run
KNG-78-C-1-(L1)	"Pocahontas	Buffalo Fork (Impoundment)
KNG-79-C-2	Pocahontas	Clubhouse Run
KNG-68	"Pocahontas	Deer Creek
KNG-53-H	Pocahontas	Douthat Creek
KNG-78	Pocahontas	East Fork of Greenbrier
KNG-68-A-6	Pocahontas	Elleber Run
KNG-79-B	Pocahontas	Fill Run
KNG-78-G	"Pocahontas	Five Mile Run
KNG	"Pocahontas	Greenbrier River (Above Hosterman)
KNG-68-A-6-A	Pocahontas	Griffin Run
KNG-30-0.7A-1-(S)	"Pocahontas	Hills Creek
KNG-78-A	Pocahontas	Johns Run
KNG-53	"Pocahontas	Knapp's Creek
KNG-60	Pocahontas	Laurel Run of Greenbrier
KNG-70	Pocahontas	Leatherbark Run
KNG-78-C	"Pocahontas	Little River-East Fork
KNG-79-C	"Pocahontas	Little River-West Fork
KNG-38	Pocahontas	Locust Creek
KNG-78-H-1	Pocahontas	Long Run
KNG-78-K	"Pocahontas	Mullenax Run
KNG-68-A	"Pocahontas	North Fork Deer Creek ~~(Above Route 28/5)~~ FS bridge below Sutton Run to head
KNG-78-H	Pocahontas	Poca Run
KNG-59-D-(L1)	"Pocahontas	Seneca (Impoundment)
KNG-66-D	Pocahontas	Shock Run
KNG-66	"Pocahontas	Sitlington Creek
KNG-79-C-1	Pocahontas	Spanoak
KNG-55	"Pocahontas	Stoney Creek
KNG-68-A-3	Pocahontas	Sutton Run of North Fork of Deer Creek
KNG-49	"Pocahontas	Swago Creek

River Basin	County	Stream
Kanawha River		
KNG-68-A-4	Pocahontas	Tacker Fork
KNG-59	Pocahontas	Thorny Creek
KNG-74	Pocahontas	Trout Run of Greenbrier
KNG-43-(L1)	Pocahontas	Watoga Lake
KNG-79	"Pocahontas	West Fork Greenbrier ~~(Above the impoundment at the tannery)~~
OG-124	Wyoming	Pinnacle Creek ~~creek~~
OG-131	Wyoming	Barker's Creek
OG-137	Wyoming	Devil's Fork
OG-131-F	Wyoming	Gooney Otter Creek
OG-134	Wyoming	Slab Fork
OG-139	Wyoming	Stonecoal Creek
OG-138	Wyoming	Winding Gulf
Tug Fork of Big Sandy River		
BST-70	McDowell	Dry Fork ~~(Above Canebrake)~~ of Tug
BST-99	McDowell	Elkhorn Creek
BST-70-W	McDowell	Jacob Fork

APPENDIX B

This list contains known waters used as public water supplies and is not intended to exclude any waters as described in section 6.2, herein.

River Basin	County	Operating Company	Source
Shenandoah River			
S	Jefferson	Charlestown Water	Shenandoah River
Potomac River			
P	Jefferson	3-M Company	Turkey Run
P	"	Shepherdstown Water	Potomac River
P	"	Harpers Ferry Water	Elk Run
P	Berkeley	DuPont Potomac River Works	Potomac River
P	"	Berkeley County PSD	Le Feure Spring
P		Opequon PSD	Quarry Spring
P	"	Hedgesville PSD	Speck Spring
P	Morgan	Paw Paw Water	Potomac River
PSB	Hampshire	Romney Water	South Branch Potomac River
PSB	"	Peterkin Conference Center	Mill Run
PSB	Hardy	Moorefield Municipal Water	South Fork River
PSB	Pendleton	U.S. Naval Radio Sta.	South Fork River
PSB	"	Circleville Water Inc.	North Fork of South Branch, Potomac River
PSB	Grant	Mountain Top PSD	Mill Creek, Impoundment
PSB	"	Petersburg Municipal Water	South Branch, Potomac River
PNB	Grant	Island Creek Coal	Impoundment
PNB	Mineral	Piedmont Municipal Water	Savage River, Maryland
PNB	"	Keyser Water	New Creek
PNB	"	Fort Ashby PSD	Lake
Monongahela River			
M	Monongalia	Morgantown Water Comm.	Colburn Creek & Monongahela River
M	"	Morgantown Ordinance Works	Monongahela River
M	Preston	Preston County PSD	Deckers Creek
M	Monongalia	Blacksville # 1 Mine	Impoundment
M	"	Loveridge Mine	Impoundment
M	"	Consolidation Coal Co.	Impoundment
M	Preston	Mason Town Water	Block Run
MC	Preston	Fibair Inc.	Impoundment
MC	Monongalia	Cheat Neck PSD	Cheat Lake
MC	"	Lakeview County Club	Cheat Lake-Lake Lynn
MC	"	Union Districk PSD	Cheat Lake-Lake Lynn
MC	"	Cooper's Rock State Park	Impoundment

River Basin	County	Operating Company	Source
Monongahela River			
MC	Preston	Kingwood Water	Cheat River
MC	Preston	Hopemount State Hosp.	Snowy Creek
MC	"	Rowlesburg Water	Keyser Run & Cheat River
MC	"	Albright	Cheat River
MC	Tucker	Parsons Water	Shavers & Elk Lick Fork
MC	"	Thomas Municipal	Thomas Reservoir
MC	"	Hamrick PSD	Dry Fork
MC	"	Douglas Water System	Long Run
MC	"	Davis Water	Blackwater River
MC	"	Hambleton Water System	Roaring Creek
MC	"	Canaan Valley State Park	Blackwater River
MC	Pocahontas	Cheat Mt. Sewer	Shavers Lake
MC	"	Snowshoe Co. Water	Shavers Fork
MC	Randolph	Womelsdorf Water	Yokum Run
MW	Harrison	Lumberport Water	Jones Run
MW	"	Clarksburg Water Bd.	West Fork River
MW	"	Bridgeport Mun. Water	Deecons & Hinkle Creek
MW	"	Salem Water Board	Dog Run
MW	"	West Milford Water	West Fork River
MW	Lewis	W.V. Water-Weston District	West Fork River
MW	"	Jackson's Mill Camp	Impoundment
MW	"	West Fork River PSD	West Fork River
MW	"	Kennedy Compresssor Station	West Fork River
MW	"	Jane Lew Water Comm.	Hackers Creek
MW	Harrison	Bel-Meadow Country Club	Lake
MW	"	Harrison Power Station	West Fork River
MW	"	Oakdale Portal	Impoundment
MW	"	Robinson Port	Impoundment
MT	Marion	Fairmont Water Comm.	Tygart River
MT	"	Mannington Water	Impoundment
MT	"	Monongah Water Works	Tygart River
MT	"	Eastern Assoc.	Coal Corp Impoundment
MT	"	Four States Water	Impoundment
MT	Harrison	Shinnston Water Dept.	Tygart River
MT	Taylor	Grafton Water	Tygart River-Lake
MT	Barbour	Phillippi Water	Tygart River
MT	"	Bethlehem Mines Corp.	Impoundment
MT	"	Belington Water Works	Tygart River & Mill Run Lake
MT	Randolph	Elkins Municipal Water	Tygart River
MT	"	Beverly Water	Tygart River
MT	"	Valley Water	Tygart River
MT	"	Huttonsville Medium Security Prison	Tygart River
MT	"	Mill Creek Water	Mill Creek
MTB	Upshur	Buckhannon Water Board	Buckhannon River

River Basin		County	Operating Company	Source
Ohio River				
O	Zone 1	Hancock	Chester Water & Sewer	Ohio River
O	"	Brooke	City of Weirton	Ohio River
O	Zone 1	Brooke	Weirton Steel Division	Ohio River
O	"	Ohio	Wheeling Water	Ohio River
O	"	Tyler	Sistersville Mun. Water	Ohio River
O	"	Pleasants	Pleasants Power Station	Ohio River
O	"	Cabell	Huntington Water Corp.	Ohio River
O	"	Marshall	Mobay Chemical Co.	Ohio River
O	"	Wood	E. I. DuPont	Ohio River
O	Zone 2	Marshall	Meron Water	Glass House Hollow
O	"	"	New Urindahana Water	Wheeling Creek System
O	"	Wetzel	Pine Grove Water	North Fork, Fishing Creek
O	"	Marshall	Consolidated Coal Co.	Impoundment
O	"	Tyler	Middlebourne Water	Middle Island Creek
O	"	Doddridge	West Union Mun. Water	Middle Island Creek
O	"	Mason	Hidden Valley Country	Lake/Impoundment
O	"	Jackson	Ripley Water	Mill Creek
O	"	Wayne	Wayne Municipal Water	Twelve Pole Creek
O	"	"	East Lynn Lake	East Lynn Lake
O	"	"	Monterey Coal Co.	Impoundment
Little Kanawha				
	LK	Wood	Claywood Park PSD	Little Kanawha River
	LK	Calhoun	Grantsville Mun. Water	Little Kanawha River
	LK	Gilmer	Glenville Utility	Little Kanawha River
	LK	"	Consolidated Gas Compressor	Steer Creek
	LK	Braxton	Burnsville Water Works	Little Kanawha River
	LK	Roane	Spencer Water	Spring Creek Mile Tree Reservoir
	LK	Wirt	Elizabeth Water	Little Kanawha River
	LKH	Ritchie	Cairo Water	North Fork Hughes River
	LKH	"	Harrisville Water	North Fork Hughes River
	LKH	"	Pennsboro Water	North Fork Hughes River
Kanawha River				
	K	Putnam	Buffalo Water	Cross Creek
	K	"	Winfield Water	Poplar Fork & Crooked Creek
	K	"	South Putnam PSD	Poplar Fork & Crooked Creek
	K	Kanawha	Cedar Grove Water	Kanawha River
	K	"	Pratt Water	Kanawha River
	K	Fayette	Armstrong PSD PO-K1-CO-EL	Kanawha River & Gum Hollow
	K	"	Kanawha Water Co.-	Unnamed Tributary Kanawha Beards Fork

River Basin	County	Operating Company	Source
Kanawha River			
K	Kanawha	Midland Trail School	Impoundment
K	"	Cedar Coal Co.	Impoundment
K	Fayette	Elkem Metals Co.	Kanawha River
K	Fayette	Deepwater PSD	Kanawha River
K	"	Kanawha Falls PSD	Kanawha River
K	"	W.V. Water-Montgomery	Kanawha River
Pocatalico River			
KP	Kanawha	Sissonville PSD	Pocatalico River
KP	Roane	Walton PSD	Silcott Fork Dam
Coal River			
KC	Kanawha	St. Albans Water	Coal River
KC	"	Washington PSD	Coal River
KC	Lincoln	Lincoln PSD	Coal River
KC	Boone	Coal River PSD	Coal River
KC	"	Whitesville PSD	Coal River
KC	Raleigh	Armco Mine 10	Marsh Fork
KC	"	Armco Steel-Montc. Stickney	Coal River
KC	Raleigh	Peabody Coal	Coal River
KC	"	Stephens Lake Park	Lake Stephens
KC	Boone	W.V. Water-Madison Dist.	Little Coal River
KC	"	Van PSD	Pond Fork
KC	Raleigh	Consol. Coal Co.	Workmans Creek
KC	Boone	Water Ways Park	Coal River
Elk River			
KE	Kanawha	Clendenin Water	Elk River
KE	"	W.V. Water-Kanawha Valley District	Elk River
KE	Kanawha	Pinch PSD	Elk River
KE	Clay	Clay Waterworks	Elk River
KE	"	Procious PSD	Elk River
KE	Braxton	Flatwoods-Canoe Run PSD	Elk River
KE	"	Sugar Creek PSD	Elk River
KE	"	W.V. Water-Gassaway Dist.	Elk River
KE	"	W.V. Water-Sutton Dist.	Elk River
KE	Webster	W.V. Water-Webster Springs	Elk River
KE		Holly River State Park	Holly River
Gauley River			
KG	Nicholas	Craigsville PSD	Gauley River
KG	"	Summersville Water	Impoundment/ Muddlety Creek
KG	"	Nettie-Leivasy PSD	Jim Branch
KG	Webster	Cowen PSD	Gauley River
KG	Nicholas	Wilderness PSD	Anglins Creek & Meadow River
KG	"	Richwood Water	North Fork Cherry River

River Basin	County	Operating Company	Source
New River			
KN	Fayette	Ames Heights Water	Mill Creek
KN	"	Mt. Hope Water	Impounded Mine (Surface)
KN	Fayette	Ansted Municipal Water	Mill Creek
KN	"	Fayette Co. Park	Impoundment
KN	"	New River Gorge Campground	Impoundment
KN	"	Fayetteville Water	Wolfe Creek
KN	Raleigh	Beckley Water	Glade Creek
KN	"	Westmoreland Coal Co.	Farley Branch
Bluestone River			
KNB	Summers	Jumping Branch-Nimitz	Mt. Valley Lake
KNB	"	Bluestone Conf. Center	Bluestone Lake
KNB	"	Pipestem State Park	Impoundment
KNB	Mercer	Town of Athens	Impoundment
KNB	"	Bluewell PSD	Impoundment
KNB	"	Bramwell Water	Impoundment
KNB	"	Green Valley-Glenwood PSD	Bailey Reservoir
KNB	"	Kelly's Tank	Spring
KNB	"	W.V. Water Princeton	Impoundment/ Brusch Creek
KNB	"	Lashmeet PSD	Impoundment
KNB	"	Pinnacle Water Assoc.	Mine
KNB	"	W.V. Water Bluefield	Impoundment
Greenbrier River			
KNG	Summers	W.V. Water Hinton	Greenbrier River & New River
KNG	"	Big Bend PSD	Greenbrier River
KNG	Greenbrier	Alderson Water Dept.	Greenbrier River
KNG	"	Ronceverte Water	Greenbrier River
KNG	"	Lewisburg Water	Greenbrier River
KNG	Pocahontas	Denmar State Hospital Water	Greenbrier River
KNG	"	City of Marlinton Water	Knapp Creek
KNG	"	Cass Scenic Railroad	Leatherbark Creek
KNG	"	Upper Greenbrier PSD	Greenbrier River
KNG	"	The Hermitage	Greenbrier River
Guyandotte River			
OG	Cabell	Salt Rock PSD	Guyandotte River
OG	Lincoln	West Hamlin Water	Guyandotte River
OG	Logan	Logan Water Board	Guyandotte River
OG	"	Man Water Works	Guyandotte River
OG	"	Buffalo Creek PSD	Buffalo Creek/ Mine/Wells
OG	Logan	Chapmanville	Guyandotte River
OG	"	Logan PSD	Whitman Creek/ Guyandotte River
OG	Mingo	Gilbert Water	Guyandotte River
OG	Wyoming	Oceana Water	Laurel Fork
OG	"	Glen Rogers PSD	Impoundment

River Basin	County	Operating Company	Source
Guyandotte River			
OG	Wyoming	Pineville Water	Pinnacle Creek/
OG	Raleigh	Raleigh Co. PSD-Amigo	Tommy Creek
OMG	Cabell	Milton Water Works	Guyandotte River
OMG	"	Culloden PSD	Indian Fork Creek
OMG	Putnam	Hurricane Municipal Water	Impoundment
OMG	Putnam	Lake Washington PSD	Lake Washington
Big Sandy River			
BS	Wayne	Kenova Municipal Water	Big Sandy River
BS	"	Fort Gay Water	Tug Fork
BST	Mingo	Kermit Water	Tug Fork
BST	"	Matewan Water	Tug Fork
BST	"	A & H Coal Co., Inc.	Impoundment
BST	"	Williamson Water	Impoundment
BST	McDowell	City of Welch	Impoundment/Wells
BST	"	City of Gary	Impoundment/Mine

APPENDIX C
CATEGORY E-3 - POWER PRODUCTION

This list contains known power production facilities and is not intended to exclude any waters as described in section 6.6.c, herein.

River Basin	County	Station Name	Operating Company
Monongahela River			
M	Monongalia	Fort Martin Power Station	Monongahela Power
M	Marion	Rivesville Station	Monongahela Power
MC	Preston	Albright Station	Monongahela Power
Potomac	Grant	Mt. Storm Power Station	Virginia Electric & Power Company
Ohio River			
O - Zone 1	Wetzel	Hannibal (Hydro)	Ohio Power
O " "	Marshall	Kammer	Ohio Power
O " "	"	Mitchell	Ohio Power
O " "	Pleasants	Pleasants Station	Monongahela Power
O " "	"	Willow Island Station	Monongahela Power
O " "	Mason	Phillip Sporn Plant	Central Operating (AEP)
O " "	"	Racine (Hydro)	Ohio Power
O " "	"	Mountaineer	Appalachian Power Co.
K	Putnam	Winfield (Hydro)	Appalachian Power Co.
K	Kanawha	Marmet (Hydro)	Appalachian Power Co.
K	"	London (Hydro)	Appalachian Power Co.
K	"	Kanawha River	Appalachian Power Co.
K	"	John E. Amos	Appalachian Power Co.

APPENDIX D
CATEGORY C - WATER CONTACT RECREATION

This list contains waters known to be used for water contact recreation and is not intended to exclude any waters as described in section 6.4, herein.

River Basin	Stream Code	Stream	County
Shenandoah	S	Shenandoah River	Jefferson
Potomac	P	Potomac River	Jefferson
	P	" "	Hampshire
	P	" "	Berkeley
	P	" "	Morgan
	P-9	Sleepy Creek & Meadow Branch	Berkeley
	P-9-G-1	North Fork of Indian Run	Morgan
South Branch	PSB	South Branch of Potomac River	Hampshire
	PSB	" "	Hardy
	PSB	" "	Grant
	PSB-21-X	Hawes Run	Pendleton
	PSB-25-C-2	Spring Run	Grant
	PSB-28	North Fork South Branch Potomac River	Grant
North Branch	PNB	North Branch of Potomac River	Mineral
	PNB-4-EE	North Fork Patterson Creek	Grant
	PNB-7-H	Linton Creek	Grant
	PNB-17	Stoney River-Mt. Storm Lake	Grant
	PC	Cacapon River	Hampshire
Monongalia			
Cheat	MC	Cheat Lake/Cheat river	Monongalia/Preston
	MC	Alpine Lake	Preston
	MC-6	Coopers Rock Lake/ Quarry Run	Monongalia
	MC-12	Big Sandy Creek	Preston
	MSC	Shavers Fork	Randolph
	MTN	Middle Fork River	Barbour/Randolph/ Upshur
	MW	West Fork River	Harrison
	MW-18	Stonecoal Creek/ Stonecoal Lake	Lewis

River Basin	Stream Code	Stream	County
Ohio	O	OhioRiver	Brooke/Cabell/ Hancock/Jackson/ Marshall/Mason/Ohio/ Pleasants/Tyler/ Wayne/Wood/Wetzel
	O-2-H	Beech Fork of Twelvepole Creek/Beech Fork Lake	Wayne
	O-2-Q	East Fork of Twelvepole Creek/East Lynn Lake	Wayne
	O-3	Fourpole Creek	Cabell
	O-21	Old Town Creek/ McClintic Ponds	Mason
	OMI	Middle Island Creek/ Crystal Lake	Doddridge
	OG	Guyandotte River	Cabell
	OG	Guyandotte River/ R. D. Bailey Lake	Wyoming
	OGM	Mud River	Cabell
Little Kanawha	LK	Little Kanawha River/ Burnsville Lake	Braxton
Kanawha	K	Kanawha River	Fayette/Kanawha/ Mason/Putnam
	K-1	Unnamed Tributary Krodel Lake	Mason
	KC	Coal River	Kanawha
	KC-45-Q	Stephens Branch/ Lake Stephens	Raleigh
	KE	Elk River	Kanawha/Clay/ Braxton/Webster/ Randolph
	KE	Sutton lake	Braxton
	KN	New River	Fayette/Raleigh/ Summers
	KN-26-F	Little Beaver Creek	Raleigh
	KNG	Greenbrier River	Greenbrier/ Pocahontas/Summers
	KNG-23-E-1	Little Devil Creek/ Moncove Lake	Monroe
	KNG-28	Anthony Creek	Greenbrier
	KNG-28-P	Meadow Creek/ Lake Sherwood	Greenbrier
	KNB	Bluestone River/ Bluestone Lake	Summers
	KG	Gauley River	Webster

River Basin	Stream Code	Stream	County
Kanawha	KG	Gauley River/ Summersville Lake	Nicholas
	KGW	Williams River	Webster

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.1 Dissolved Aluminum (ug/l) ~~Not to exceed [e]~~:	750xCF[5]	~~87~~ 750xCF[5] [e]	750xCF[5]	87xCF[5] [e]			
8.2. Acute and chronic aquatic life criteria for ammonia shall be determined using the National Criterion for Ammonia in Fresh Water[d] from USEPA's 1999 Update of Ambient Water Quality Criteria for Ammonia (EPA-822-R-99-014, December 1999)	X	X	X	X			
8.3 Antimony (ug/l) ~~Not to exceed:~~					4300	14	
8.4 Arsenic[b] (ug/l) ~~Not to exceed:~~					~~50~~ 10	~~50~~ 10	100
8.4.1 Dissolved Trivalent Arsenic (ug/l) ~~Not to exceed:~~	340 ~~360 x CF[5]~~	150 ~~190 x CF[5]~~	340 ~~360 x CF[5]~~	150 ~~190 x CF[5]~~			
8.5 Barium (mg/l) ~~Not to exceed:~~						1.0	
8.6 Beryllium (ug/l)	130		130			.0077	
8.7 Cadmium (ug/l) Hardness (mg/l $CaCO_3$) / Soluble Cd 0 - 35 / 1.0 36 - 75 / 2.0 76 - 150 / 5.0 > 150 / 10.0						X	

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.7.1 ~~Not to exceed~~ 10 ug/l in the Ohio River (O Zone 1) main stem (see section 7.1.d, herein)						X	
8.7.~~3~~ 2 The four-day average concentration of dissolved cadmium ~~shall not exceed the value~~ determined by the following equation: ~~$Cd = e^{(0.7852[ln(hardness)]-3.490)} \times CF^5$~~ $Cd = e^{(0.7409[ln(hardness)]-4.719)} \times CF^5$		X		X			
8.7.~~4~~ 3 The one-hour average concentration of dissolved cadmium ~~shall not exceed the value~~ determined by the following equation: ~~$Cd = e^{(1.128[ln(hardness)]-3.828)} \times CF^5$~~ $Cd = e^{(1.0166[ln(hardness)]-3.924)} \times CF^5$	X		X				
8.8 Chloride (mg/l)	860	230	860	230	250	250	
8.9.1 Chromium, dissolved hexavalent (ug/l): ~~Not to exceed:~~	16 ~~x CF^5~~	11 ~~x CF^5~~	16 ~~x CF^5~~	7.2 ~~x CF^5~~		50	
8.9.2 Chromium, trivalent (ug/l) The one-hour average concentration of dissolved trivalent chromium ~~shall not exceed the value~~ determined by the following equation: ~~$exp\{0.8190[ln(hardness)]+3.7256\} \times (CF^5)$~~ $CrIII = e^{(0.8190[ln(hardness)]+3.7256)} \times CF^5$	X		X				
8.9.3 The four-day average concentration of dissolved trivalent chromium ~~shall not exceed the value~~ determined by the following concentration: ~~$exp\{0.8190[ln(hardness)]+0.6848\} \times (CF^5)$.~~ $CrIII = e^{(0.8190[ln(hardness)]+0.6848)} \times CF^5$		X		X			

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C^3	A^4	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.10 Copper (ug/l) ~~Not to exceed:~~						1000	
8.10.1 The four-day average concentration of dissolved copper ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Cu = e^{(0.8545[ln(hardness)]-1.465)} \times CF^5$~~ $Cu = e^{(0.8545[ln(hardness)]-1.702)} \times CF^5$		X		X			
8.10.2 The one-hour average concentration of dissolved copper ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Cu = e^{(0.9422[ln(hardness)]-1.464)} \times CF^5$~~ $Cu = e^{(0.9422[ln(hardness)]-1.700)} \times CF^5$	X		X				
8.11 Cyanide (ug/l) (As free cyanide $HCN+CN^-$) ~~Not to exceed:~~	22	5.0	22	5.0	5.0	5.0	
8.12 Dissolved Oxygen[c]: not less than 5 mg/l at any time.	X				X	X	X
8.12.1 Kanawha River main stem, Zone 1 - Not less than 4.0 mg/l at any time.	X						
8.12.2 Ohio River main stem - the average concentration shall not be less than 5.0 mg/l per calendar day and shall not be less than 4.0 mg/l at any time or place outside any established mixing zone - provided that a minimum of 5.0 mg/l at any time is maintained during the April 15-June 15 spawning season.	X						

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.12.3 Not less than 7.0 mg/l in spawning areas and in no case less than 6.0 mg/l at any time.			X				
8.13 Fecal Coliform: Maximum allowable level of fecal coliform content for ~~Primary~~ Water Contact Recreation (either MPN or MF) shall not exceed 200/100 ml as a monthly geometric mean based on not less than 5 samples per month; nor to exceed 400/100 ml in more than ten percent of all samples taken during the month.					X	X	
8.13.1 Ohio River main stem (zone 1) - During the non-recreational season (November through April only) the maximum allowable level of fecal coliform for the Ohio River (either MPN or MF) shall not exceed 2000/100 ml as a monthly geometric mean based on not less than 5 samples per month.					X	X	
8.14 Fluoride (mg/l) ~~Not to exceed:~~						1.4	
8.14.1 Not to exceed 2.0 for category D1 uses.							X
8.15 Iron[c] (mg/l) ~~Not to exceed:~~		1.5		0.5		1.5	
8.16 Lead (ug/l) ~~Not to exceed:~~						50	
8.16.1 The four-day average concentration of dissolved lead ~~shall not exceed the value~~ determined by the following equation[a]: $Pb = e^{(1.273[\ln(\text{hardness})]-4.705)} \times CF^{5}$		X		X			

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.16.2 The one-hour average concentration of dissolved lead ~~shall not exceed the value~~ determined by the following equation[a]: $Pb = e^{(1.273[\ln(\text{hardness})]-1.46)} \times CF^5$	X		X				
8.17 Manganese (mg/l) (see §6.2.d) ~~Not to exceed:~~						1.0	
8.18 Mercury The total organism body burden of any aquatic species shall not exceed 0.5 ug/g as methylmercury.					0.5	0.5	
8.18.1 Total mercury in any unfiltered water sample ~~shall not exceed~~ (ug/l):	2.4		2.4		0.15	0.14	
8.18.2 Methylmercury (water column) ~~Not to exceed~~ (ug/l):		.012		.012			
Nickel (ug/l) ~~Not to exceed:~~					4600	510	
8.19.1 The four-day average concentration of dissolved nickel ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Ni = e^{(0.846[\ln(\text{hardness})]+1.1645)} \times CF^5$~~ $Ni = e^{(0.846[\ln(\text{hardness})]+0.0584)} \times CF^5$		X		X			
8.19.2 The one-hour average concentration of dissolved nickel ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Ni = e^{(0.846[\ln(\text{hardness})]+3.361)} \times CF^5$~~ $Ni = e^{(0.846[\ln(\text{hardness})]+2.255)} \times CF^5$	X		X				
8.20 Nitrate (as Nitrate-N) (mg/l)						10	

47CSR2
APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.21 Nitrite (as Nitrite-N) (mg/l) ~~Not to exceed:~~	1.0		.060				
8.22 Nutrients							
Chlorophyll –a (µg/l) (see §47-2-8.3)							
Total Phosphorus (µg/l) (see §47-2-8.3)							
~~8.22~~ 8.23 Organics							
Chlordane[b] (ng/l)	2400	4.3	2400	4.3	0.46	0.46	0.46
DDT[b] (ng/l)	1100	1.0	1100	1.0	0.024	0.024	0.024
Aldrin[b] (ng/l)	3.0		3.0		0.071	0.071	0.071
Dieldrin[b] (ng/l)	2500	1.9	2500	1.9	0.071	0.071	0.071
Endrin (ng/l)	180	2.3	180	2.3	2.3	2.3	2.3
Toxaphene[b] (ng/l)	730	0.2	730	0.2	0.73	0.73	0.73
PCB[b] (ng/l)		14.0		14.0	0.045	0.044	0.045
Methoxychlor (ug/l)		0.03		0.03	0.03	0.03	0.03
Dioxin (2,3,7,8- TCDD)[b] (pg/l)					0.014	0.013	0.014
Acrylonitrile[b] (ug/l)					0.66	0.059	
Benzene[b] (ug/l)					~~71~~ 51	0.66	
1,2-dichlorobenzene (mg/l)					17	2.7	
1,3-dichlorobenzene (mg/l)					2.6	0.4	
1,4-dichlorobenzene (mg/l)					2.6	0.4	
2,4-dinitrotoluene[b] (ug/l)					9.1	0.11	

47CSR2
APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
Hexachlorobenzene[b] (ng/l)					0.77	0.72	
Carbon tetrachloride[b] (ug/l)					4.4	0.25	
Chloroform[b] (ug/l)					470	5.7	
~~Halomethanes (ug/l)~~					~~15.7~~	~~0.19~~	
Bromoform[b] (ug/l)					140	4.3	
Dichlorobromomethane[b] (ug/l)					17	0.55	
Methyl Bromide (ug/l)					1500	47	
Methylene Chloride[b] (ug/l)					590	4.6	
1,2-dichloroethane[b] (ug/l)					99	0.035	
1,1,1- trichloroethane[b] (mg/l)						12	
1,1,2,2-tetrachloroethane (ug/l)					11	0.17	
1,1-dichloroethylene[b] (ug/l)					3.2	0.03	
Trichloroethylene[b] (ug/l)					81	2.7	
Tetrachloroethylene[b] (ug/l)					8.85	0.8	
Toluene[b] (mg/l)					200	6.8	
~~Polynuclear Aromatic Hydrocarbons (PAH)[b] (ug/l)~~					~~0.031~~	~~.0028~~	
Acenaphthene (ug/l)					990	670	

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
Anthracene (ug/l)					40,000	8,300	
Benzo(a) Anthracene[b] (ug/l)					0.018	0.0038	
Benzo(a) Pyrene[b] (ug/l)					0.018	0.0038	
Benzo(b) Fluoranthene[b] (ug/l)					0.018	0.0038	
Benzo(k) Fluoranthene[b] (ug/l)					0.018	0.0038	
Chrysene[b] (ug/l)					0.018	0.0038	
Dibenzo(a,h)Anthracene[b] (ug/l)					0.018	0.0038	
Fluorene (ug/l)					5300	1100	
Ideno(1,2,3-cd)Pyrene[b] (ug/l)					0.018	0.0038	
Pyrene (ug/l)					4000	830	
2-Chloronaphthalene (ug/l)					1600	1000	
Phthalate esters[6] (ug/l)		3.0		3.0			
Vinyl chloride[b] (chloroethene) (ug/l)					525	2.0	
alpa-BHC (alpha- Hexachloro-cyclohexane)[b] (ug/l)					0.013	.0039	
beta-BHC(beta- Hexachloro-cyclohexane)[b] (ug/l)					0.046	0.014	
gamma-BHC (gamma- Hexachloro-cyclohexane)[b] (ug/l)	2.0	0.08	2.0	0.08	0.063	0.019	
Chlorobenzene (mg/l)					21	0.68	
Ethylbenzene (mg/l)					29	3.1	
Heptachlor[b] (ng/l)	520	3.8	520	3.8	0.21	0.21	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
2-methyl-4,6-Dinitrophenol (ug/l)					765	13.4	
Fluoranthene (ug/l)					370	300	
~~8.22.1~~ 8.23.1 ~~The organic chemicals listed in §8.22 shall not exceed the specified water quality criteria~~. When the specified criteria for organic chemicals listed in §8.23 are less than the practical laboratory quantification level, instream values will be calculated from discharge concentrations and flow rates, where applicable.							
~~8.23~~ 8.24 pH[c] No values below 6.0 nor above 9.0. Higher values due to photosynthetic activity may be tolerated.	X	X	X	X	X	X	X
~~8.24~~ 8.25 Phenolic Materials							
~~8.24.1~~ 8.25.1 Phenol (ug/l) ~~Not to exceed:~~					4,600,000	21,000	
~~8.24.2~~ 8.25.2 2-Chlorophenol (ug/l) ~~Not to exceed:~~					400	120	
~~8.24.3~~ 8.25.3 2,4-Dichlorophenol (ug/l) ~~Not to exceed:~~					790	93	
~~8.24.4~~ 8.25.4 2,4-Dimethylphenol (ug/l) ~~Not to exceed:~~					2300	540	
~~8.24.5~~ 8.25.5 2,4-Dinitrophenol (ug/l) ~~Not to exceed:~~					14,000	70	
~~8.24.6~~ 8.25.6 Pentachlorophenol[b] (ug/l)					8.2	0.28	

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.24.6.a~~ 8.25.6.a The one-hour average concentration of pentachlorophenol ~~shall not exceed the value~~ determined by the following equation: exp(1.005(pH)-4.869)	X		X				
~~8.24.6.b~~ 8.25.6.b The 4-day average concentration of pentachlorophenol ~~shall not exceed the value~~ determined by the following equation: exp(1.005(pH)-5.134).		X		X			
~~8.24.7~~ 8.25.7 2,4,6-Trichlorophenol[b] (ug/l) ~~Not to exceed:~~					6.5	2.1	
~~8.25~~ 8.26 Radioactivity: Gross Beta activity not to exceed 1000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.	X		X		X	X	X
~~8.25.1~~ 8.26.1 Gross total alpha particle activity (including radium-226 but excluding radon and uranium shall not exceed 15 pCi/l and combined radium-226 and radium-228 shall not exceed 5pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved particle activity does not exceed 5pCi/l; the concentration of tritium shall not exceed 20,000 pCi/l; the concentration of total strontium-90 shall not exceed 8 pCi/l in the Ohio River main stem.	X		X		X	X	X

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.26~~ 8.27 Selenium (ug/l) ~~Not to exceed:~~	20	5	20	5		~~10~~ 50	
~~8.27~~ 8.28 Silver (ug/l) Hardness Silver 0-50 1 51-100 4 101-200 12 >201 24				X		X	
~~8.27.1~~ 8.28.1 0-50 1 51-100 4 101-200 12 201-400 24 401-500 30 501-600 43		X					
~~8.27.2~~ 8.28.2 The one-hour average concentration of dissolved silver ~~shall not exceed the value~~ determined by the following equation: ~~$Ag=e^{(1.72[\ln(hardness)]-6.52)} \times CF^5$~~ $Ag=e^{(1.72[\ln(hardness)]-6.59)} \times CF^5$	X		X				

47CSR2
APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.28~~ 8.29 Temperature Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 87°F at any time during months of May through November and not to exceed 73°F at any time during the months of December through April. During any month of the year, heat should not be added to a stream in excess of the amount that will raise the temperature of the water more than 5°F above natural temperature. In lakes and reservoirs, the temperature of the epilimnion should not be raised more than 3°F by the addition of heat of artificial origin. The normal daily and seasonable temperature fluctuations that existed before the addition of heat due to other natural causes should be maintained.	X						
~~8.28.1~~ 8.29.1 For the Kanawha River Main Stem (K-1): Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 90°F in any case.	X						

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.28.2~~ 8.29.2 For the Bluestone R (KNB), Bluestone Lake (KN-60) East River (KNE), New River (KN), Gauley R. (KG) and Greenbrier River (KNG): Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 81°F at any time during the months of May through November and not to exceed 73°F at any time during December through April.			X				
~~8.28.3~~ 8.29.3 No heated effluents will be discharged in the vicinity of spawning areas. The maximum temperatures for cold waters are expressed in the following table: Daily Mean °F / Hourly Max °F Oct-Apr 50 / 55 Sep-May 58 / 62 Jun-Aug 66 / 70			X				

47CSR2
APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.28.4~~ 8.29.4 For Ohio River Main Stem (01) (see section 7.1.d, herein): Period Inst. Dates Ave. Max. Jan 1-31 45°F 50°F February 45 50 March 1-15 51 56 March 16-31 54 59 April 1-15 58 64 April 16-30 64 69 May 1-15 68 73 May 16-31 75 80 June 1-15 80 85 June 16-30 83 87 July 1-31 84 89 August 1-31 84 89 Sept 1-15 84 87 Sept 16-30 82 86 Oct 1-15 77 82 Oct 16-31 72 77 Nov 1-30 67 72 Dec 1-31 52 57	X						
~~8.29~~ 8.30 Thallium (ug/l)					6.3	1.7	
~~8.30~~ 8.31 Threshold odor[c] Not to exceed a threshold odor number of 8 at 104°F as a daily average.		X		X	X	X	
~~8.31~~ 8.32 Total Residual Chlorine (ug/l - measured by amperometric or equivalent method) ~~Not to exceed:~~	19	11					

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.31.1~~ 8.32.1 No chlorinated discharge allowed			X				
~~8.32~~ 8.33 Turbidity No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU or less, or have more than a 10% increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs. This limitation shall apply to all earth disturbance activities and shall be determined by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbing activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase.		X		X	X	X	
~~8.32.1~~ 8.33.1 This rule shall not apply to those activities at which Best Management Practices in accordance with the State's adopted 208 Water Quality Management Plan are being utilized, maintained and completed on a site-specific basis as determined by the appropriate 208 cooperative or an approved Federal or State Surface Mining Permit is in effect. This exemption shall not apply to Trout Waters.		X			X	X	

APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
~~8.33~~ 8.34 Zinc (ug/l) The four-day average concentration of dissolved zinc ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Zn = e^{(0.8473[\ln(\text{hardness})]+0.7614)} \times CF^5$~~ $Zn = e^{(0.8473[\ln(\text{hardness})]+0.884)} \times CF^5$		X		X			
~~8.33.1~~ 8.34.1 The one-hour average concentration of dissolved zinc ~~shall not exceed the value~~ determined by the following equation[a]: ~~$Zn = e^{(0.8473[\ln(\text{hardness})]+0.8604)} \times CF^5$~~ $Zn = e^{(0.8473[\ln(\text{hardness})]+0.884)} \times CF^5$	X		X				

[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] These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted. Concentration not to be exceeded, unless otherwise noted.
[4] These criteria have been calculated to protect human health from toxic effects through drinking water and fish consumption, unless otherwise noted. Concentration not to be exceeded, unless otherwise noted.
[5] The appropriate Conversion Factor (CF) is a value used as a multiplier to derive the dissolved aquatic life criterion is found in Appendix E, Table 2.
[6] Phthalate esters are determined by the summation of the concentrations of Butylbenzyl Phthalate, Diethyl Phthalate, Dimethyl Phthalate, Di-n-Butyl Phthalate and Di-n-Octyl Phthalate.
[a] Hardness as calcium carbonate (mg/l). The minimum hardness allowed for use is this equation shall not be less than 25 mg/l, even if the actual ambient hardness is less than 25 mg/l. The maximum hardness value for use in this equation shall not exceed 400 mg/l even if the actual hardness is greater than 400 mg/l.
[b] Known or suspected carcinogen. Human health standards are for a risk level of 10^{-6}.
[c] May not be applicable to wetlands (B4) - site-specific criteria are desirable.
[d] The early life stage equation in the National Criterion shall be used to establish chronic criteria throughout the state unless the applicant demonstrates that no early life stages of fish occur in the affected water(s).
~~[e] Until July 4, 2007, the aluminum criteria will be implemented as follows: the chronic aluminum criterion shall be 87 ug/l for trout waters (as defined in section 2.20 of this rule) and shall be 750 ug/l for all other waters of the state. The implementation of the interim criteria provides time for a study to develop aluminum criteria for waters of the state which are based upon sound science and are protective of aquatic life.~~

APPENDIX E
TABLE 2

Conversion Factors

Metal	Acute	Chronic
Aluminum	1.000	1.000
Arsenic (III)	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium (III)	0.316	0.860
Chromium(VI)	0.982	0.962
Copper	0.960	0.960
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]
Nickel	0.998	0.997
Silver	0.85	N/A
Zinc	0.978	0.986

APPENDIX F
COOL WATER LAKES

This list contains lakes to be managed for cool water fisheries and is not intended to exclude any waters which meet the definition in Section 2.2.

River Basin	County	Lake
Potomac River		
PC	Hardy Lost River	Trout Pond (Impoundment)
PC	Hardy Lost River	Rock Cliff Lake (Impoundment)
PSB	Pendleton	Hawes Run (Impoundment)
PNB	Mineral	New Creek Dam 14(Impoundment)
Monongahela River		
MC	Monongalia	Coopers Rock (Impoundment)
MC	Monongalia	Cheat Lake
MC	Tucker	Thomas Park (Impoundment)
MC	Randolph	Spruce Knob Lake (Impoundment)
MT	Taylor	Tygart Lake
MW	Lewis	Stonecoal Lake
Kanawha River		
KC	Raleigh	Stephens Lake (Impoundment)
KG	Nicholas	Summersville Reservoir (Impoundment)
KG	Greenbrier	Summit Lake (Impoundment)
KNG	Pocahontas	Watoga Lake
KNG	Pocahontas	Buffalo Fork (Impoundment)
KNG	Pocahontas	Seneca (Impoundment)
KCG	Pocahontas	Handley Pond
Guyandotte River		
OG	Wyoming/Mingo	RD Bailey Lake

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

IN THE MATTER OF:

PROPOSED RULE 47CSR2

Rules Governing Water Quality Standards

TRANSCRIPT OF PROCEEDINGS had or testimony of adduced pursuant to the West Virginia Rules of Civil Procedure in the above-entitled action, on the 16th day of July, 2007, commencing at 6:00 p.m. and concluding at 6:28 p.m., at the office of the West Virginia Department of Environmental Protection, 601 57th Street, S.E., Cooper's Rock Training Room, Charleston, Kanawha County, West Virginia, pursuant to notice to all interested parties.

BEFORE: JESSICA GREATHOUSE, Facilitator
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

MS. GREATHOUSE: We'll go ahead and start this evening's public hearing. My name is Jessica Greathouse, and I'm the Facilitator for tonight's hearing. The purpose of tonight's hearing is to accept comments on Proposed Rule 47CSR2 - Rules Governing Water Quality Standards.

Please make sure you have signed in and indicated if you're going to make a comment. Comments shall be limited to the proposed revisions to the rule. Copies of the rules are available from the Secretary of State's Office or from the DEP webpage at www.WVDEP.org/2008 Rules.

We are here this evening to listen to your comments and questions and include them in the official record. Written comments must be submitted to the West Virginia Department of Environmental Protection Public Information Office, 601 57th Street, S.E., Charleston, West Virginia, 25304. Comments may also be e-mailed to Comments@WVDEP.org. The meeting is being recorded tonight. The comment period will end at 5:00 p.m., July 17th, 2007.

I will ask people to come up and comment at the podium here and speak into the microphone so that everyone can hear and so that the court reporter can appropriately take down your oral comments. I will call the speakers in order that they're listed on a sheet and

then once I get done with that, I'll ask if there are any additional speakers that would like to comment on the water quality standards rule. The first speaker is Bud Smith.

MR. SMITH: Thank you, Jessica, and the West Virginia DEP for the opportunity to comment on these new rules. We'll issue our comments in the mail, but also I'll give you a hard copy, but I just wanted to read about a page and half of additional comments.

On behalf of Mountain State Carbon, Wheeling Corrugating Company and Wheeling-Pittsburgh Steel Corporation, I'm please to provide a brief summary of our comments on the changes to the water quality standards and NPDES permit regulations proposed by the West Virginia Department of Environmental Protection. Our detailed comments will be filed with the West Virginia DEP before the close of the comment period tomorrow and offer a copy to you at this public hearing this evening.

Like other states some of West Virginia's borders are formed by rivers, such as the Potomac, Big Sandy and the Ohio River. When West Virginia creates new environmental regulations, such as those proposed changes to the water quality standards and NPDES permit regulations, they may or may not be compatible with those imposed on the same river by the different states, such as

Pennsylvania, Ohio and Kentucky. Since these other states must also meet with EPA approval of such regulations, then the citizens of all states including West Virginia can be assured that the waters in their bordering rivers are being protected.

It is our assessment that the proposed changes to the West Virginia DEP water quality standards and NPDES permit regulations are more stringent than those of the bordering states. While the term more stringent typically implies more protection, it is not necessarily the case. It can also simply mean more stringent regulatory requirement compliance based on regulatory pension but not necessarily on science.

In some of the proposed changes, the limits are not technically achievable with conventional treatment technologies and we have found that analytical methods are not available to detect low enough to determine whether discharges are in compliance. We have also found that in these some cases the West Virginia DEP regulations and policies provide reasonable flexibility to address these issues while still providing the necessary protection of designated uses.

It is these situations that way heavily on the manufacturing sector and as time goes on will influence

decisions regarding plant extensions and locations of new facilities. When Pennsylvania, Ohio and Kentucky have water quality standards and issue NPDES permits that are protective of human health and the environment of the Ohio River, then why would West Virginia want more stringent water quality standards? Would the Ohio River water be significantly clearer on the West Virginia side? Of course not, although the overall river quality may be improved to some degree, but what price would be paid for such improvement that is above and beyond that determined by the United States Protection Agency.

Let me suggest one answer to that question. Wheeling Pittsburgh Steel Corporation owns or is partner in nine steel mills whose waste waters are discharged into the Ohio River or one of its upstream tributaries, the Monongahela. These plants include three in West Virginia, five in Ohio and one in Pennsylvania and all have NPDES permits for their wastewater discharges.

Many of our employees and their families live in communities along these rivers from which they enjoy the benefits of drinking water, recreation and industry. We believe they will all continue to enjoy such benefits if the water quality standards and NPDES rules are the same for all three states. We also believe that any

additional benefit that may be gained from more stringent water quality standards and NPDES permit rules by West Virginia will be potentially negated by the impact on the business climate in these communities.

It could be argued that this impact could be better exemplified by a change in the sign on the bridges entering West Virginia that would state "West Virginia Open For A Little Bit Cleaner Water On Our Side But More Business On The Other". We believe if the West Virginia DEP incorporates our comments provided under separate cover, that bridge signs will not have to be changed. Thank you.

MS. GREATHOUSE: The next speaker is Don Garvin.

MR. GARVIN: Thank you. I'm Don Garvin, Legislative Coordinator for the West Virginia Environmental Counsel and we've submitted or joined on to comments, detailed comments that will be submitted by the end of business tomorrow under the cover of the West Virginia Rivers Coalition and they are here to speak to that in general tonight.

I just want to say a couple of things. One was during the session I was really glad to see DEP stand firm on the proposed B-2 trout list and the definition of trout waters. It was a real joy. This is one of the first

water quality rules that DEP has ever presented that I almost totally agree with. We do have some concerns.

Two concerns: One we're still not sure the way the Blackwater River has been divided up is correct and protects the whole that it did, and we'd like you to take another look at that. The final comment is while on the Pat's Branch use removal, while we don't necessarily disagree with the intent of that, we question whether or not DEP used the correct use attainability analysis procedure.

We never saw a public notice. We never saw an opportunity to request a public hearing and even though Lisa McClung said that this went on for two years, we were totally unaware of it and what we're concerned about is that the DEP use the proper process for these UAA's. It's extremely important that you meet the requirements of the federal act and I'll be there next session to back DEP totally in defending this rule with the legislature. Thank you.

MS. GREATHOUSE: The next speaker on the list is Evan Hansen.

MR. HANSEN: My name is Evan Hansen, and I'm speaking on behalf of the West Virginia Rivers Coalition. Don mentioned that there will be a letter submitted

tomorrow on behalf of the Rivers Coalition and about a dozen other organizations, and I'm not going into every detail of that letter, but I would like to mention a couple things; and similarly to what Don Garvin just said we agree with DEP and commend them for taking a lot of the actions they've taken in this list.

In particular, the new 337 streams that are on the B-2 list as trout water, that's the right thing to do. That's a list of streams that was made in consultation with the Division of Natural Resources who are the experts in the state in terms of what is and is not a trout stream, and if the expert agencies says they're trout streams, they should be listed as such and protected as such. That's the right thing to do.

We also agree with the decision to list streams as trout streams based on their existing use; in other words, the Clean Water Act is clear that if something has satisfied use since 1975, then it is to be protected for that use in the future and so even if there's a trout stream that is currently polluted, if it did sustain year-round trout populations since 1975, it needs to have that protection and we believe the DEP has included those streams in this list.

I'd like to say a word about the new

nutrient criteria in the rural spur lakes and reservoirs and say that we support those as well. As several folks at DEP are well aware, there was a very long process that took place over many years where a group of stakeholders came together and that -- probably almost monthly for all these years to try to reach a consensus on new water quality standards for nutrients, and we decided to start with lakes and reservoirs and to wait on rivers and streams and even though we had different perspectives and how disagreements we eventually reached a consensus and those consensus numbers are the ones that are in the proposed rules.

As far as I know, that consensus still stands, so we appreciate that those numbers are in the new rule and we eagerly await the next step of the process, which is developing the criteria for rivers and streams. The West Virginia Rivers Coalition and I know other past stakeholders are more than willing to start the process up again to help move forward on that, and I think that the Chesapeake Bay Program is building momentum and they're implementing new permitting systems and trying to get a trading program in place, it's more important than ever that we have local nutrient criteria for our rivers and streams.

Otherwise, if some of these programs get

off the ground and the only purpose of these programs is to meet the Bay standards and the Chesapeake Bay, we may have problems locally if we don't have local nutrient criteria to protect our streams in West Virginia and my final comment is related to the Blackwater River. I know what Don said that at least a year ago when this similar rule was proposed, there were issues about whether the entire Blackwater River was truly listed as a trout water. I hope DEP has corrected that and if not, I hope they will take another look at it just to make sure.

Thank you.

MS. GREATHOUSE: The next speaker on the list is Larry Orr.

MR. ORR: Thank you. My name is Larry Orr and I'm Chairman of the West Virginia Council of Trout Unlimited. West Virginia Council of Trout Unlimited has 1700 members -- 1700 voting members and dues paying members in the state. Our mission is to conserve, protect and restore the cold water fisheries of West Virginia and their watersheds. I'm a retired chemical engineer. When I first came to the Kanawha Valley in 1961, the Kanawha River was not suitable for recreation.

The chemical industry acted as a good neighbor, cleaned up its act by designing and operating its

plants in accordance with the appropriate water quality standards and now people can fish, boat and swim in the Kanawha River in the Charleston and South Charleston areas. It's time that the extracting industry is required to step up and be good neighbors by treating the waters of West Virginia with the respect and concern that was deserved.

West Virginia Council of Trout Unlimited supports the 47CSR Water Quality Standards Rule. Our main point of concern is that the definition of B-2 trout streams must remain the same. Trout waters are defined as waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings from trout which do not support year-round trout populations. This is a good and proper definition.

Trout fishing in West Virginia brings in about $80 million annually. There are 2,000 miles of trout streams so this converts to about $40,000 per mile of stream. Water is the most important natural resource in West Virginia, not coal, oil, gas, timber or other extracted materials. There's no alternative material to replace water as there is with the extracted materials used for power generation.

Pure water is required for the sustenance of life and maintenance of health. We must provide the

proper protection for this precious commodity. Almost all of our Trout Unlimited members live and work in West Virginia. We're not anti-business, nor are we anti-development. We believe that business and development can grow in a responsible manner while still maintaining the quality of our waters and the recreational value.

We've worked with various companies including oil and gas and coal companies on trout restoration projects in West Virginia and have reached win-win solutions for both sides. Again West Virginia and the Council of Trout Unlimited does support this rule with the caveat that the definition of B-2 trout streams remain the same. Thank you.

MS. GREATHOUSE: Is there anyone that would like to comment on 47CSR2 Rules Governing Water Quality Standards? Come on up.

MR. MARTIN: My name is Julian Martin. I'm with the West Virginia Highlands Conservancy. I won't speak very long. Our comments will come in with the Rivers Coalition. I just want to comment on the first speaker, something he said about the sign coming into West Virginia. They do this every year. What they want us to do is to race to the bottom, you know. Find out where the worst environmental regulations are and then we dive down and get

below them and that way we'll bring business back and then they can poop in our rivers, you know.

So they really want to destroy our rivers. They really don't want to take care of them. They want us to be at the bottom. I want that sign to say Wild and Wonderful West Virginia.

MS. GREATHOUSE: Is there anyone else that would like to make a comment? Say your name and affiliation first.

MR. GASPAR: I came from the back of the room there. My name is Don Gaspar. I'm a retired fish biologist and I'd like you to -- DNR -- consider the fisheries unit in DNR as your experts and rely upon them to find these year-round trout populations, and they have submitted I believe advice indicating over 400 of them should be considered. Now maybe 300 are being considered or even half that number.

It's the experts in DNR that have advised you that there are over 400 year-round trout populations, and I just want one more comment that the existing use should be preserved. They should not be dedicated -- some of these reaches to coal development or any kind of development that might degrade them. I believe the Clean Water Act is clear that these water quality standards are

not to be degraded in any way.

Those are my comments. It's that of a citizen, Don Gaspar. I'm a participant in the West Virginia Highlands Conservancy and the Trout Unlimited, but those of a citizen. Thank you.

MR. FETTER: My name is Shawn Fetter and I'm with the Mountaineer Chapter of Trout Unlimited and a concerned citizen and I'm a teacher in the state of middle school children and spent a lot of time when I teach about our Save Our Streams Program which we do every year, and I spent a lot of time talking about the DEP and how they are working to protect habitat and waters in this state and got a little concerned -- a lot of concern I should say -- the past year when things started to go array and the list started at this really nice number and it kept dropping and dropping and at some point, you know, it looked like the list wasn't going to make it all and it didn't.

So we're here having a meeting which to me is kind of ludicrous to being having a meeting about something I think we all in our hearts really agree on, maybe not our pocketbook, but we agree that water quality is got to be important in this state.

I just spent a week over in Pocahontas County with the Boy Scouts and we did a lot of fly fishing

and fishing at the camp, and we couldn't have done that without the water quality that we found there.

I want to echo what the Rivers Coalition said in that protecting trout streams is the right thing to do for water quality and for the water that we will eventually use after they do, and to the gentleman that spoke earlier, that spoke first, does less stringent standards make Pennsylvania and Ohio's rules correct or right? Why should West Virginia give in to other state standards? You know, can't we be better than that. We should be better than that.

I think Pocahontas County had it right on their tourism guide. What do you see? You see clean water right on the front page. That draws people here. People want to come to this state to fish here, to kayak here, to just see clean anything. So I looked in here and Pocahontas County is known as the birthplace of rivers. I found 14 pictures of clean water activities from kayaking to trout fishing to just plain hiking along a river. It's also the home of Snowshoe Ski Resort, but I only saw four pictures of skiing of wintertime activities.

So in a state that is having trouble with their industry, I think this is the industry that we should be concentrating on in this state, tourism, and what's

going to bring people here, how they're going to spend their money. If there's clean water here, they're going to come. If there's not, I know I'd stay away. Thank you.

MS. GREATHOUSE: Is there anyone else that would like to comment on 47CSR2 Rules Governing Water Quality Standards? No other comments on Water Quality Standards? Okay.

This completes our hearing. The comment period will end tomorrow at 5:00 p.m. The comments can come in by e-mail at Comments@WVDEP.org. or they may be sent into the Department of Environmental Protection here at our headquarters. Thanks again for your interest and participation. We will be filing our rule with our responses to your comments with the Secretary of State's Office and updates will be made to our webpage as responses to comments are completed. This concludes the hearing. Thank you.

(WHEREUPON, the hearing was closed.)

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

STATE OF WEST VIRGINIA,

COUNTY OF KANAWHA, to wit:

I, **NANCY MCNEALY**, Certified Verbatim 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 22nd day of July, 2007.

My commission expires November 26, 2010.

Certified Verbatim Reporter

Water Quality Standards

dep

west virginia department of environmental protection

WV DEP-DIVISION OF WATER AND WASTE MANAGEMENT
WATER QUALITY STANDARDS PROGRAM
SIGN IN SHEET

MEETING: WQS - 47CSR2 Public Meeting
DATE AND TIME: July 16, 2007 6:00 pm
Location: Kanawha City DEP Office
Attendees:

SPEAKERS

	Name	Company	Telephone Number	Email Address
✓ 1.	Bud E Smith	Wheeling-Pitt	304-234-2662	smithbe@wpsc.com
2.	JULIAN MARTIN	WV HIGHLANDS CONS.	342-8989	MARTINJUL@AOL.COM
3.	Chris Byrd	MCTU	304-622-3023	cBYRD@MA.RR.c
4.	Shawn Fetter	MCTU	304-823-2388	whitetailhunter@yahoo.com
5.	Gary M. Hershman	MCTU	304-457-4856	gmhersh@msn.com
✓ 6.	DON GARVIN	WVEC	304-395-0078	DSGJR@aol.com
7.	MATT NOERPEL	CRMW	3048542324	matt@crmw.net
✓ 8.	Evan Hansen	WVRC	292-2450	ehansen@downstreamstrategies.com
9.	Paul Curry	T.U.	949-2719	
10.	John Lavender	TU	767 8123	
11.	Don Lyons	TU.	595 1244	
✓ 12.	LARRY ORR	WVCTU	965 7185	edhorse@suddenlink.net
13.	Mat Robertson	KVCTU	744-9338	troutczar@peoplepc.com

Promoting a healthy environment.

Water Quality Standards

	Name	Company	Telephone Number	Email Address
14.	[illegible]	Gazette	348-1702	[illegible]@wsgazette.com
15.	Don Gasper	RCTU	472-3704	—
16.	Janet Gagnon	VA	344-2684	jsgagnon@mindspring.com
17.	John Gagnon	—	"	JSGAGNON@MINDSPRING.COM
18.	Nelson Sorah	TU	544-9190	NSORAH@AOL.COM
19.	Barney W. Frazier, Jr.		926-8316	
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				
37.				

From: "Lydia Work" <lwork@triadeng.com>
To: <smandirola@wvdep.org>
Date: 6/5/2007 12:10:30 PM
Subject: 47CSR2 revision for consideration

Hi, Scott-

Below summarizes comments to 47CSR2 regarding the reference date of 40CFR part 136:

47CSR2 sections 2.18 and 8.1.a currently reads:

2.17. 2.18. "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, as amended June 15, 1990, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

8.1.a. Specific state (i.e. total, total recoverable, dissolved, valence, etc.) of any parameter to be analyzed shall follow 40 CFR 136, Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act, as amended, June 15, 1990. (See also 47 C.S.R. 10, section 7.3 - National Pollutant Discharge Elimination System (NPDES) Program.)

47CSR2 Proposed changes:

2.17. 2.18. "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, as amended June 15, 1990 March 26, 2007, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

8.1.a. Specific state (i.e. total, total recoverable, dissolved, valence, etc.) of any parameter to be analyzed shall follow 40 CFR 136, Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act, as amended, June 15, 1990 March 26, 2007. (See also 47 C.S.R. 10, section 7.3 - National Pollutant Discharge Elimination System (NPDES) Program.)

Sincerely,

Lydia Work, Licensed Remediation Specialist

Environmental Services Manager/Senior Chemist

Triad Engineering, Inc.

PO Box 889

219 Hartman Run Road

Morgantown, WV 26505

phone: 304.296.2562

fax: 304.296.8739

mobile: 304.552.1442

From: <Jermckeen@aol.com>
To: <comments@wvdep.org>
Date: 7/9/2007 11:59:15 PM
Subject: Comments on 60CSR5 and 47CSR2...

WV Dept. of Environmental Protection...

We strongly oppose the proposed antidegradation rule (60CSR5) which would remove streams from the Tier 2.5 list.

The original "presumptive list" of Tier 2.5 streams adopted by the Legislature in 2001 contained 444 streams. Last year you (The WV DEP) cut the original "presumptive list" down to a list of 309 streams This year you are proposing to slash the list again – down to just 157 streams

We also strongly support the water quality standards rule, 47CSR2).

Jerry and Julie McKeen
Rt. 2 Box 54

Bristol, WV 26426

Gloria J. Shaffer - Tier 2.5

From: "Michael Davis" <shiboriwest@gmail.com>
To: <comments@wvdep.org>
Date: 7/10/2007 7:54 PM
Subject: Tier 2.5

This is to let you know of my strong opposition to the antidegradation rule 60csr5 and my strong support for the water quality standards in 47csr2.

Don't lower the number of streams to fewer then 309. The 309 is already a compromise, down from 444. It is important to maintain water quality at the highest possible standards for many reasons. I own Cheat River Campground and Cabins on The Shavers Fork of the Cheat River east of Elkins. My family depends on this business for our livelihood. I know first-hand how important the quality of our state's rivers is to the many people who come here to enjoy them. somethiOur rivers are unique this close to the East Coast. Don't let them get trashed.

Sincerely

Michael Davis

--
Michael Davis
Water Gap Retreat
172 High Street
Elkins, WV 26241

e-mail - Karen Wright

From: "Dave Buhrman" <omb00794@mail.wvnet.edu>
To: <comments@wvdep.org>
Date: 7/16/2007 7:45:32 AM
Subject: oppose antidegradation rule (60CSR5)

WV DEP administrators,

I am strongly opposed to the reduction for Tier 2.5 West Virginia streams from 309 streams down to 157. I believe this is entirely politically motivated and does not represent the best interests of West Virginia citizens.

DEP has proposed an excellent
Water Quality Standards rule (47CSR2), and this is one I strongly DO support.

Please add these comments to the record,

Sincerely,

David Buhrman
HC 67 Box 533
Renick, WV 24966

Scott Mandirola - waterquality standard 47CSR2

From: "john mathwin" <jmathwin@hotmail.com>
To: <comments@wvdep.org>
Date: 7/16/2007 4:10 PM
Subject: waterquality standard 47CSR2

15 July 07

To whom it may concern,

I am a Maryland resident who frequently travels to near-by West Virginia to fish, usually for trout, therefore I want to encourage you to support water quality standards rule 47CSR2 and oppose antidegradation rule 60CSR5. I also hope that you will list the 309 streams that have been classified as deserving Tier 2.5 protection. West Virginia is a beautiful State. I hope you will rise to the occasion, put politics aside and follow the dictates of science and keep the States waters clean.

Sincerely,

John Mathwin
13515 Crispin Way
Rockville MD 20853
301-871-7658

Scott Mandirola - Tier 2.5 Stream List

From: Lawrence Burdiss <tmwv@verizon.net>
To: <comments@wvdep.org>
Date: 7/16/2007 7:27 PM
Subject: Tier 2.5 Stream List

Hi. My name is Tim Webb and I live in Clarksburg, WV. I want to let you know that I am strongly opposed to the removal of streams from the Tier 2.5 list (60CSR5). This is important to me as a sportsman, and to my family and friends. I also want you to know that I support the water quality standards rule (47CSR2). Thank you. Sincerely, Tim

From: <JStone5532@aol.com>
To: <comments@wvdep.org>
Date: 7/17/2007 9:20:19 AM
Subject: re: Tier 2.5 protection

Sirs: I strongly oppose the proposed antidegradation rule (60CSR5) which would remove streams from the Tier 2.5 list. I do wholeheartedly support the water quality standards rule (47CSR2). At a time when clean water is the world's most precious commodity, one that is disappearing rapidly, it behooves those of us who are still fortunate enough to have access to clean water to protect it with the zeal that it deserves. It is shocking to me that state government and state agencies are either not aware of the urgency for protecting water or are so profit-oriented that they disregard this very obvious need to make sure that clean water is a priority.

Kathryn A. Stone
26 Birch Tree Lane
Chas., WV 25314
Tel: (304) 342-1161

****

From: "Judy Rodd" <info@saveblackwater.org>
To: <comments@wvdep.org>
Date: 7/17/2007 1:08:36 PM
Subject: Tier 2.5 comment

We strongly strongly oppose the proposed antidegradation rule (60CSR5) which would remove streams from the Tier 2.5 list and strongly support the water quality standards rule, 47CSR2. Please return to the original "presumptive list" of Tier 2.5 streams adopted by the Legislature in 2001 containing 444 streams.

Judith Rodd, Director
For Friends of Blackwater
501 Elizabeth St.
Charleston, WV 25311
304-345-7663
www.saveblackwater.org

Scott Mandirola - 60CSR5

From: Wayne Miller <wmiller@bpwebworks.com>
To: <comments@wvdep.org>
Date: 7/17/2007 2:06 PM
Subject: 60CSR5

As a registered voter, tax-paying resident of West Virginia, and member of Trout Unlimited, I wish to state that I strongly oppose the proposed anti-degradation rule (60CSR5) which would remove streams from the Tier 2.5 list. I also strongly support the water quality standards rule (47CSR2). The time has come to protect the quality of our water. No one, whether business or individual, has the right to pollute this valuable resource.

Wayne Miller

From: <Atkinson.Cheryl@epamail.epa.gov>
To: <smandirola@wvdep.org>
Date: 7/17/2007 6:03:04 PM
Subject: EPA Comments on WV Proposed WQS Changes

Dear Scott

In May 2007, the West Virginia Department of Environmental Protection (DEP) began the Public Notice and Comment Period on its proposed changes to West Virginia Requirements Governing Water Quality Standards 47CSR2. EPA appreciates the opportunity to provide comments for your consideration on the proposed changes to West Virginia WQS. Our comments on the proposed rule are listed below.

1. Section 2.2 Definitions

This section defines "cool water lakes" as lakes managed by the West Virginia Division of Natural Resources (WVDNR) for cool water fisheries, with summer residence times greater then 14 days. EPA supports West Virginia adopting a definition for cool water lakes; however, the definition provided simply references the lakes managed by WVDNR, without actually defining a cool water lake. What is WVDNR's definition of cool water lakes? EPA recommends that West Virginia more precisely define cool water lakes, with reference to the aquatic life communities that are supported in those waters or the physical conditions that define those lakes. In addition EPA recommends that West Virginia add a warm water lake definition for clarity.

Concerning the 14-day residence time, please explain how West Virginia calculates and applies the 14-day residence time. The information should discuss whether the residence time is adjusted to account for seasonal variation in tributary discharge, and whether a residence time has been calculated with respect to differences in residence time of the epilimnion and hypolimnion during summer stratification (when it develops). This information will assist in providing support for the lake water classification and on how the proposed criteria protect those classifications.

2. Section 8.3 Criteria for Nutrients in Lakes

This section establishes nutrient criteria designed to protect Water Use Categories B (Propagation and Maintenance of Fish and Other Aquatic Life) and Categories C (Water Contact Recreation). Section 8.3.b sets forth the numeric criteria for nutrients (based on an average of four or more samples collected during the period May 1-October 31) as follows:

Total phosphorus shall not exceed:

50 ug/l for warm water lakes
30 ug/l for cool water lakes

Chlorophyll-a shall not exceed:

30 ug/l for warm water lakes
15 ug/l for cool water lakes

For both total phosphorus and chlorophyll-a West Virginia states that in lieu of sampling, impairment may be evidenced at any time by noncompliance with section 3.2, as determined by the Secretary. EPA reminds West Virginia that water quality criteria must be based on a sound scientific rationale and must contain sufficient parameters to protect the designated use(s). West Virginia's submission for approval to EPA of adopted nutrient criteria should include documentation of that rationale and the methodology used to develop the criteria for nutrients in lakes.

In addition, EPA has the following specific questions and comments:

Please provide rationale showing how total phosphorus criteria of 50 ug/l for warm water lakes and 30 ug/l for cool water lakes protect the designated uses. The supporting rationale should include adequate justifications for both the warm water and the cool water criteria.

Please provide rationale showing how chlorophyll-a criteria of 30 ug/l for warm water lakes and 15 ug/l for cool water lakes protect the designated uses. The supporting rationale should include adequate justifications for both the warm water and the cool water criteria.

?nThe rationale should include an analysis to show that the criteria are protective against "worst case" conditions (i.e., hot summers with low flow).

West Virginia should show how the total phosphorous and chlorophyll-a proposed criteria relate to the Trophic State Index scale of eutrophication. Please also show how the expected levels of chlorophyll-a correlate, if at all, to the expected levels of total phosphorus, and how this correlation is reflected in the criteria.

The proposed regulations state that the criteria protect water use categories B and C. Will these criteria also protect other uses from the impact of nutrients? If not, how does West Virginia intend to adequately protect the other uses from nutrients? Does West Virginia plan to adopt additional criteria in the future?

Do all of the lakes in Appendix F have a residence time greater than 14 days? If not, or if for some reason the residence time decreases, do the criteria still apply?

In addition to providing a list of all cool water lakes, West Virginia should provide a list of all warm water lakes, to more clearly specify the particular waters subject to criteria

EPA¡¦s regulations at CFR Part 131.10(b) require that in ¡§designating uses of a waterbody and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.¡" How do the proposed criteria account for downstream effects?

Please explain how the proposed nutrient criteria will be protective against the degradation of more pristine lakes with much lower level of nutrients.

Please explain why a determination of whether a water segment meets the criteria should depend on an average of at least four sample, instead of simply on one sample, or the average of the samples actually taken. How is the sampling procedure establish in the rule protective of the designated uses?

Does West Virginia expect to sample all lakes more than four times within the index period? If not, what would trigger additional sampling to determine compliance with the WQS?

Please explain how the criteria will be assessed to determined impairment for the purpose of the Section 303(d) list.

EPA supports the language in the proposed regulations which explicitly provides that impairment for nutrients also can be determined based on the application of narrative criteria. EPA recommends that West Virginia further define impairment from nutrient by specifying that in the case of nutrients, a water would be deemed impaired if the nutrients have directly or indirectly caused: nuisance algae or excessive growth of macrophytes; unacceptable water clarity, odor or microbial growth; or an increase or decrease in the relative abundance of species or in the diversity of indigenous communities beyond the normal range.

EPA's recommended parameters for nutrient assessment are total phosphorus, total nitrogen, chlorophyll-a, and some measure of water clarity." Please explain and support West Virginia's rationale for not proposing total nitrogen and secchi nutrient criteria for lakes.

3. Section 7.2.d.16.2 Socio-economic Variance for Weirton Steel Corporation (now Mittal Corporation) on Harmon Creek.

This section extends the socioeconomic variance until July 1, 2009 to allow Mittal Corporation to continue operating under the existing variance while information is being reviewed. Extending a variance based solely on time needed to review information is not appropriate. West Virginia's submission for approval should include documentation that the conditions for granting a variance still apply and that the variance provisions are consistent with 40 CFR 131.10(g). Discharger-specific variances based on the substantial and widespread economic and social economic impact factors should include a demonstration that alternative control strategies were evaluated as part of the showing that standards were not attainable.

4. Section 7.2.d.19.3 Chloride Variance for Union Carbide on Ward Hollow

This section extends the variance from July 1, 2008 to July 1, 2010. The exception was approved by EPA in September 2006. West Virginia should still provide documentation that the conditions for granting the variance still apply and that the variance provisions are consistent with 40 CFR 131.10(g).

5. Section 7.2.d.24.1 Pats Branch Use Removal

This section removes Category A (Public Water Supply) and Category D1 (Irrigation) designated uses for Pat Branch. EPA notes that a ¡§Use Removal Request Information Sheet¡¨ was attached to the proposed rule. West Virginia¡¦s submission for approval should include the full assessment of factors affecting the attainment of a use, which may include physical, chemical and biological and economic factors and documentation supporting that the use is not attainable nor exiting for the stream subject to use removal.

6. Appendix A Category B-2 Trout Waters

West Virginia has deleted a number of streams from the trout water list. EPA reminds West Virginia that States may remove a designated use which is not an existing use, as defined in Section 131.3, if the State can demonstrate that attaining the designated use is not feasible. West Virginia's submission for approval should include a use attainability analysis (UAA) covering each stream or stream segment that is being removed from the trout list. As defined in the water quality standards regulations, a UAA is a structured scientific assessment of factors affecting the attainment of a use, which may include physical, chemical and biological and economic factors. 40 C.F.R. 131.3(g). EPA notes that this assessment can be simple or complex, depending on the water body in question and the reason for the removal of the use. For streams that may have been erroneously designated as trout streams, a UAA could consist of data showing that the natural conditions (such as physical and chemical conditions) that prevent the water body from sustaining a year-round trout population have been present all along, and that those conditions are not subject to change.

7. Appendix E, Section 8.13.1 Fecal Coliform exception for the Ohio River

This section expands the fecal coliform exception for the non-recreational season of November¡VApril on the Ohio River to include Category A (Public Water Supply). The WVDEP Briefing Document states that the revisions is based on a 1986 Rationale document from the Environmental Quality Board (EQB). It is unclear how this document provides sound scientific rationale to protect the Ohio River's drinking water use. Public water supply use shall be protected at all times. EPA reminds West Virginia that water quality criteria must be based on a sound scientific rationale and must contain sufficient parameters to protect the designated use(s). West Virginia's submission for approval to EPA of adopted criteria for the Ohio River Drinking water use should include documentation of that rationale.

8. Section 8.14.1 Fluoride Standard

This section changes the fluoride standard for Category D (Agriculture and wildlife uses) to Category D1 (Irrigation). The WVDEP Briefing Document states the revisions is based on a 1986 Rationale document from the Environmental Quality Board (EQB). West Virginia's submission for

approval should include rational on how this change protect the use.

Coordination with the U.S. Fish and Wildlife Service (FWS)

In February of 2001, EPA entered into a Memorandum of Agreement (MOA) with the FWS and the National Marine Fisheries Service (NMFS) regarding coordination under the CWA and the Endangered Species Act (ESA). Section 7 of the ESA requires that all Federal agencies ensure that any covered action, (including any approval or disapproval action under CWA Section 303(c)) is not likely to jeopardize the continued existence of any threatened or endangered species, or to result in the destruction or adverse modification of the habitat that has been designated as critical for species.

We would appreciate your cooperation in meeting the spirit of these commitments under the MOA in order to expedite our 303(c) action once revisions to West Virginia's WQS rule are submitted for our review. While we recognize that this MOA does not bind the state, dischargers, construction projects and others who are individually responsible for compliance with the Endangered Species Act. West Virginia can assist EPA in meeting our commitment by facilitating early exchange of information with the FWS and helping in early identification of potential problems. This effort can contribute to a speedier review by EPA and decrease the likelihood of a nonoccurrence by FWS on an action to approve any newly adopted criteria.

Please note that the comments and questions listed below, regarding either existing or proposed water quality standards, are preliminary in nature and do not constitute a disapproval or determination by EPA under Clean Water Act Section 303(c). Approval/disapproval decisions will be made by the Region following adoption of new/revised standards by the state/tribe and submittal to EPA. Any determination pursuant to Clean Water Act Section 304(c)(4)(B) may only be made by the Administrator.

If you have any questions please let me know.

Cheryl Atkinson
- - -
Water Quality Standards
Middle Atlantic Region
U.S. Environmental Protection Agency
215 814 3392
215 814 2318 (Fax:)

From: Jessica Greathouse
To: Gloria J. Shaffer; Scott Mandirola
Date: 7/17/2007 1:11:22 PM
Subject: Fwd: FW: WVCA Comments WQS Rule

>>> "Jason Bostic" <jbostic@wvcoal.com> 7/17/2007 12:08 PM >>>
July 17, 2007 Ms. Jessica Greathouse West Virginia Department of Environmental Protection Public Information Office 601 57th Street SECharleston, WV 25304Via electronic mail: comments @wvdep.org; jgreathouse@wvdep.org Re: Comments on Proposed Revisions to State Water Quality Standards Rule, 47 CSR 2 Dear Ms. Greathouse: Pursuant to the notice filed with the West Virginia Secretary of State, attached are the comments and observations of the West Virginia Coal Association regarding the agency's proposed revisions to the state's Water Quality Standards Rule, 47 CSR 2. Jason BosticVice-PresidentEnvironmental & Regulatory Affairs West Virginia Coal Association

West Virginia Coal Association
PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

July 17, 2007

Ms. Jessica Greathouse
West Virginia Department of Environmental Protection
Public Information Office
601 57th Street SE
Charleston, WV 25304

Re: Comments on 2008 Proposed Revisions to Water Quality Standards Rule

Dear Ms. Greathouse:

Pursuant to the notice published in the State Register by the West Virginia Department of Environmental Protection (WV DEP), the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's proposed revision of water quality standards rule.

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 primary goal is to enhance the viability of the West Virginia coal industry by supporting efficient and environmentally responsible coal extraction and processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA appreciates the opportunity to provide

comments to WV DEP regarding the proposed revisions to the state's water quality standards rule.

General Comments

WVCA is pleased that in the proposed rule WV DEP has moved to permanently codify the chronic aluminum criterion that has been approved by the federal Environmental Protection Agency (EPA). As we detail in subsequent comments, the revised chronic aluminum standard properly reflects the level of scientific research that exists with respect to aluminum, reversing an ill-advised acceptance of a scientifically-deficient standard by the Environmental Quality Board (EQB) and ending a 10-year plus effort to revise the chronic aluminum criterion. With respect to trout streams, WVCA has serious concerns regarding the agency's proposed expansion of these stream classifications. As the agency is well aware, classifying a stream as a trout stream through a formal Legislative rule means that any subsequent change to such a list requires additional Legislative action. WVCA believes that this is unnecessary because WV DEP can, and has adequately protected trout streams through its administration of the NPDES permitting program. In addition to these comments, WVCA endorses the comments filed on this rule proposal by the West Virginia Chamber of Commerce.

Specific Comments

Aluminum

WVCA has actively participated in rulemaking initiatives with WV DEP, the EQB and the West Virginia Legislature regarding aluminum that have culminated with the approval by EPA of a revised chronic aluminum criterion for West Virginia. As in past rulemaking efforts, WVCA supports the revised aluminum criterion as approved by EPA and totally supports the current proposal to permanently codify the revision.

Previous comments and supporting documentation provided by WVCA to both WV DEP and the EQB detail the rulemaking history of aluminum in West Virginia and nationally, and support EPA's approval of the revised 750 ug/L chronic aluminum criterion. WVCA has attached copies of these original comments and asks the agency to consider them with respect to the current rulemaking effort.[1]

Trout Streams

WV DEP has proposed to massively expand the list of streams codified within the water quality standards rule as "trout streams". As noted in previous WVCA comments to this agency and the EQB, the permitting ramifications of classifying a water segment as trout stream are significant, with different water quality standards (uniformly more stringent) applying to trout streams. Incorrectly classifying a water segment as a trout stream will have

[1] See generally WVCA's initial comments and supporting attachments as submitted in October 2005 to WV DEP regarding aluminum. Copy provided as attachment "A".

serious economic and environmental ramifications for mining operations and mineral reserve holders situated in proximity to such streams.

WVCA believes that the agency already has the adequate tools necessary to protect trout streams absent expanding the codified list contained in this rule. WV DEP, in the NPDES permitting process, will apply appropriate trout stream effluent limitations if the agency believes a stream to have a trout population regardless of whether or not the stream or stream segment is on the codified list contained in the water quality standards rule or not. The only difference is that in the permitting process, the applicant has the opportunity to present data such as water samples and fish surveys to refute the agency's assertion that a stream is a trout stream, and has a right of appeal if they continue to disagree with agency's assignment of trout stream limits. The ability to dispute the trout stream designation is very important, especially since some of the data supporting the current initiative to expand the codified list is decades old.

Additionally, some streams proposed for codification on the trout stream list are stocked, not native trout streams, and as such do not deserve the restrictive water quality effluent limitations that were intended for application on native, naturally reproducing trout streams. The failure of the codified trout stream list to recognize the difference between native and stocked populations reveals another shortcoming that exists in West Virginia's approach to protecting trout streams. While WVCA believes that the best approach to protecting trout streams is for the agency to assign limits on a permit-by-permit basis (see proceeding comments),

we also believe that the both WV DEP and the West Virginia Department of Natural Resources should develop a classification system that acknowledges the differences among the trout populations found in West Virginia. Ideally, such a classification system would differentiate streams that support native, naturally reproducing trout streams. Similar classification approaches exist in other states (see attachment "B"), and we believe the development of a similar system for West Virginia would better facilitate the protection of the state's most pristine waters versus the current approach where every single "trout stream" receives the most restrictive effluent limitations.

Respectfully Submitted,

Jason D. Bostic
Vice-President
Environmental & Regulatory Affairs

From: Jessica Greathouse
To: Gloria J. Shaffer; Scott Mandirola
Date: 7/17/2007 1:17:35 PM
Subject: Fwd: RE: WVCA Comments Attachment A

>>> "Jason Bostic" <jbostic@wvcoal.com> 7/17/2007 1:11 PM >>>
Attachment A to WVCA's WQS comments

July 17, 2007 Ms. Jessica Greathouse West Virginia Department of Environmental Protection Public Information Office 601 57th Street SECharleston, WV 25304Via electronic mail: comments @wvdep.org; jgreathouse@wvdep.org Re: Comments on Proposed Revisions to State Water Quality Standards Rule, 47 CSR 2 Dear Ms. Greathouse: Pursuant to the notice filed with the West Virginia Secretary of State, attached are the comments and observations of the West Virginia Coal Association regarding the agency's proposed revisions to the state's Water Quality Standards Rule, 47 CSR 2. Jason BosticVice-PresidentEnvironmental & Regulatory Affairs West Virginia Coal Association

West Virginia Coal Association
PO Box 3923, Charleston, WV 25339 ■ (304) 342-4153 ■ Fax 342-7651 ■ www.wvcoal.com

FILE COPY

Ms. Gloria Shaffer
West Virginia Department of Environmental Protection
Division of Water and Waste Management-
Water Quality Standards Program
601 57th Street SE
Charleston, WV 25304

Via Electronic Mail: Gjshaffer@wvdep.org

Re: Comments on 2007 Triennial Review of Water Quality Standards

Dear Ms. Shaffer:

Pursuant to the September 22, 2005 announcement by the West Virginia Department of Environmental Protection (WV DEP), the West Virginia Coal Association (WVCA) offers the following comments and observations regarding the agency's first triennial review of water quality standards.

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 producing members account for 80 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 appreciates the opportunity to provide comments to WV DEP regarding revisions to water quality standards.

General Comments

Prior to the adoption of any water quality standard recommended by the federal Environmental Protection Agency (EPA), WV DEP must have a full understanding of the criteria's application to West Virginia. EPA requires that states only adopt criteria consistent with the agency's recommended standards—it does not require that states adopt all criteria. Wholesale adoption of federal standards by West Virginia in the past has resulted in state water quality standards that are inappropriate for conditions found in West Virginia and have spurred intensive rulemaking efforts to revise these standards (see subsequent comments regarding aluminum and selenium).

Blind acceptance of EPA standards has also placed West Virginia at an economic disadvantage with surrounding states that elected not to adopt certain criteria. Without understanding background water quality levels, geology, and other state-specific factors, adoption of EPA standards is risky to the stability of regulatory programs such as the TMDL program. Adoption of EPA standards absent scientific investigation as to the applicability of the standard also presents serious social and economic implications (coal mining and manganese, aluminum

and selenium) and fails to paint an accurate picture of the effect of proposed water quality standards for consideration by the public and policy makers. Collection of technical and economic data will also assist WV DEP in filing "Fiscal Notes" for proposed water quality standard changes as required by *W. Va. Code* §§29A-3-4, 22-11-2 and 22B-3-4(b).

WVCA encourages WV DEP to conduct scientific data collection with respect to any new criteria based on federal recommendations and to adequately survey NDPES permit holders as to the possible economic and technical aspects of any new criteria.

Specific Comments

Aluminum

The current aluminum criteria for West Virginia remains a serious concern for the West Virginia coal industry. WVCA supported an initiative through the West Virginia Legislature and the West Virginia Environmental Quality Board (EQB) to reexamine the chronic aluminum criterion. This initiative culminated in a proposed revision to the chronic aluminum criterion that was approved by the EQB and the Legislature and now awaits the approval of the federal Environmental Protection Agency (EPA). WVCA remains supportive of this revision, and encourages WV DEP to actively pursue its approval with EPA. Since the pending revision was promulgated by the EQB, WVCA feels it is necessary to submit substantive comments on the West Virginia aluminum

criterion to WV DEP, as the agency now charged with water quality standards development.

The EQB adopted EPA's aquatic life criteria for aluminum of 87 ug/L chronic and 750 ug/L acute with little or no scientific research or consideration of the criteria's applicability to West Virginia, setting in motion a 10-year effort to revise the state aluminum criteria.

In 1996, WV DEP presented data to the EQB demonstrating that several streams in West Virginia violated the aluminum standards of 87/750, yet they supported healthy and diverse fish and benthic populations. In addition to the WV DEP data, the EQB reviewed EPA's supporting scientific rationale for the chronic aluminum standard and determined that the criterion was scientifically flawed. Had the federal agency followed its own guidance for the development of water quality standards, the chronic aluminum criterion would be equal to the acute criterion of 750 ug/L.[1] The EQB collected information from other parties regarding aluminum, and during 1997 triennial review proposed deleting the chronic aluminum criterion from the state's water quality standards. The Legislature approved the revision and it was forwarded to EPA for approval.

Unfortunately, when the EQB staff prepared the rule package regarding deletion of the aquatic life criterion for aluminum, it failed to include the wealth of

[1] See generally Attachment "A", comments regarding the chronic aluminum criterion submitted to the EQB during the 1997 Triennial Review and attachment "B", comments submitted to the EQB in September, 2004.

scientific information reviewed by the Board members regarding the flawed nature of EPA's chronic criteria.[2] Instead, the EQB rationale referenced only concerns related to NPDES permits and the information supplied by WV DEP regarding state stream concentrations of aluminum. While these concerns were valid, failure to include scientific reference information regarding the unsound federal chronic criterion lead to EPA's disapproval of the chronic aluminum criterion deletion.

Recent experience in neighboring states illustrates that a properly-justified deletion of the chronic aluminum criterion that references the flawed basis of the standard can indeed gain EPA approval. In December 2000, Pennsylvania (through its agency, the Pennsylvania Department of Environmental Protection) rejected EPA's chronic aluminum criterion:

> **The Department believes that the chronic criterion of 87 ug/L should not be adopted because it is based on chronic toxicity test results that show inconsistencies within tests and between studies. The chronic studies described in the EPA's 1988 Ambient Water Quality Criteria for Aluminum document do not show a consistent pattern of toxicological response to the different exposure concentrations within or between the various tests described. The final chronic value developed following the EPA's procedures and based on available acute-chronic ratios is 750 ug/L, the same value as the acute criterion. However, the EPA then lowered the final chronic value to 87 ug/L, claiming it to be necessary to protect brook trout and striped bass. The EPA's justification for this was data derived from studies that EPA staff later described as data that should not be used for criteria development.**

[2] See Attachment "C", EQB rationale document dated July 7, 1998.

The Department cannot adopt the flawed chronic criterion for use in the Commonwealth without better justification.[3]

In August 2001, EPA Region III approved Pennsylvania's rejection of the chronic aluminum criterion:

> **Pennsylvania adopted the EPA recommendation for the protection of aquatic life from acute exposures but did not adopt EPA's chronic recommendation. The Department [Pennsylvania Department of Environmental Protection] that the federal aluminum chronic criterion of 87 ug/L should not be adopted because it is based on chronic toxicity test results that show inconsistencies within the tests and between studies, and it question [sic] the supporting data in which the chronic criterion has been based.**
>
> **The issues surrounding the chronic aluminum criterion are not new, and EPA Region III is not taking issue with Pennsylvania's lack of a criterion at this time. We do believe that the absence of the chronic criterion will be adversely affect [sic] threatened and endangered species in Pennsylvania. Our reasoning is that the two specific species that the chronic criterion was lowered to protect brook trout and stripped bass, are not threatened or endangered. [4]**

Following EPA's disapproval of West Virginia's deletion of the chronic aluminum criterion, rather than further pursuing the change with the added benefit of a properly justified rationale document, the EQB chose to proceed with changing the measure of aluminum from total to dissolved. This revision was approved by EPA, but it did not address the problems associated with the scientifically-deficient chronic aluminum criterion.

---

[3] See page 16 of Attachment "D", Pennsylvania water quality standards revisions as published in the Pennsylvania Bulletin.

[4] See Attachment "E", letter dated August 2, 2001 from Rebecca Hanmer, EPA Region III to David Hess, Pennsylvania Department of Environmental Protection.

In 2004 the West Virginia Legislature directed the EQB to revise the chronic aluminum criterion. Based on scientific information supplied to the EQB during the public comment process, the EQB again proposed a revision of the chronic aluminum criterion.[5] This change remains under review at EPA.

As stated earlier, WVCA supports the current revision that is undergoing review at EPA as an appropriate step toward a defensible aluminum criteria for West Virginia and urges WV DEP to interact with EPA regarding the standard's approval. However, should the current revision be rejected by EPA, problems with the chronic aluminum criterion will remain, requiring further examination and future revision by WV DEP.

Selenium

Several years ago the EQB adopted the federally-recommended criteria for selenium. Based on a review of the administrative record, it appears that the EQB adopted the criteria with no scientific research regarding the criteria's applicability to West Virginia. The 1987 criteria were largely based on selenium toxicity to fish in a large pond with extended water retention times. This is a vastly different environment than exists in the steeply-sloped terrain of West Virginia, and application of this lotic criteria to flowing streams is misplaced.

Since the selenium criteria was originally promulgated by EPA, further research and studies have been conducted that illustrate the flawed nature of the

[5] See generally Attachment "B", September 2004 comments to the EQB regarding revision of the chronic aluminum criterion.

criteria. EPA is currently in the process of revising the nationally-recommended selenium criteria.[6] Because of the flawed nature of the current selenium criteria and its inappropriate application to flowing waters in West Virginia, WVCA is supportive of this federal initiative. However, we caution WV DEP to fully analyze the appropriateness of applying any federally-revised standard in West Virginia. Available information seems to indicate that a state-specific selenium standard for West Virginia may be warranted, as fish populations appear to be healthy and diverse in streams with identified selenium concentrations.[7] The pressing nature of selenium also warrants that WV DEP investigate a state-specific criteria for West Virginia since the federal revisions remains pending. The agency has recently completed draft TMDL documents that impose selenium allocations based on the existing water quality criteria, and will continue to develop and implement selenium TMDLs, adding urgency to this important issue.

Trout Streams

In the EQB's last triennial review, it proposed adding some 400 streams to the list of Trout Waters contained in the water quality standards rule. The EQB allowed only a 30-day comment period on this major expansion of the Trout Waters list. The EQB proposal was based only on the recommendations of the

[6] See Attachment "F", October 29, 1999 Federal Register Notice published by EPA regarding revision of the selenium criteria and Attachment "G", December 17, 2004 Federal Register Notice announcing draft criteria and requesting public comments.

[7] See Attachment "H", relevant pages from comments filed by the National Mining Association and WVCA regarding the programmatic Mountaintop Mining/ Valley Fill Environmental Impact Statement and *Fish Communities and Their Responses to Environmental Factors in the Kanawha River Basin, West Virginia, Virginia, and North Carolina.* U.S. Geological Survey, 2001.

West Virginia Division of Natural Resources, with no accompanying data or information on whether or not the streams actually meet the requirements to be classified as trout waters. Based on the lack of information regarding the current status of the proposed trout waters and the limited opportunity for comment provided, the West Virginia Legislature rejected the revision.

The permitting ramifications of classifying streams as trout waters can be significant, as different water quality standards (uniformly more stringent) apply to trout streams. Incorrectly classifying a water as a trout stream can have serious economic impacts for property owners and NPDES dischargers along that streams and should not be taken lightly be WV DEP. Before the agency undertakes any effort as part of its 2007 triennial review to list any additional streams as trout waters, WV DEP should conduct scientific investigations of water quality and fish populations in order to ascertain if a water body meets the criteria required of a trout stream. The agency should also hold hearings in the communities where such streams are located to take comment from the persons most familiar with the conditions of these streams.

We appreciate the agency's consideration of these comments.

Respectfully Submitted,

Jason D. Bostic
West Virginia Coal Association

From: Jessica Greathouse
To: Gloria J. Shaffer; Scott Mandirola
Date: 7/17/2007 1:17:50 PM
Subject: Fwd: RE: WVCA Comments Attachment A

>>> "Jason Bostic" <jbostic@wvcoal.com> 7/17/2007 1:11 PM >>>

Attachment B to WVCA's WQS comments

July 17, 2007 Ms. Jessica Greathouse West Virginia Department of Environmental Protection Public Information Office 601 57th Street SECharleston, WV 25304Via electronic mail: comments @wvdep.org; jgreathouse@wvdep.org Re: Comments on Proposed Revisions to State Water Quality Standards Rule, 47 CSR 2 Dear Ms. Greathouse: Pursuant to the notice filed with the West Virginia Secretary of State, attached are the comments and observations of the West Virginia Coal Association regarding the agency's proposed revisions to the state's Water Quality Standards Rule, 47 CSR 2. Jason BosticVice-PresidentEnvironmental & Regulatory Affairs West Virginia Coal Association

Classifying WV Trout Streams

[redacted]
September 20, 2006

Need:
A process for classifying streams or stream segments into categories that reflect their quality and value as coldwater fisheries resources.

Purpose:
An appropriate classification system provides a basis for establishing water quality criteria and other regulations that are sufficiently protective of the highest quality trout streams but not unnecessarily restrictive of economic activities near streams of lesser quality.

Four Issues that Should be Addressed:

1. An objective process for placing a particular stream or stream segment on the state "Trout List."
2. A tiered classification system for streams on the trout list that reflect the quality and value of each stream as a trout fishery.
3. A system of class specific water quality criteria (and other appropriate regulations) that is appropriately protective of class uses.
4. An objective process for transferring streams from the "trout list" to a tier 2, 2.5, or 3 designation.

Tiered Classification System for Trout Streams in Other States:

Pennsylvania:

Distinction between stocked and wild trout streams. Wild trout streams are defined as streams that have resident trout populations resulting from natural reproduction. Wild trout streams contain young-of-year trout at some time of the year and two or more age classes.

Wild trout streams are further classified into Class A, B, or C. Class A streams are wild trout streams that possess exceptionally productive wild trout populations and require no stocking to support a productive fishery. Class B streams possess healthy populations and good reproduction, but the streams may not be productive enough to support exceptional fisheries. Class C streams possess wild populations, but supplemental stocking is needed to support a successful fishery. Tributaries of wild trout streams are classified as wild.

Kentucky:

Streams are rated based on six parameter: 1) trout presence; 2) trout population structure (are there multiple age classes?); 3) water quality; 4) habitat quality; 5) fishing success (judged using angler surveys); and 6) aesthetics. Streams are rated as excellent, good, fair, and poor. The ratings are then transferred to four classes: Class I – exceptional trout streams that have wild brook trout populations; Class 2 – high quality trout streams that are managed as put-take-and-grow fisheries or have carryover beyond one year; Class III – general trout streams that are managed as put-and-take fisheries; and Class IV – marginal trout streams that have a fair rating and managed as put-and-take fisheries.

Georgia:

Distinguish between primary and secondary trout streams. Primary trout streams support self-sustaining populations of rainbow, brown, or brook trout. Secondary trout streams

are those with no evidence of natural reproduction, but which are capable of supporting trout throughout the year.

Wisconsin:

Initial stream classification into Cold and Warm water communities. Trout streams are equated with Coldwater streams. These streams are then broken into three classes. Class 1 trout streams are high quality trout waters that have sufficient natural reproduction to sustain populations of wild trout, at or near carrying capacity. Class 2 trout streams have some natural reproduction, but not enough to utilize all available food and space, and may require some stocking to maintain a desirable sport fishery. Class 3 trout streams have no natural reproduction, require stocking each year to support a fisher, and have little or no annual carryover of stocked trout.

Definition of a Trout Stream in WV:

WV trout streams are defined as streams or stream segments that sustain year-round trout populations. This definition excludes streams that must be stocked annually to maintain a population (i.e., it would exclude Class 3 streams in Wisconsin from the trout stream list). This definition does not distinguish among trout streams of varying quality.

A Proposed Classification Scheme for WV Trout Streams:

Cold vs. Warmwater
Wild vs. Stocked
Stocked: Put-and-Take vs. Put-Take-and-Grow
Wild: Class I – IV (details below)

Classes of Wild Trout Streams based on the following variables:
Young-of-Year abundance
Adult abundance
Adult biomass
Maximum Adult size
Recreational Fishing Value?

Class I: Wild trout streams that possess high levels of both local reproduction and adult productivity. Sustain popular recreational fisheries without supplemental stocking.

Class II: Wild trout streams that possess high levels of local reproduction but relatively low levels of adult productivity. Streams are often too small or too sterile to support productive adult fisheries. Typically important as regional sources of juvenile trout.

Class III: Wild trout streams that possess relatively low levels of reproduction but support high levels of adult productivity. Streams are often too large to support high levels of reproduction. Some stocking may be needed to maximize fishery productivity.

Class IV: Wild trout streams that possess relatively low levels of reproduction and adult productivity. These streams are often large rivers in the mountainous regions of the state. Significant levels of stocking are needed to maintain fishery productivity. Stocked fish may carryover from year to year. Often valuable stocked fisheries.

Sampling Protocols

- Single-pass electrofishing with moveable seines
- Reach Length = 40x mean stream width
- Mid-June – late August sampling period
- Measure length and weight of all trout
- Identify young-of-year individuals
- Calculate yoy abundance, adult abundance, adult biomass, maximum adult size
- Criteria for "wild" trout stream: presence of trout young of year AND adults above some threshold abundance
- Fishery Rating based on user surveys

Eastern Brook Trout Joint Venture Issues:

- Adjacency (where a stream is relative to other streams: protecting, restoring and connecting core brook trout habitats).
- Fishery potential (goal to reestablish wild brook trout populations to streams where brook trout have been extirpated; goal to enhance populations in streams where population levels have been reduced).
- Watershed scale classification (trout stream management at a watershed scale).
- interest in classifying trout streams to reflect goals of the WV Brook Trout Conservation Strategy.

From: Bruce Edinger <bruce_edinger@yahoo.com>
To: <comments@wvdep.org>
Date: 7/17/2007 2:29:18 PM
Subject: Proposed WVDEP stream regulation changes

17 July 2007

Dear West Virginia Department of Environmental Protection,

It is important that the West Virginia Department of Environmental Protection continue its protection of river environments. Therefore, I support its proposed Requirements governing water quality standards, 47CSR2, which increases the number of streams protected under the trout stream B2 status.

However, I am opposed to its proposed Antidegradation implementation procedures, 60CSR5, which will reduce by about half the number of streams protected currently on the Tier 2.5 list. All 307 currently listed streams have been previously shown by WVDEP to qualify for protection. The current listing of streams is already a compromise that was expensive and lengthy, and resulted in these streams not having to be listed under the more restrictive Tier 3 category. There is no scientific rationale for delisting the streams as proposed. In fact, research is uncovering more and more impacts to West Virginia streams that result from little-regulated pollutants. Proposals to further reduce stream protection from water pollution in WV are short-sighted and destructive.

As a biologist and educator, I have been involved in stream monitoring and research in West Virginia for many years. I have worked many hours as a watershed volunteer in my local community, along side many other dedicated volunteers, to study and get funding to actually clean up a part of the dramatic pollution of irresponsible coal mining from years past, when a WVDEP did not exist. To this day acid mine drainage continues to blight stream wildlife, landscapes, property values and development options, and estimates for its clean up run into the 100s of millions of dollars. Now, in 2007 a WVDEP does exist, and following the lead of engineers and scientists, has worked hard for projects that reduce the impacts of problems such as acid mine drainage.

But the WVDEP should not pull the rug out from under its own feet.

The leadership of WVDEP needs to stick to their science-based guns and resist pressure to delist protected streams. West Virginia does not need another round of river and stream pollution, another round of threatened wildlife populations, and another round of diminished economic development alternatives.

Such a politically mandated change, not based on science, appears similar to recent national-level environmental policies made at the level of the Administration that ignore or oppose scientific evidence (attracting wide and justifiable criticism). West Virginia can and must do better. Our actions are a legacy for our children and their children.

Sincerely

Bruce Edinger
49 Poplar Avenue
Wheeling, West Virginia 26003

From: Joe Peabody WV Rivers <jpeabody@wvrivers.org>
To: <comments@wvdep.org>
Date: 7/17/2007 2:36:02 PM
Subject: WV Rivers Coalition Comments

Hi,

Attached are WV Rivers Coalition's comments pertaining to Proposed Rule 47 CSR2 and Proposed Rule 60 CSR5.

Thank you for your time.

Sincerely,

Joe Peabody
/Acting Executive Director
WV Rivers Coalition
304-637-7201/

WEST VIRGINIA RIVERS COALITION

329 Davis Avenue, Suite 7 • Elkins, West Virginia 26241 • (304) 637-7201 • www.wvrivers.org

Lisa McClung, Director
Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: Proposed Rule 47 CSR 2, Requirements Governing Water Quality Standards

Dear Ms. McClung:

West Virginia Rivers Coalition submits these comments on behalf of, and in collaboration with, the organizations and individuals 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 these comments are important to the future health of these valuable resources.

The following comments address WVDEP's proposed rules, 47 CSR 2, "Requirements Governing Water Quality Standards." In brief, the comments focus on six aspects of changes to the water quality standards, and are for the most part similar to the comments we filed in 2006:

1. The revised list of trout waters,
2. New nutrient criteria for lakes and reservoirs,
3. Removal of site-specific criteria for several streams,
4. Removal of the Blackwater River from the B-2 trout water list
5. Changes to criteria for several metals, and
6. Proposed use removal for Pats Branch.

1. The Revised List of Trout Waters

Similar to its actions with the list of Tier 2.5 waters, WVDEP has spent a tremendous amount of effort trying to appropriately identify streams requiring Category B2 "Trout Waters" designation. Before we specifically address the B2 list in the following sections, we would like to first commend WVDEP for listing an additional 337 streams as "Trout Waters" as defined by Section 2.19 of the proposed rule, 47 CSR 2. ***We commend DEP for its refusal to compromise on this proposed rule during the 2007 Legislative Session and strongly encourage the agency to continue to uphold these proposed designations.***

The listing of these streams provides exceptional benefits for the state and upholds the intent of the rule, whereas:

"It is declared to be the public policy 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, and other aquatic and plant life; and (3) the expansion of agriculture and the provision of a permanent foundation for healthy industrial development."[1]

1.a) Revising the Rule

WVDEP's decisions for B2 designations were made in close consultation with West Virginia Division of Natural Resources (WVDNR) biologists—particularly those from the Coldwater Management Section. Throughout the upcoming months during which the water quality standards package is reviewed by legislative committees, we encourage WVDEP to continue recognizing WVDNR as *the* expert agency with regards to the assessment of trout populations and trout streams across the state. WVDEP and WVDNR relied on decades of monitoring data at hundreds of sites to make decisions about designating streams as Category B2.

The criteria that WVDNR uses to identify "trout waters" as defined by Section 2.19 are further detailed in WVDEP's briefing document about the proposed rule.[2]

1.b) "Existing Use" Designations Are a Clean Water Act Requirement

Sections 4.1.a and 6.1.b of 47 CSR 2 require the protection of existing uses. "Existing uses" are "those uses actually attained in a water body on or after November 28, 1975."[3] The proposed B2 list therefore correctly includes waters where sustained year-round trout populations, or trout reproduction, have been documented since November 28, 1975. ***We commend WVDEP for taking these required actions.***

1.c) The Importance of Trout Streams

We would also like to recognize that the listing of streams as trout waters based on existing use upholds the Clean Water Act objective listed in Section 101(a) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

By listing streams as Category B2 based upon eligibility provided by existing use, WVDEP is not only remaining consistent with the Act, but it is also exhibiting a tremendous effort to reach the goals of the Act to restore polluted waters.

---

[1] Section 1.1 of 47 CSR 2, "Requirements Governing Water Quality Standards" (See also W.Va. Code §22-11-2). Note: The addition of 337 streams to the Category B2 "Trout Waters" list within the rule, 47 CSR 2, appropriately reflects federal requirements outlined in sections 101(a) (2) and 303(c) of the Clean Water Act, as well as criteria outlined in 40 CFR 131.10(a) and (b).

[2] Briefing Document for proposed rule, 47 CSR 2, "Requirements Governing Water Quality Standards." Available online: http://www.wvdep.org/show_blob.cfm?ID=10641&Name=BRIEFING_DOCUMENT_WQS.pdf.

[3] See also 40 CFR 131.3

In West Virginia, for example, numerous trout streams have suffered from siltation, acid rain, acid mine drainage, sewage, and other pollutants. The value of these streams to the state's economy is significant. While streams that currently support year-round trout populations are generous sources of revenue for the state,[4] streams that once supported these populations may provide similar benefits in the future.

The Middle Fork of the Tygart River in Randolph, Upshur and Barbour counties, for example, has restoration projects carried out by WVDEP and WVDNR that have remediated impacts from acid rain and acid mine drainage with treatment projects in its headwaters.[5]

According to WVDNR, there are now stocking programs, brown trout are spawning in upper reaches of the Middle Fork, and brook trout fisheries are restored throughout numerous tributaries. According to WVDNR, 150 miles of Middle Fork trout stream have been rehabilitated for less than $600 per mile each year– far less than the $40,000 each of these miles is thought to provide in economic impacts.[6]

The above-mentioned scenario provides evidence that designating trout streams based on existing use is not only required by the Clean Water Act, but also a proven action that upholds the integrity of the Clean Water Act and provides a valuable service for the state.

1.d) Tier 2.5 Listings and B2 Designation Are Separate Processes

Listing streams for Tier 2.5 protections and designating streams as Category B2 "Trout Waters" are completely different processes, with different protections.

At times throughout the Tier 2.5 listing process, including comments made during the July 10, 2006 public hearing concerning the rule, 60 CSR 5, some parties objecting to listing streams for Tier 2.5 protections argued that these protections are not needed because "very stringent" water quality criteria (B2) are already in place for trout streams.[7]

---

[4] One mile of trout stream in West Virginia has an estimated economic impact worth $40,000 annually. http://www.envirovaluation.org/index.php?title=wtrf_www_wtrf_com_channel_7_cbs_wheeling&more=1&c=1&tb=1&pb=1 Accessed: July 5, 2006.

[5] http://www.wtrf.com/story.cfm?func=viewstory&storyid=3394 Accessed July 14, 2006. http://www.envirovaluation.org/index.php?title=wtrf_www_wtrf_com_channel_7_cbs_wheeling&more=1&c=1&tb=1&pb=1 Accessed: July 14, 2006.

[6] http://www.wtrf.com/story.cfm?func=viewstory&storyid=3394 Accessed July 14, 2006. http://www.envirovaluation.org/index.php?title=wtrf_www_wtrf_com_channel_7_cbs_wheeling&more=1&c=1&tb=1&pb=1 Accessed: July 14, 2006.

[7] Letter from Plum Creek Timber Company (Steve Yeager, Resource Supervisor) to West Virginia Department of Environmental Protection (Lisa McClung, Director of Division of Water and Waste Management) concerning Tier 2.5 listings: Dated December 19, 2005; Letter from Mead Westvaco (Kevin Wall, V.P. Engineering) to West Virginia Department of Environmental Protection (Lisa McClung, Director of Division of Water and Waste Management) concerning continued objections to Tier 2.5 listings: Dated December 28, 2005.

In the upcoming months, we encourage WVDEP to reiterate that water quality criteria and antidegradation are separate procedures. [8]

2. New Nutrient Criteria for Lakes and Reservoirs

The proposed rules include new nutrient criteria for lakes and reservoirs. Criteria are proposed for total phosphorus and chlorophyll a, and more stringent criteria are proposed for cool and cold water lakes. A list of cool and cold water lakes is included in a new Appendix F. The criteria in the new Section 8.3.b make it clear that while four or more samples are recommended between May and October, the Secretary can still make nutrient-related listings according Section 3.2, the narrative conditions not allowable in State waters.

The West Virginia Rivers Coalition participated actively in the Nutrient Criteria Committee, which was formed by the Environmental Quality Board in 2002 and continued meeting through 2006 after WVDEP took over responsibility for water quality standards. The Committee performed a considerable amount of research on lakes and reservoir criteria. They designed and implemented a monitoring program in summer 2004 to bring new West Virginia data into the analysis. The Committee eventually went through a weight-of-evidence process to reach consensus on the criteria that WVDEP has now proposed.

We commend WVDEP for adopting the Nutrient Criteria Committee's consensus, and recommend that the agency maintain these criteria now, and advocate for their adoption by the legislature and their approval by the United States Environmental Protection Agency.

3. Removal of Site-Specific Exemptions from Water Quality Criteria for Several Streams

Site-specific exemptions from water quality criteria should be granted only in very limited situations, and should be removed when they expire. We commend WVDEP for reviewing these exemptions and proposing that three be removed:

- Section 7.2.d.6.1, which exempted Stony River from thermal criteria, which expired in 1998;
- Section 7.2.d.20.3, which set site-specific numeric temperature criteria for Simmons Creek, which also expired in 1998; and
- Section 7.2.d.14.1, which excluded Water Use Categories A and E certain tributaries of the Youghiogheny River, for which WVDEP was unable to find any documentation.

We support these deletions from the water quality standards rule.

4. Removal of the Blackwater River from the B-2 Trout Water List

The current rule classifies the ***entire length of the Blackwater River*** as a B-2 trout water. Section 7.2.d.9 applies to the Blackwater River below Davis, and the Blackwater above Davis is listed in Appendix A as a B-2 trout water.

---

[8] Water quality standards and antidegradation policy are defined at 40 CFR sections 131.2 and 131.12, respectively.

WVDEP proposes to delete both of these listings, and to replace them with a listing in Appendix A for the Blackwater River from the mouth of North Fork upstream. If approved, the entire length of the Blackwater River below the confluence with the North Fork would be removed from the B-2 list.

In explaining this change, WVDEP's Briefing Document simply states: "In section 7.2.d.9, the Blackwater River is referred to as a trout stream, which is repetitive since it is listed on the trout list in Appendix A. Therefore, section 7.2.d.9 has been amended." This statement is false. The proposed change is not simply the removal of a repetitive reference; it is a delisting of miles of the Blackwater River.

According to the Clean Water Act, WVDEP cannot remove uses without performing a Use Attainability Analysis. WVDEP has given no indication that a UAA has been performed for the Blackwater River. WVDEP must therefore keep the entire Blackwater River on the B-2 list of trout waters at this time.

5. Changes to Criteria for Several Metals

WVDEP proposes to modify the formulas in Appendix E for five metals: cadmium, copper, nickel, silver, and zinc. We agree with WVDEP that these updates reflect those recommended by EPA in 2002. For clarity, we suggest that the wording and formulas in Sections 8.9.2 and 8.9.3 for dissolved trivalent chromium be edited to be consistent with those used for cadmium, copper, lead, nickel, silver, and zinc.

6. Proposed Use Removal for Pats Branch

Section 7.2.d.34.1 of the proposed rule states that "Pats Branch from its confluence with the Guyandotte River to a point 1000 feet upstream shall not have Water Use Category A and Category D1 designation." This constitutes a "Use Removal" under the provisions of the federal Clean Water Act, and WVDEP has acknowledged as much in a "Use Removal Request Information Sheet" document that was prepared on May 31, 2007.

While we do not necessarily disagree with the intent or necessity for this proposed Use Removal, we are concerned that the agency has not submitted this decision to a formal "Use Attainability Analysis" and the appropriate public notice and comment process as required by provisions of the Clean Water Act. For example, we can find no official notice or advertisement of this proposed Use Removal as required by the WV Administrative Procedures Act, prior to the official publication of this proposed rule.

Therefore, we request that WVDEP withdraw this proposed rule change and submit the Pats Branch Use Removal to a formal "Use Attainability Analysis" that includes a full public notice and comment process, including the opportunity for requesting a public hearing.

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

Sincerely,

Joe Peabody
Acting Executive Director
West Virginia Rivers Coalition

Cindy Rank
Mining Chair
West Virginia Highlands Conservancy

Don Garvin
Legislative Coordinator
West Virginia Environmental Council

Helen Gibbins
WV League of Women's Voters

Keith Pitzer
Executive Director
Friends of the Cheat

Don Gasper
Retired Fisheries Biologist
WV Division of Natural Resources

Deana Smith
President
Friends of the Little Kanawha

Gary Zuckett
Executive Director
West Virginia Citizens Action Group

Vivian Stockman
Project Coordinator
Ohio Valley Environmental Coalition

Paul Wilson
Chairman
State Chapter West Virginia Sierra Club

Judy Bonds
Coal River Mountain Watch

Randy Kesling
President
Mountaineer Chapter Trout Unlimited

Mr. Larry B. Dadisman
912 Greendale Dr.
Charleston, WV 25302-3224
304-343-1156
ldadisman@yahoo.com

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

Re: Comments Rules 47CSR2 Requirements Governing Water Quality Standards and 60CSR5 Antidegradation Implementation Procedures

Dear Agent,

1. Rule 47CSR2

I support the Water Quality Standards rule (47CSR2) which greatly expands the list of trout streams (called the "B2" list).

The water of this state needs to be protected from pollutants. Drinking water is our only means of this life support in our state. Transporting water from another area is expensive and as populations grow would be a very costly endeavor, even more so today. Lack of quality safe drinking water for consumption would devalue our state lands and cost our economy to the point which it would be irretrievable.
Achieving monies needed to clean up pollutants are difficult and almost impossible as funds become needed in other greatly important areas of our states budget.

Water across the United States has grown tremendously in value. The lack of drinking water across our country has put the value at an all time high an accelerating extension of our economy and to devalue it would be suicide to the drinking water business and to human consumption. West Virginia has shown this trend more so in recent years as water is lost to industry and citizens wait years to regain a drinking water source,, fall on deaf ears. The cost to these citizens is taken out of their livelihood, period.

2. Rule 60CSR5
Any rule changes to weaken our current laws fly in the face of the Federal Clean Water Act and the basic premise that we need to protect our current pollution free and clean waterways from any type of degradation. The Federal Clean Water Act is based on foresight by the our country's leading scientific community and great statesman from across our country.

I am for fully protecting our waters needed for existence on earth and keeping the highest value of human life and living as God gave us.

Sincerely,

Larry B. Dadisman

West Virginia American Water®

Sammy Gray
Manager, Government
& Regulatory Affairs

July 16, 2007

Mr. Scott G. Mandirola, Assistant Director
Water Quality Standards Program
Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

Re: 47 SCR 2: Requirements Governing Water Quality Standards

Dear Mr. Mandirola:

West Virginia American Water appreciates the opportunity to comment on the proposed rule 47 CSR 2: *Requirements Governing Water Quality Standards.* Enclosed are comments to Appendix B of the proposed rule. We hope you will give our comments careful consideration.

West Virginia American Water, headquartered in Charleston, is the largest regulated water provider in the state. The company operates nine water treatment facilities and serves 33 percent of West Virginia's population, or approximately 600,000 in 19 counties of West Virginia. Providing quality water services for more than a century, West Virginia American Water is a wholly-owned subsidiary of American Water.

Once again, thank you for the opportunity to provide comments on the proposed rule. If I can be of further assistance in this matter, please do not hesitate to contact me.

Sincerely,

Sammy Gray

Sammy Gray

1600 Pennsylvania Ave.
Charleston, WV 25302
T (304) 340-2005
F (304) 353-6360
M (304) 741-7934
E sammy.gray@amwater.com
I www.amwater.com

enclosure

West Virginia American Water
Comments Regarding Proposed Regulations
Title 47, Series 2
Legislative Rule
Requirements Governing Water Quality Standards
Appendix B

River basin	County	Operating Company	Source	Changes to be made
Monongahela	Lewis	WV Water-Weston District	West Fork River	Change Operating Company to WV American Water-Weston District
Monongahela	Lewis	West Fork River PSD	West Fork River	Delete
Kanawha River	Fayette	WV Water-Montgomery	Kanawha River	Change Operating Company to WV American Water-Montgomery District
Coal River	Kanawha	Washington PSD	Coal River	Delete
Coal River	Boone	WV Water-Madison District	Little Coal River	Delete
Coal River	Boone	Van PSD	Pond Fork	Delete
Elk River	Kanawha	Clendenin Water	Elk River	Delete
Elk River	Kanawha	WV Water-Kanawha	Elk River	Change Operating Company to WV American Water-Kanawha Valley District
Elk River	Braxton	WV Water-Gassaway Dist.	Elk River	Change Operating Company to WV American Water-Gassaway District
Elk River	Braxton	WV Water-Sutton Dist.	Elk River	Delete
Elk River	Webster	WV Water-Webster Springs	Elk River	Change Operating Company to WV American Water-Webster Springs District
New River	Fayette	Ames Heights Water	Mill Creek	Delete

New River	Fayette	Ansted Municipal Water	Mill Creek	Delete
New River	Summers	WV American Water-Bluestone Dist	Bluestone Lake	Add to List
New River	Fayette	WV American Water-New River Dist	New River	Add to List
Bluestone River	Summers	Jumping Branch-Nimitz	Mt. Valley Lake	Delete
Bluestone River	Mercer	WV Water Princeton	Impoundment/ Brusch	Delete
Bluestone River	Mercer	Lashmeet PSD	Impoundment	Delete
Bluestone River	Mercer	WV Water-Bluefield	Impoundment	Change Operating Company to WV American Water-Bluefield District
Greenbrier River	Summers	WV Water-Hinton	Greenbrier & New Rivers	Delete
Guyandotte River	Cabell	Salt Rock PSD	Guyandotte River	Delete
Guyandotte River	Cabell	Culloden PSD	Indian Fork Creek	Delete
Guyandotte River	Putnam	Lake Washington PSD	Lake Washington	Delete

West Virginia UNLIMITED

CONSERVE PROTECT RESTORE

July 10, 2007
104 Hillcrest Ave.
Elkview, WV 25071 – 9514

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

Subject: 2008 Rules

To Whom It May Concern:

I am writing to you as the Chairman of the West Virginia Council of Trout Unlimited (WVCTU) in regard to two proposed rules to be introduced to the 2008 WV legislative session; 47CSR2, Requirements Governing Water Quality Standards and 60CSR5, Antidegradation Implementation Procedures. .

WVCTU has more than 1700 members. Our mission is to conserve, protect and restore the coldwater fisheries of WV and their watersheds. We work to restore native brook trout habitat, stock brown trout fingerlings in suitable streams, participate in stream cleanup projects, support reasonable water quality standards, and engage in other projects to further our mission.

I am a chemical engineer and retired from Union Carbide in 1999 as a Senior Project Manager. I managed the design and construction of chemical plants around the world for 38 years. When I first came to the Kanawha Valley in 1961, the Kanawha River was not suitable for recreation in the Charleston area. The chemical industry acted as a good neighbor, cleaned up its' act by designing and operating its' plants according to the appropriate water quality standards, and now people fish, boat and swim in the Kanawha River in the Charleston and South Charleston areas. It is time that the extractive industries are required to step up and be good neighbors by treating the waters of West Virginia with the respect and concern that is deserved.

The main point on 47CSR2 is that the definition of B2 trout streams must remain the same; "Trout waters are defined as waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round trout populations." This is a good and proper definition.

The West Virginia Council of Trout Unlimited strongly objects to the reduction of the number of proposed Category Tier 2.5 streams to 157 in 60CSR5. The number of proposed streams should be at least the 309 streams that were in the

rules package introduced to the 2007 Legislative Session. The reduction from the initial presumptive list of 444 streams to 309 prior to that session was done by the DNR and DEP and had scientific basis. The reduction from 309 to 157 in the current proposed legislation was purely political and has no basis.

All reproducing trout streams should have Tier 2.5 protection, or if not, then they should be elevated to Tier 3 protection.

Trout fishing in WV brings in $80 million annually. There are 2000 miles of trout streams in WV, so this converts to $40,000 per mile of trout stream. Only a fraction of these streams are included in the 309 that were proposed to be given Tier 2.5 protection in the legislation introduced to the 2007 legislative session. The wholesale reduction of Tier 2.5 streams for political purposes must be reversed. It is not in the interest of the WV economy or its quality of life.

Water is the most important natural resource in WV – not coal, oil, gas, timber or other extractive materials. There is no alternative material to replace water as there is with extractive industry materials used for the production of energy. Pure water is required for sustenance of life and maintenance of health. We must provide the proper protection for this precious commodity.

Almost all of our Trout Unlimited members live and work in WV. We are not anti business or anti development. We believe that business and development can operate and grow in a responsible manner while still maintaining the quality of our waters and the recreational value. We have worked with various companies (including oil and gas and coal companies) on trout stream restoration projects in WV and have reached win – win solutions for both sides.

It is time for WV to comply with federal water quality requirements by enacting the Antidegradation Implementation Procedures and including the 309 streams for Tier 2.5 protection as presented in the package that was originally sent to the 2007 Legislature.

Sincerely,

Larry Orr

Larry Orr
Chairman, WVCTU
304 965 7185
edhorse@suddenlink.net

cc: Karen Light

From: "O'Neill, Ashley L." <ashley.oneill@klgates.com>
To: <smandirola@wvdep.org>
Date: 7/17/2007 2:04:20 PM
Subject: Comments to Title 47-2 and 47-10

Mr. Mandirola,

Please find the attached transmittal letter and comments to Title 47, Series 2 and Title 47, Series 10, submitted on behalf of Koppers Inc. Please confirm that you have received and are able to view these comments.

Thank you,

Ashley L. O'Neill

<<S. Mandirola Transmittal Letter.pdf>> <<Koppers Comments to 47-2.pdf>> <<Koppers Comments to 47-10.pdf>>

Ashley L. O'Neill
K&L Gates
535 Smithfield Street
Pittsburgh, PA 15222
(412) 355 - 8607
(412) 355 - 6501 (fax)

CC: "Komoroski, Kenneth" <kenneth.komoroski@klgates.com>

K&L|GATES

Kirkpatrick & Lockhart Preston Gates Ellis LLP
Henry W. Oliver Building
535 Smithfield Street
Pittsburgh, PA 15222-2312

T 412.355.6500 www.klgates.com

July 17, 2007

Ashley L. O'Neill
D 412.355.8607
F 412.355.6501
ashley.oneill@klgates.com

Via E-Mail smandirola@wvdep.org

Mr. Scott G. Mandirola
Program Manager
Water Quality Standards Program
Division of Water and Waste Management
WV Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: Comments 59 47 C.S.R. 2 and 47 C.S.R. 10

Dear Mr. Mandirola:

Enclosed please find Koppers Inc.'s comments regarding the proposed revisions to the West Virginia Regulations governing Water Quality Standards and the NPDES Permit Program, 47 C.S.R. 2 and 47 C.S.R. 10, respectively.

Very truly yours,

Ashley L. O'Neill

Ashley L. O'Neill

ALO:cam
Enclosures

COMMENTS TO TITLE 47
LEGISLATIVE RULES
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER RESOURCES

SERIES 2
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

The following comments to 47 C.S.R. 2 Requirements Governing Water Quality Standards are intended to illustrate that, in several respects, the West Virginia rules governing water quality standards are more stringent than necessary for the protection of West Virginia's waters. First, West Virginia's Requirements Governing Water Quality Standards are more stringent than the requirements of neighboring states and are also more stringent than the requirements of ORSANCO or the US EPA. Additionally, West Virginia's requirements are more stringent than dictated by the application of scientific principles and, in some instances, are unable to be implemented and/or enforced using currently available technology.

The application of unnecessarily stringent rules to companies doing business in West Virginia puts those companies at a competitive disadvantage as compared to companies located in neighboring states and creates an undue burden on West Virginia businesses. Further, the imposition of requirements not supported by the application of scientific principles limits the options available to companies without furthering the protection of the state's waters.

The following comments point out portions of the proposed Requirements Governing Water Quality Standards that are more stringent than necessary and include suggested revisions which will alleviate the burden placed on West Virginia businesses without diminishing the level of protection afforded to the state's waters.

Comments to Section 47-2-5 - Prohibition on the Overlap of Mixing Zones

<u>Discharges of Dissimilar Pollutants – Section 5.2.h.5</u>

47 C.S.R. 2 § 5.2.h.5, in its current state, prohibits the overlap of mixing zones regardless of whether or not the outlets in question discharge the same pollutant. This prohibition is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point. In fact, in instances where the upstream or downstream discharge point discharges pollutants other than the pollutant at issue in the mixing zone, that discharge would likely have a beneficial dilutive effect on the in-stream concentration of the pollutant in question. Further, in a recent

decision of the Circuit Court of Kanawha County, West Virginia[1] the court held that the Environmental Quality Board's interpretation of this provision to prohibit the overlap of mixing zones for dissimilar pollutants was "clearly wrong." Accordingly, Section 5.2.h.5 should be deleted.

Discharges of the Same Pollutant in Close Proximity

Additionally, a blanket prohibition on the overlap of mixing zones in which the same pollutant is discharged is unnecessary to protect designated human health or aquatic life uses of water This prohibition is more restrictive than the requirements of ORSANCO and of neighboring states. The following paragraph, taken from the 2006 ORSANCO Pollution Control Standards should be inserted as a new section under 5.2 in order to address circumstances where mixing zones potentially overlap:

> *If mixing zones from two or more proximate sources interact or overlap, the combined effect must be evaluated to ensure that applicable values will be met in the area where any applicable mixing zones overlap.*

Category A Half-Mile Zones – Section 5.2.h.6

In its current state, proposed rule 47-2-5.2.h.6 prohibits the overlap of a mixing zone with any category A half-mile zone, regardless of whether such overlap poses any risk that the concentrations designated for Water Use Category A would be exceeded. This prohibition is more stringent than is necessary to protect category A half-mile zones from pollution. Accordingly, the prohibition set forth in 47-2-5.2.h.6 should be replaced with the following language taken from the 2006 ORSANCO Pollution Control Standards.

> *No mixing zone shall adversely impact water quality so as to interfere with potable or industrial water supplies, bathing areas, reproduction of fish, other aquatic life and wildlife.*

In its current state, Appendix B designates the entire Ohio River as a water used as public water supply. Given the size and flow of the Ohio River, designation of the entire river as Category A is unnecessary to protect the quality of the river for the purpose of drinking water supply. The proposed rules should be revised to clarify that only those portions of the Ohio River that are within one-half mile of a drinking water intake are designated as Category A. Further, the proposed rules should clarify that the prohibition set forth at C.S.R. 47-2-7.2.a.2, as well as other conditions applicable to waters designated as Category A, apply only to discharges that occur within one-half mile of a

[1] PPG Industries, Inc. v. Director, Division of Water and Waste Management, Department of Environmental Protection, Civil Action No. 06-AA-125 June 22, 2007.

drinking water intake, and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake. Alternatively, Category A designations should be reevaluated and limited to those streams or segments of streams that actually include a drinking water supply.

Comments to 47-2-7.2.b - Water Quality Design Flow

47-2-7.2.b.2 requires that all West Virginia water quality standards, including those for the protection of aquatic life or human health, apply ..."at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10)." The water quality criteria for the protection of human health developed by EPA, however, are recommended for application in state water quality standards at the harmonic mean flow rate (HMF) rather than at the 7Q10 rate. EPA's basis for recommendation of use of the HMF flow is because the principal routes of human exposure to toxic pollutants are through consumption of drinking water and consumption of fish. The toxicological endpoints upon which EPA's water quality criteria are based consider lifetime exposures to toxins rather than short term exposures such as those relevant to acute aquatic life criteria.

The 7Q10 and HMF flows for the upper reach of the Ohio River in West Virginia are as follows:

7Q10	5,880 cfs
HMF	20, 500 cfs

The HMF is approximately 3.5 times greater than the 7Q10 flow. Thus, water-quality based effluent limitations for the protection of human health that are based on the 7Q10 flow are more restrictive than the HMF-based human health criteria recommended by EPA. The 7Q10 based water quality based effluent limitations are more restrictive than necessary for the protection of human health.

Many states and ORSANCO have adopted the EPA human health criteria and have applied these criteria to their respective water quality standards at the harmonic mean flow. Existing and proposed West Virginia water quality standards for many pollutants, including polynuclear aromatic hydrocarbons, are in the lower nanogram per liter (ng/L) range. Water-quality based effluent limitations calculated from these existing and proposed water quality standards and based on the 7Q10 flow rate often result in effluent limits that are not reliably measurable with current, commercially available state-of-the art analytical methods and are not attainable.

Accordingly, in order to implement EPA's recommended use of the HMF for human health criteria, the following amended version of 47-2-7.2.b (new language underlined) is proposed.

> *7.2.b In the absence of any special application or contrary provision, water quality standards <u>for protection of aquatic life</u> shall apply at all times when the flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency. <u>Water quality standards for protection of human health shall apply at all times when the flows are equal to or greater than the harmonic mean flow (HMF).</u>*

Comments to 47-2 Appendix E – Selected Numerical Water Quality Standards

<u>Polynuclear Aromatic Hydrocarbons</u>

EPA recommends that water quality standards, including those for PAHs, be based on the mean harmonic flow rather than the 7Q10 flow. For the reasons discussed above, WVDEP should use the HMF rather than the 7Q10 flow in developing water quality standards for PAHs.

EPA has not published a definition for the term "Total PAHs" for purposes of ambient water quality standards or of implementing those standards in NPDES permits in the form of water quality-based effluent limitations. West Virginia NPDES permits may include water quality-based effluent limitations for Total PAH. EPA has, however, classified the seven PAH compounds having human health criteria of 3.8 ng/L as "B2" PAH compounds. These B2 PAH compounds are identified by EPA as probable human carcinogens. The sum of the human health criteria for these B2 PAH compounds (3.8 ng/L * 7 or 26.6 ng/L) is referred to as B2 PAHs for purposes of these comments.

Point-source dischargers of PAHs will often discharge several PAH compounds rather than just one or two compounds. The proposed West Virginia WQS for acenaphthene, anthracene, fluoranthene, fluorene and pyrene range from 0.30 mg/l to 8.3 mg/L (300,000 ng/L to 8,300,000 ng/L). EPA has established and West Virginia has proposed relatively high human health criteria values for these compounds compared to criteria for B2 PAHs. Given current advanced wastewater treatment facilities installed for PAH wastewater discharges, it is highly likely that discharges of the above PAHs will <u>not</u> pose a *reasonable potential* to cause or contribute to exceedances of the respective WQS. However, that is not the case for the seven B2 PAHs that have proposed West Virginia water quality criteria of 3.8 ng/L.

The criteria for the seven B2 PAH compounds are each 3.8 ng/L, a level which is not detectable using conventional EPA analytical methods and about a factor of 10 lower than detection levels for more sensitive GC/MS (gas chromatography/mass spectroscopy) methods. If the B2 PAH criteria were applied directly as effluent limits with no mixing zone, compliance would likely not be possible for dischargers of PAHs.

A reasonable approach that WVDEP should use in this regard is to establish a definition of "Total B2 PAHs" comprising the seven B2 PAHs identified by EPA as probable human carcinogens. This would be equivalent to a Total B2 PAH criterion 26.6 ng/L. NPDES permit water quality-based effluent limits could then be established on the basis of "Total B2 PAHs". This approach makes sense from an environmental standpoint because if the B2 PAH compounds are controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the respective human health criteria for those compounds.

Based on the above, the following definition of "Total B2 PAHs" is proposed for addition to Appendix E, Table 1:

"Total B2 PAHs" means the sum of human health water quality criteria for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene (i.e., 26.6 ng/L). Total B2 PAHs shall be regulated in NPDES permits in lieu of individual effluent limits for the B2 PAHs identified by EPA."

Phone: 304-527-280

Wheeling - Nisshin

Penn & Main Streets • P.O. Box 635 • Follansbee, WV 26037

June 14, 2007

WV-DEP
Public Information Office
611 57th Street S.E.
Charleston, WV 25304

RE: WRITTEN COMMENTS
47 CSR 2, Rules Governing Water Quality Standards
47 CSR 10, National Pollutant Discharge Elimination System

To Whom It May Concern:

Please accept these written comments on behalf of Wheeling-Nisshin and make them part of the rulemaking record.

Thank you ~

Ty Lollini
Manager, Environmental, Health & Safety

TL/psm
Attachment
Cc: R. Stepputtis
S. Beresh
K. Kinney
B. Schwarz

Items for West Virginia Water Quality Standards

1. Water Quality Design Flow for Human Health Standards – Harmonic Mean Flow

- "Water quality design flow" is the flow in the river WVDEP uses to develop NPDES permit limits for municipal and industrial dischargers for aquatic life and human health water quality standards.

- Current West Virginia water quality regulations require that WVDEP use the "7Q10 flow" (i.e., the lowest seven-day average flow that occurs once in ten years) as the design flow for all water quality standards including those for aquatic life and human health.

- The 7Q10 flow is a near draught flow meant mean to protect fish and other aquatic life under relatively extreme low river flow conditions.

- U.S. EPA recommends and ORSANCO and several states use the "harmonic mean flow" as the water quality design flow for human health standards. The "harmonic mean flow" is less than the annual average flow of a river, but much greater than the "7Q10 flow".

- EPA and other states find that using the "harmonic mean flow" for application of human health water quality standards provides adequate protection of human health for people who use rivers and streams as a source of potable water and for consumption of fish.

- For example, for the upper Ohio River in the Weirton – Wheeling area:

	cfs	mgd
7Q10 flow	5,880	3,800
Harmonic mean flow	20,500	13,250
Annual average flow	43,000	27,800

cfs: cubic feet of water per second
mgd: million gallons of water per day

- By using the 7Q10 flow for developing permit limits based on human health standards WVDEP ends up developing more stringent effluent limits for municipal and industrial dischargers than would be recommended by EPA and would be developed by other states, putting West Virginia municipal and industrial dischargers at a disadvantage.

- The water quality regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow.

2. Mixing Zones

- A recent ruling by the WV Environmental Quality Board states that mixing zones cannot overlap the discharge plume of another outlet (outfall) even if the discharge from the downstream outfall does not contain the substance discharged by the upstream outfall.

- This is overly restrictive and can result in more stringent NPDES permit limits than would be derived by other states in similar circumstances.

- The mixing zone rules in the water quality standards should be amended to allow for mixing zones for an upstream outfall to overlap the plume of a downstream outfall provided the discharges from both outfalls are considered in a manner that is protective of water quality standards and designated water quality uses.

Items for West Virginia NPDES Permits

1. Background Water Quality – Ohio River

- ORSANCO has a network of Ohio River water quality monitoring stations that includes most of the Ohio River locks and dams. This network has been in place for many years and the water quality data are collected with proper sample collection techniques and sensitive analytical methods approved by U.S. EPA.
- The data are representative of the background water quality of the Ohio River for dischargers in the downstream pools.
- Foe NPDES permitting, WVDEP often requires dischargers to conduct additional background water quality studies immediately upstream of their respective outfalls. These studies require deployment of sampling crews in boats and the same type of water quality analyses as conducted by ORSANCO. Depending on the pollutants analyzed and the number of times samples must be obtained, these studies can cost from $30,000 to $60,000.
- WVDEP should be directed to consider and use the ORSANCO background water quality data in nearly every case, the exceptions being where the ORSANCO data may not address a particular pollutant or class of pollutants found in the outfall under study.

2. Dissolved Metals Translators – Ohio River

- "Dissolved metals translators" provide a means to account for the "total" and dissolved" portions of metals in the receiving water and in the discharges from a facility when developing NPDES permit effluent limits for many metals.
- ORSANCO has conducted extensive studies throughout the Ohio River to develop site-specific "dissolved metals translators" for each pool of the River.

- As noted above for background water quality, WVDEP often requires dischargers to conduct additional studies for "dissolved metals translators" at their expense.
- WVDEP should be directed to use the ORSANCO studies in lieu of discharger studies unless there are compelling reasons for a discharger study.

MOUNTAIN STATE

Wilbur B. Winland
President

Phone: 740-283-5640
E-mail: winlandwb@wpsc.com

July 13, 2007

Ms. Lisa A. McClung
Director, Division of Water & Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Mr. Scott G. Mandirola
Assistant Director, Water Quality Standards Program
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: **Comments on Public Noticed Proposed Amendments to Requirements Governing Water Quality Standards and National Pollutant Discharge Elimination System (NPDES) Program**

Dear: Ms. McClung and Mr. Mandirola:

I would like to thank you for the opportunity to comment on the recently Public Noticed proposed amendments to the current Title 47, Series 2 rules dealing with the "Requirements Governing Water Quality Standards" and also Title 47, Series 10 rules dealing with the "National Pollutant Discharge Elimination System (NPDES) Program".

Mountain State Carbon, LLC. (MSC) operates a metallurgical coke facility in Follansbee, West Virginia and is currently covered under an existing WV/NPDES Permit which has been extended. Any changes to the WQS will impact future NPDES permit renewals of our Coke Plant and thereby the potential viability of our plant operations. MSC and its employees, many of whom live in the upper Ohio River Valley, have a vested interest in the environmental health of the Ohio River and its many benefits, including drinking water, recreation and industrial water supply for many area businesses. For this reason we are most interested in protecting this vital resource, as well as maintaining a healthy business climate in which to support our families. It is with this dual interest we offer the enclosed comments on the proposed WQS.

We trust that WVDEP will give due consideration to our comments before finalizing changes to WQS.

Sincerely,

Wilbur B. Winland

Wilbur B. Winland
President

Enclosures (2)

Comments On
Title 47 Legislative Rules
Department of Environmental Protection
Series 2
Requirements Governing Water Quality Standards

§47-2-5. Mixing Zones

Overlap of Mixing Zones

The current 47CSR2, section 5.2.h.5 prohibits mixing zones from overlapping one another. Based on a recent Environmental Quality Board ruling[1], the Department has been interpreting this prohibition to prevent the overlap of a mixing zone from any downstream outlet, whether or not the downstream outlet discharges the pollutant in question. This prohibition can have the effect of truncating mixing zones based solely on the location of downstream discharges that actually would have a dilutive (beneficial) effect on in-stream concentrations of the pollution in question. This prohibition is not necessary to protect designated human health or aquatic life uses. Furthermore, the Environmental Quality Board Ruling was recently overturned by the Circuit Court of Kanawah County.[2] Section 5.2.h should be deleted.

Outlets in Close Proximity

The following paragraph taken from the 2006 ORSANCO Pollution Control Standards should be inserted as a new section under section 5.2. to address circumstances where mixing zones potentially overlap:

> *If mixing zones from two or more proximate sources interact or overlap, the combined effect must be evaluated to ensure that applicable values will be met in the area where any applicable mixing zones overlap.*

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

In its current state, proposed rule 47-2-5.2.h.6 prohibits the overlap of a mixing zone with any Category A half-mile zone, regardless of whether such overlap poses any risk that the concentrations designated for Water Use Category A would be exceeded. This prohibition is more stringent than is necessary to protect drinking water supplies. Accordingly, the prohibition set forth in 47-2-5.2.h.6 should be replaced with the following language taken from the 2006 ORSANCO Pollution Control Standards.

---

[1] Final Order of the West Virginia Environmental Quality Board: Appeal No 05-17-EQB, Appeal No. 05-18-EQB; July 24, 2006.

[2] Final Order, Civil Action No. 06-AA-125, Circuit Court of Kanawah County, West Virginia; June 22, 2007.

No mixing zone shall adversely impact water quality so as to interfere with potable or industrial water supplies, bathing areas, reproduction of fish, other aquatic life and wildlife.

Also, the proposed rules should be revised to clarify that the prohibition set forth at C.S.R. 47-2-7.2.a.2 for discharges in excess of Category A concentrations applies only to discharges that occur within the half-mile zone, and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

§47-2-7. West Virginia Waters

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

See above comments under §47-2-5 that apply also to section 7.2.a.2

Water Quality Design Flow

47CSR2, section 7.2.b. requires that all West Virginia water quality standards, whether they be for protection of aquatic life or human health "*...shall apply at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10).*" EPA has developed recommended water quality criteria for protection of human health and has recommended that the criteria for many substances, including polynuclear aromatic hydrocarbons, be applied in state water quality standards at the harmonic mean flow (HMF) rather than at the 7Q10. EPA's stated basis for recommending the HMF as the water quality design flow for human health criteria is that the principal routes of exposure are through consumption of drinking water and consumption of fish, and that the toxicological endpoints upon which the criteria are based consider lifetime exposures rather than short term exposures such as would be important for acute aquatic life criteria.

For the upper reach of the Ohio River in West Virginia, the 7Q10 and harmonic mean flows are as follows:

7Q10	5,880 cfs
HMF	20,500 cfs

The HMF is approximately 3.5 times greater than the 7Q10. Consequently, as noted below, water quality-based effluent limits based on the 7Q10 flow and human health are more restrictive than necessary as measured against limits calculated on the basis of the harmonic mean flow and human health criteria as recommended by EPA.

Many states and ORSANCO have adopted the EPA human health criteria and have applied those criteria in their respective water quality standards at the harmonic mean

flow. Because existing and proposed West Virginia water quality standards for many substances (e.g., polynuclear aromatic hydrocarbons) are in the low nanogram per liter (ng/L) range, preliminary water quality-based effluent limits calculated from the 7Q10 flow and existing or proposed water quality standards for these substances often results in effluent limits that are not attainable and not measurable with current commercially available state-of-the-art analytical methods.

The following amended 47CSR2, subsection 7.2.b is proposed (new language underlined) to implement EPA's recommended use of the harmonic mean flow for human health criteria:

> *7.2.b. In the absence of any special application or contrary provision, water quality standards for protection of aquatic life shall apply at all times when the flows are equal to or greater than the minimum mean seven (7) consecutive day draught flow with a ten (10) year return frequency. In the absence of any special application or contrary provision, water quality standards for protection of human health shall apply at all times when the flows are equal to or greater than the harmonic mean flow (HMF).*

47CSR2, Appendix E, Table 1
Comments on Selected Numerical Water Quality Standards

Polynuclear Aromatic Hydrocarbons

Table 1 presents the human health water quality standards for polynuclear aromatic hydrocarbons (PAHs) proposed by WVDEP.

Table 1
Proposed West Virginia PAH Water Quality Standards

PAH Compounds	West Virginia Proposed Human Health Criteria (ng/L)
Acenaphthene	670,000
Anthracene	8,300,000
Benzo(a)anthracene	3.8
Benzo(a)pyrene	3.8
Benzo(b)fluoranthene	3.8
Benzo(k)fluoranthene	3.8
Chrysene	3.8
Dibenzo(a,h)anthracene	3.8
Fluoranthene	300,000
Fluorene	1,100,000
Indeno(1,2,3-cd)pyrene	3.8
Pyrene	830,000

As noted above, EPA recommends that human health PAH WQS be applied at the harmonic mean flow. The 2006 ORSANCO Pollution Control Standards reflect that recommendation. For the reasons stated above, WVDEP should adopt that approach.

EPA has not published a definition of "Total PAHs" for purposes of ambient water quality standards or implementing those standards in NPDES permits in the form of water quality-based effluent limits. However, the seven PAH compounds with human health criteria of 3.8 ng/L are classified by EPA as "B2", probable human carcinogens. The sum of the criteria for these compounds (26.6 ng/L) is referred to as B2 PAHs for purposes of these comments.

Discharges from by-product coke plants, coal tar distillation plants and other sources of PAHs almost always discharge several regulated PAH compounds rather than one or two compounds. The proposed West Virginia WQS for acenaphthene, anthracene, fluoranthene, fluorene and pyrene range from 0.30 mg/l to 8.3 mg/L (300,000 ng/L to 8,300,000 mg/L). EPA has established and West Virginia has proposed relatively high human health criteria values for these compounds compared to criteria for B2 PAHs. Given current advanced wastewater treatment facilities installed for most PAH wastewater discharges, it is highly likely that discharges of the above PAHs will not pose a *reasonable potential* to cause or contribute to exceedances of the respective WQS. However, that is not the case for the seven B2 PAHs that have proposed West Virginia water quality criteria of 3.8 ng/L.

The criteria for the seven B2 PAH compounds are each 3.8 ng/L, a level which is not detectable using conventional EPA analytical methods and about a factor of 10 lower than detection levels for more sensitive GC/MS (gas chromatography/mass spectroscopy) methods. If the B2 PAH criteria were applied directly as effluent limits with no mixing zone, compliance would likely not be possible for most dischargers of PAHs.

A reasonable approach that WVDEP should use in this regard is to establish a definition of "Total B2 PAHs" comprising the seven B2 PAHs identified by EPA as probable human carcinogens. This would be equivalent to a Total B2 PAH criterion 26.6 ng/L. NPDES permit water quality-based effluent limits could then be established on the basis of "Total B2 PAHs". This approach make sense from an environmental standpoint because if the B2 PAH compounds are controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the respective human health criteria for those compounds.

Based on the above, the following definition of "Total B2 PAHs is proposed for addition to Appendix E, Table 1:

> *"Total B2 PAHs" means the sum of human health water quality criteria for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene (i.e., 26.6 ng/L). Total B2 PAHs shall be regulated in NPDES permits in lieu of individual effluent limits for the B2 PAHs identified by EPA."*

Fecal Coliform

The proposed addition of a November through April fecal coliform limit of 200 colonies per 100 mL as a monthly geometric mean for the Ohio River Category A human health WQS should be adopted to provide for consistency with the approach taken for the Category C water quality standard.

Bud E. Smith
Director,
Environmental Control

Wheeling Corrugating Company
A DIVISION OF WHEELING-PITTSBURGH STEEL CORPORATION
Since 1890

Phone: 304-234-2662
Fax: 304-234-2613
smithbe@wpsc.com

July 13, 2007

Ms. Lisa A. McClung
Director
Division of Water & Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

RECEIVED
JUL 17 2007
WATER QUALITY STDS

Mr. Scott G. Mandirola
Assistant Director
Water Quality Standards Program
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: **Comments on Public Noticed Proposed Amendments to Requirements Governing Water Quality Standards and National Pollutant Discharge Elimination System (NPDES) Program**

Dear: Ms. McClung and Mr. Mandirola:

Please find enclosed our comments on the recently Public Noticed proposed amendments to the current Title 47, Series 2 rules dealing with the "Requirements Governing Water Quality Standards" (WQS) and also Title 47, Series 10 rules dealing with the "National Pollutant Discharge Elimination System (NPDES) Program".

Wheeling Corrugating Company, a Division of Wheeling-Pittsburgh Steel Corporation, operates a steel coil painting facility in Beech Bottom, West Virginia which is currently covered under an existing WV/NPDES Permit. Any changes to the WQS will impact future NPDES permit renewals of our Beech Bottom Plant and thereby the potential viability of our plant operations. Wheeling Corrugating Company and its employees, many of whom live in the upper Ohio River Valley, have a vested interest in the environmental health of the Ohio River and its many benefits, including drinking water, recreation and industrial water supply for many area businesses. For this reason we are most interested in protecting this vital resource, as well as maintaining a healthy business climate in which to support our families. It is with this dual interest we offer the enclosed comments on the proposed WQS.

We trust that WVDEP will give due consideration to our comments before finalizing changes to WQS.

Very truly yours,

Bud E. Smith
Director, Environmental Control

Enclosures (2)

Wheeling Corrugating Company

7/13/07

Comments On
Title 47 Legislative Rules
Department of Environmental Protection
Series 2
Requirements Governing Water Quality Standards

§47-2-5. Mixing Zones

Overlap of Mixing Zones

The current 47CSR2, section 5.2.h.5 prohibits mixing zones from overlapping one another. Based on a recent Environmental Quality Board ruling[1], the Department has been interpreting this prohibition to prevent the overlap of a mixing zone from any downstream outlet, whether or not the downstream outlet discharges the pollutant in question. This prohibition can have the effect of truncating mixing zones based solely on the location of downstream discharges that actually would have a dilutive (beneficial) effect on in-stream concentrations of the pollution in question. This prohibition is not necessary to protect designated human health or aquatic life uses. Furthermore, the Environmental Quality Board Ruling was recently overturned by the Circuit Court of Kanawah County.[2] Section 5.2.h should be deleted.

Outlets in Close Proximity

The following paragraph taken from the 2006 ORSANCO Pollution Control Standards should be inserted as a new section under section 5.2. to address circumstances where mixing zones potentially overlap:

> *If mixing zones from two or more proximate sources interact or overlap, the combined effect must be evaluated to ensure that applicable values will be met in the area where any applicable mixing zones overlap.*

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

In its current state, proposed rule 47-2-5.2.h.6 prohibits the overlap of a mixing zone with any Category A half-mile zone, regardless of whether such overlap poses any risk that the concentrations designated for Water Use Category A would be exceeded. This prohibition is more stringent than is necessary to protect drinking water supplies. Accordingly, the prohibition set forth in 47-2-5.2.h.6 should be replaced with the following language taken from the 2006 ORSANCO Pollution Control Standards.

---

[1] Final Order of the West Virginia Environmental Quality Board: Appeal No 05-17-EQB, Appeal No. 05-18-EQB; July 24, 2006.

[2] Final Order, Civil Action No. 06-AA-125, Circuit Court of Kanawah County, West Virginia; June 22, 2007.

No mixing zone shall adversely impact water quality so as to interfere with potable or industrial water supplies, bathing areas, reproduction of fish, other aquatic life and wildlife.

Also, the proposed rules should be revised to clarify that the prohibition set forth at C.S.R. 47-2-7.2.a.2 for discharges in excess of Category A concentrations applies only to discharges that occur within the half-mile zone, and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

§47-2-7. West Virginia Waters

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

See above comments under §47-2-5 that apply also to section 7.2.a.2

Water Quality Design Flow

47CSR2, section 7.2.b. requires that all West Virginia water quality standards, whether they be for protection of aquatic life or human health "*...shall apply at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10).*" EPA has developed recommended water quality criteria for protection of human health and has recommended that the criteria for many substances, including polynuclear aromatic hydrocarbons, be applied in state water quality standards at the harmonic mean flow (HMF) rather than at the 7Q10. EPA's stated basis for recommending the HMF as the water quality design flow for human health criteria is that the principal routes of exposure are through consumption of drinking water and consumption of fish, and that the toxicological endpoints upon which the criteria are based consider lifetime exposures rather than short term exposures such as would be important for acute aquatic life criteria.

For the upper reach of the Ohio River in West Virginia, the 7Q10 and harmonic mean flows are as follows:

7Q10	5,880 cfs
HMF	20,500 cfs

The HMF is approximately 3.5 times greater than the 7Q10. Consequently, as noted below, water quality-based effluent limits based on the 7Q10 flow and human health are more restrictive than necessary as measured against limits calculated on the basis of the harmonic mean flow and human health criteria as recommended by EPA.

Many states and ORSANCO have adopted the EPA human health criteria and have applied those criteria in their respective water quality standards at the harmonic mean

flow. Because existing and proposed West Virginia water quality standards for many substances (e.g., polynuclear aromatic hydrocarbons) are in the low nanogram per liter (ng/L) range, preliminary water quality-based effluent limits calculated from the 7Q10 flow and existing or proposed water quality standards for these substances often results in effluent limits that are not attainable and not measurable with current commercially available state-of-the-art analytical methods.

The following amended 47CSR2, subsection 7.2.b is proposed (new language underlined) to implement EPA's recommended use of the harmonic mean flow for human health criteria:

> *7.2.b. In the absence of any special application or contrary provision, water quality standards for protection of aquatic life shall apply at all times when the flows are equal to or greater than the minimum mean seven (7) consecutive day draught flow with a ten (10) year return frequency. In the absence of any special application or contrary provision, water quality standards for protection of human health shall apply at all times when the flows are equal to or greater than the harmonic mean flow (HMF).*

47CSR2, Appendix E, Table 1
Comments on Selected Numerical Water Quality Standards

Polynuclear Aromatic Hydrocarbons

Table 1 presents the human health water quality standards for polynuclear aromatic hydrocarbons (PAHs) proposed by WVDEP.

Table 1
Proposed West Virginia PAH Water Quality Standards

PAH Compounds	West Virginia Proposed Human Health Criteria (ng/L)
Acenaphthene	670,000
Anthracene	8,300,000
Benzo(a)anthracene	3.8
Benzo(a)pyrene	3.8
Benzo(b)fluoranthene	3.8
Benzo(k)fluoranthene	3.8
Chrysene	3.8
Dibenzo(a,h)anthracene	3.8
Fluoranthene	300,000
Fluorene	1,100,000
Indeno(1,2,3-cd)pyrene	3.8
Pyrene	830,000

As noted above, EPA recommends that human health PAH WQS be applied at the harmonic mean flow. The 2006 ORSANCO Pollution Control Standards reflect that recommendation. For the reasons stated above, WVDEP should adopt that approach.

EPA has not published a definition of "Total PAHs" for purposes of ambient water quality standards or implementing those standards in NPDES permits in the form of water quality-based effluent limits. However, the seven PAH compounds with human health criteria of 3.8 ng/L are classified by EPA as "B2", probable human carcinogens. The sum of the criteria for these compounds (26.6 ng/L) is referred to as B2 PAHs for purposes of these comments.

Discharges from by-product coke plants, coal tar distillation plants and other sources of PAHs almost always discharge several regulated PAH compounds rather than one or two compounds. The proposed West Virginia WQS for acenaphthene, anthracene, fluoranthene, fluorene and pyrene range from 0.30 mg/l to 8.3 mg/L (300,000 ng/L to 8,300,000 mg/L). EPA has established and West Virginia has proposed relatively high human health criteria values for these compounds compared to criteria for B2 PAHs. Given current advanced wastewater treatment facilities installed for most PAH wastewater discharges, it is highly likely that discharges of the above PAHs will not pose a *reasonable potential* to cause or contribute to exceedances of the respective WQS. However, that is not the case for the seven B2 PAHs that have proposed West Virginia water quality criteria of 3.8 ng/L.

The criteria for the seven B2 PAH compounds are each 3.8 ng/L, a level which is not detectable using conventional EPA analytical methods and about a factor of 10 lower than detection levels for more sensitive GC/MS (gas chromatography/mass spectroscopy) methods. If the B2 PAH criteria were applied directly as effluent limits with no mixing zone, compliance would likely not be possible for most dischargers of PAHs.

A reasonable approach that WVDEP should use in this regard is to establish a definition of "Total B2 PAHs" comprising the seven B2 PAHs identified by EPA as probable human carcinogens. This would be equivalent to a Total B2 PAH criterion 26.6 ng/L. NPDES permit water quality-based effluent limits could then be established on the basis of "Total B2 PAHs". This approach make sense from an environmental standpoint because if the B2 PAH compounds are controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the respective human health criteria for those compounds.

Based on the above, the following definition of "Total B2 PAHs is proposed for addition to Appendix E, Table 1:

> *"Total B2 PAHs" means the sum of human health water quality criteria for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene (i.e., 26.6 ng/L). Total B2 PAHs shall be regulated in NPDES permits in lieu of individual effluent limits for the B2 PAHs identified by EPA."*

Fecal Coliform

The proposed addition of a November through April fecal coliform limit of 200 colonies per 100 mL as a monthly geometric mean for the Ohio River Category A human health WQS should be adopted to provide for consistency with the approach taken for the Category C water quality standard.

Wheeling-Pittsburgh Steel Corporation 7/16/2007

Comments on WVDEP proposed changes to:

Water Quality Standards and NPDES permit regulations
Public Hearing, Charleston, WV, July 16, 2007

On behalf of Mountain State Carbon LLC; Wheeling Corrugating Company and Wheeling-Pittsburgh Steel Corporation, I am pleased to provide a brief summary of our comments on the changes to the Water Quality Standards (WQS) and NPDES permit regulations proposed by the West Virginia Department of Environmental Protection (WVDEP). Our detailed comments will be filed with the WVDEP before the close of the comment period tomorrow, and I offer a copy of them to you at this public hearing this evening.

Like other states, some of West Virginia's borders are formed by rivers, such as the Potomac, Big Sandy and the Ohio River. When West Virginia creates new environmental regulations, such as these proposed changes to the Water Quality Standards (WQS) and NPDES permit regulations, they may or may not be compatible with those imposed on the same river by the different states, such as Pennsylvania, Ohio and Kentucky. Since these other states must also meet with EPA approval of such regulations, then the citizens of all states, including West Virginia, can be assured that the waters in their bordering rivers are being protected.

It is our assessment that the proposed changes to the WVDEP WQS and NPDES permit regulations are more stringent than those of bordering states. While the term "more stringent" typically implies more protection, it is not necessarily the case. It can also simply mean more stringent regulatory requirement compliance based on regulatory penchant, but not necessarily on science. In some of the proposed changes, the limits are not technically achievable with conventional treatment technologies, and we have found that analytical methods are not available to detect low enough to determine whether discharges are in compliance. We have also found that in some of these cases the WVDEP's regulations and policies provide reasonable flexibility to address these issues while still providing the necessary protection of designated uses. It is these situations that weigh heavily on the manufacturing sector and, as time goes on, will influence decisions regarding plant expansions and location of new facilities.

When Pennsylvania, Ohio and Kentucky have WQS and issue NPDES permits that are protective of human health and the environment of the Ohio River, then why would West Virginia want "more stringent" WQS? Would the Ohio River water be significantly cleaner on the West Virginia side? Of course not, although the overall river water quality may be improved to some degree, but what price would be paid for such improvement that is above and beyond that determined by the United States Environmental Protection Agency? Let me suggest one answer to that question.

Wheeling Pittsburgh Steel Corporation owns or is a partner in nine steel mills whose wastewaters are discharged into the Ohio River or one of its upstream tributaries, the Monongahela. These plants include three in West Virginia, five in Ohio and one in Pennsylvania, and all have NPDES permits for their wastewater discharges. Many of our employees and their families live in communities along these rivers from which they enjoy the benefits of drinking water, recreation and industry. We believe they all will continue to enjoy such benefits if the WQS and NPDES permit rules are the same for all three states. We also believe that any additional benefit that may be gained from more stringent WQS and NPDES permit rules by West Virginia will be potentially negated by the impact on the business climate in these communities. It could be argued that this impact could be better exemplified by a change in the sign on the bridges entering West Virginia that would state, "West Virginia, open for a little bit cleaner water on our side, but more business on the other"!

We believe if WVDEP incorporates our comments provided under separate cover, the bridge signs will not have to be changed. Thank you.

MITTAL

July 16, 2007

Mr. Scott Mandirola
Assistant Director - Water Quality Standards
West Virginia Department of Environmental Protection
Water Quality Standards Program
601 57th Street SE
Charlestown, WV 25304

Dear Mr. Mandirola:

RE: **Comments on Proposed Water Quality Standards**
TITLE 47 - LEGISLATIVE RULES - DEPARTMENT OF ENVIRONMENTAL PROTECTION - SERIES 2 - REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

Comments on Proposed NPDES Permit Regulations
TITLE 47 - LEGISLATIVE RULES - DEPARTMENT OF ENVIRONMENTAL PROTECTION - SERIES 10 – NATIONAL POLLUTANS DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM

Please find enclosed Mittal Steel USA - Weirton Inc.'s comments on the proposed changes to the West Virginia Water Quality Standards at 47 CSR 2 and regulations for the National Pollutant Discharge Elimination System Program at 47 CSR 10. Please pay particular attention to the comments we provided regarding the Harmon Creek socio-economic variance and the ½ mile rule as it pertains to the Ohio River main channel at Browns Island.

Thank you for the opportunity to provide these comments.

Sincerely yours,

Mittal Steel USA – Weirton Inc.

Paul W. Tomiczek III

Paul W. Tomiczek, III, REM, P.E.
Manager – Environmental & Security

Enclosures

cc: Gary Amendola, P.E.

Comments On
Title 47 Legislative Rules
Department of Environmental Protection
Series 2
Requirements Governing Water Quality Standards

§47-2-5. Mixing Zones

Overlap of Mixing Zones

The current 47CSR2, section 5.2.h.5 prohibits mixing zones from overlapping one another. Based on a recent Environmental Quality Board ruling[1], the Department has been interpreting this prohibition to prevent the overlap of a mixing zone from any downstream outlet, whether or not the downstream outlet discharges the pollutant in question. This prohibition can have the effect of truncating mixing zones based solely on the location of downstream discharges that actually would have a dilutive (beneficial) effect on in-stream concentrations of the pollution in question. This prohibition is not necessary to protect designated human health or aquatic life uses. Furthermore, the Environmental Quality Board Ruling was recently overturned by the Circuit Court of Kanawah County.[2] Section 5.2.h should be amended as follows:

> *5.2.h. Mixing zones shall not:*
>
> *5.2.h.5. Overlap one another for discharges of the same pollutant.*

Outlets in Close Proximity

There may also be circumstances where it may make sense to consider together outlets located in reasonable proximity that discharge the same pollutant when developing mixing zones. The following paragraph taken from the 2006 ORSANCO Pollution Control Standards should be inserted as a new section under section 5.2. to accommodate such circumstances:

> *If mixing zones from two or more proximate sources interact or overlap, the combined effect must be evaluated to ensure that applicable values will be met in the area where any applicable mixing zones overlap.*

---

[1] Final Order of the West Virginia Environmental Quality Board: Appeal No 05-17-EQB, Appeal No. 05-18-EQB; July 24, 2006.

[2] Final Order, Civil Action No. 06-AA-125, Circuit Court of Kanawah County, West Virginia; June 22, 2007.

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

In its current state, proposed rule 47-2-5.2.h.6 prohibits the overlap of a mixing zone with any Category A half-mile zone, regardless of whether such overlap poses any risk that the concentrations designated for Water Use Category A would be exceeded. This prohibition is more stringent than is necessary to protect Category A half-mile zones from pollution. Accordingly, the prohibition set forth in 47-2-5.2.h.6 should be replaced with the following language taken from the 2006 ORSANCO Pollution Control Standards.

> *No mixing zone shall adversely impact water quality so as to interfere with potable or industrial water supplies, bathing areas, reproduction of fish, other aquatic life and wildlife.*

Also, the proposed rules should be revised to clarify that the prohibition set forth at C.S.R. 47-2-7.2.a.2 for discharges in excess of Category A concentrations applies only to discharges that occur within the half-mile zone, and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

§47-2-7. West Virginia Waters

47CSR2, sections 5.2.h.6 & 7.2.a.2. Mixing Zones & Category A ½ Mile Zones

See above comments under §47-2-5 that apply also to section 7.2.a.2

One-Half Mile Rule for Ohio River Main Channel at Brown's Island

47CSR2, section 7.2.a.2. establishes a one-half (1/2) mile zone upstream of Category A public water supplies where discharges in excess of public water supply criteria are prohibited. In previous versions of this section and in the current proposed version, an exception was made for total iron for Ohio River main stem at Brown's Island. Previous versions and the current proposed version also required that Weirton Steel Corporation submit a report of its drinking water intake to the West Virginia Bureau for Public Health and the West Virginia Department of Environmental Protection before March 1, 2007. Weirton Steel (now Mittal Steel USA – Weirton Inc). The required report was filed in a timely manner on February 12, 2007. The report demonstrated the Weirton Plant drinking water intake treatment plant produces finished water with total iron concentrations typically not-detect (i.e., < 0.05 mg/L) in comparison the drinking water standard of 1.5 mg/L. Given the performance of the drinking water treatment plant and other circumstances set out in the report, Mittal Steel requested the variance for the half-mile rule for total iron be made permanent. Mittal Steel is renewing that request with these comments. Following is proposed language for section 7.2.a.2 (underlined sentence new):

7.2.a.2. Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of one-half (1/2) mile or to the nearest headwater, must be protected by prohibiting the discharge of any pollutants in excess of the concentrations designated for this Water Use Category in section 8 herein. In addition, within that one-half (1/2) mile zone, the Secretary may establish for any discharge, effluent limitations for the protection of human health that require additional removal of pollutants than would otherwise be provided by this rule. (If a watershed is not significantly larger than this zone above the intake, the water supply section may include the entire watershed to its headwaters. This provision shall not apply for the Category A criterion for total iron to the Ohio River main channel (between Brown's Island and the left descending bank) between river mile points 61.0 and 63.5).

Water Quality Design Flow

47CSR2, section 7.2.b. requires that all West Virginia water quality standards, whether they be for protection of aquatic life or human health "*...shall apply at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10).*" EPA has developed recommended water quality criteria for protection of human health and has recommended that the criteria for many substances, including polynuclear aromatic hydrocarbons and mercury, be applied in state water quality standards at the harmonic mean flow (HMF) rather than at the 7Q10. EPA's stated basis for recommending the HMF as the water quality design flow for human health criteria is that the principal routes of exposure are through consumption of drinking water and consumption of fish, and that the toxicological endpoints upon which the criteria are based consider lifetime exposures rather than short term exposures such as would be important for acute aquatic life criteria.

For the upper reach of the Ohio River in West Virginia, the 7Q10 and harmonic mean flows are as follows:

7Q10	5,880 cfs
HMF	20,500 cfs

The HMF is approximately 3.5 times greater than the 7Q10. Consequently, as noted below, water quality-based effluent limits based on the 7Q10 flow and human health are more restrictive than necessary as measured against limits calculated on the basis of the harmonic mean flow and human health criteria as recommended by EPA.

Many states and ORSANCO have adopted the EPA human health criteria and have applied those criteria in their respective water quality standards at the harmonic mean flow. Because existing and proposed West Virginia water quality standards for many substances (e.g., polynuclear aromatic hydrocarbons) are in the low nanogram per liter (ng/L) range, preliminary water quality-based effluent limits calculated from the 7Q10

flow and existing or proposed water quality standards for these substances often results in effluent limits that are not attainable and not measurable with current commercially available state-of-the-art analytical methods.

The following amended 47CSR2, subsection 7.2.b is proposed (new language underlined) to implement EPA's recommended use of the harmonic mean flow for human health criteria:

> *7.2.b. In the absence of any special application or contrary provision, water quality standards for protection of aquatic life shall apply at all times when the flows are equal to or greater than the minimum mean seven (7) consecutive day draught flow with a ten (10) year return frequency. In the absence of any special application or contrary provision, water quality standards for protection of human health shall apply at all times when the flows are equal to or greater than the harmonic mean flow (HMF). NOTE: With the exception of section 7.2.c.5 listed herein exceptions do not apply to trout waters, nor to the requirements of section 3, herein.*

Harmon Creek Water Quality Variance

The previous version of section 7.2.d.16.2. provided a temporary socio-economic variance for Weirton Steel Corporation (now Mittal Steel USA – Weirton Inc.) for certain water quality criteria for the lower reach of Harmon Creek extending from Weirton Outlet oo4 to the confluence of Harmon Creek with the Ohio River. The variance remained in effect until July 1, 2007. This proposed version of section 7.2.d.16.2. would extend the temporary socio-economic variance until July 1, 2009. In response to the temporary socio-economic variance, with advice and consultations with the Department, Mittal Steel conducted extensive technical and financial assessments of its operations and extensive biological studies of Harmon Creek including characterization of macroinvertebrates and fish communities at locations upstream and downstream of Outlet 004. On January 23, 2007, Mittal Steel filed a petition to permanently change the use designation and selected water quality criteria for the lower reach of Harmon Creek. The Department advised Mittal Steel that there was insufficient time to fully review that petition and conduct the necessary interagency reviews and coordination with EPA such that the petition could be properly addressed in this rulemaking. The Department also advised that it is proposing to extend the temporary socioeconomic variance until July 1, 2009, to allow time for proper consideration of Mittal Steel's petition. Mittal Steel requests that its petition and the expected review prior to July 1, 2009, be acknowledged in the final version of section 7.2.d.16.2.

CONSOL ENERGY

CONSOL Energy Inc.
Permitting & Engineering Services
Oakwood Office
P.O. Drawer L
10545 Riverside Dr.
Oakwood, VA 24631

phone: 276/498-8261
fax: 276/498-8218

July 16, 2007

Mr. Scott Mandirola
Environmental Resources Program Manager II
WV Department of Environmental Protection
Division of Water and Waste Management
601 57th Street SE
Charleston, West Virginia 25304

RE: Trout Stream Listing Objection
Dry Fork (BST-70)

Dear Mr. Mandirola:

CONSOL Energy, Inc. on behalf of Consolidation Coal Company, (CCC) appreciates the opportunity to provide comments on the draft Requirements Governing Water Quality Standards (47 CSR 2) (WQS) which are currently out for public review and comment. CCC has permitted discharges in the Dry Fork watershed (BST-70) in McDowell County, West Virginia. We are writing to provide information regarding the listing of the entire length of Dry Fork in Appendix A of the WQS Trout Waters and to formally object to the listing.

Previously, Dry Fork above Canebrake has been included on the West Virginia Department of Environmental Protection's (WVDEP) Trout Stream list. Due to the presence of CCC's deep mine discharge in the upper reaches of Dry Fork it is believed to support a year round trout population in the vicinity of the discharge. The proposed language removes the downstream limit of the trout water designation and extends the use to the mouth of the stream. We have reviewed the data provided in response to a Freedom of Information Act (FOIA) request by the West Virginia Division of Natural Resources (WVDNR) in support of the determination that Dry Fork below Canebrake supports year round trout populations and believe the information is insufficient to warrant the listing of the entire length of the stream. One fish survey conducted 5 miles above the mouth of the stream in September of 1979 reported a brown trout in the 0-21 inch size range. No additional survey information is available for the farthest downstream reaches. Surveys conducted in 1963 and 2003 near the confluence with Jacobs Fork (BST-70-W) did not find trout in this stream reach. The 2003 survey indicated a diverse warm water fish community with 16 taxa present including warm water game fish. Other surveys conducted in the upstream reaches of Dry Fork have found trout in the vicinity of our deep mine discharge.

CCC is hereby requesting the WVDEP review the available data utilized in the listing as well as the following information regarding the ability of Dry Fork to support trout on a year round basis. CCC believes, based on a study conducted by Potesta & Associates, Inc. (POTESTA) of Charleston, West Virginia, that temperature data indicate sections of the stream exhibit characteristics more like those of a Category B1 warm water fishery stream.

POTESTA installed monitoring devices programmed for hourly temperature recordings in fifteen locations along Dry Fork (Attachments 1 and 2). Data were continuously logged every hour beginning July 18, 2006 and ending October 30, 2006 for Sites 3-10 and August 22, 2006 through October 30, 2006 for Sites 1 and 12-15. Sites 2 and 11 had sampling device malfunctions. Temperature monitoring results are summarized for each site during July, August, September and October 2006 (Attachment 3). The data summarized here can be provided at your request.

Site 1 was located at the mouth of Beech Fork. It exceeded the daily mean 54 percent of the time or greater (Figure 1). This site met the hourly maximum in August (exceedances </= 11 percent) but exceeded in September and October at least 50 percent of the time.

Temperature monitoring data for Dry Fork and Dick Creek upstream of deep mine discharges (Sites 3 and 5) indicated temperatures exceeded the daily mean limits at least 73 percent of the time from July to October (Figures 2 and 4). Sites 3 and 5 also exceeded the hourly maximum temperature limits 20 percent of the time or greater. Both also had temperatures that reached lethal limits for trout species during August.

Deep mine discharges from Dick Creek and Mile Branch created cooler conditions in Dry Fork in the vicinity of these outfalls indicated at Sites 4, 6 and 7. Although hourly temperature criteria are generally met at Sites 4 and 6 (exceedances </= 11 percent), Site 7 exceeded hourly temperature thresholds at least 12 percent of the time in July and August and greater than 50 percent of the time in September and October (Figures 3, 5 and 6). The sampling conducted in July and August also indicated daily mean temperature ranges which would not favor the coldwater taxa with exceedances occurring greater than 10 percent of the time at Site 4 and 40 to 60 percent of the time at Sites 6 and 7. During September and October, these three deep mine influenced sites consistently exceeded average daily temperature criteria indicative of coldwater fish habitat.

The largest of the deep mine discharges was located immediately upstream of Site 8. This site and the site immediately downstream (Site 9) met the daily mean threshold temperature for coldwater fish in July and August 96 percent of the time or more (Figures 7 and 8). However, these deep mine influenced sites did not support conditions meeting the temperature requirements for coldwater fish in September and October upwards of 60 percent of the time. Site 9 met the hourly maximum threshold 100 percent of the time in July and August but exceeded 15 percent of the time in September. This site also exceeded the hourly maximum 54 percent of the time in October.

Site 10 was located downstream of Site 9. It exceeded the daily mean threshold from July to October with exceedances 49 percent of the time or greater (Figure 9). The hourly maximum limit was met in July and August at least 86 percent of the time but exceeded more than 50 percent of the time in September and October.

Sites 12–15 were located at increasing distances downstream from the mine discharges and were clearly outside of the cool water influence. These sites exceeded the threshold temperatures for the daily mean and the hourly maximum 51 percent of the time or more from August through October (Figures 10-13). These sites also had temperatures recorded as high as 77°F or greater, in which trout cannot survive for more than a few hours (Trout Preferences, Attachment 4). Additionally, sites 14 and 15 had occurrences of lethal stream temperatures almost 40 percent of the time in August and several occurrences of temperatures reaching 80°F or higher.

The data compiled by POTESTA indicate that temperatures in sections of Dry Fork are consistently too warm to support a viable trout population. Results indicate that maximum temperatures required to support a Trout Water (Category B2) were exceeded more often than they were met in the lower four sites from Canebrake to the Tug Fork. Temperatures in the vicinity of the deep mine discharge also indicate the questionable ability to sustain a year-round trout population with the upstream reaches (background condition) clearly not indicative of a cold water stream. Therefore, we respectfully request your consideration of the available temperature data (collected during low flow, high temperature periods) and the lack of fish data supporting the trout water designation in determining the applicable aquatic life use stream designation for this stream. Thank you for your consideration.

Sincerely,

Ed Fanning

Ed Fanning, P.E.
Project Engineer

Enclosures

AMERICAN ELECTRIC POWER

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

July 16, 2007

Scott G. Mandirola
Water Quality Standards Program
WV Department of Environmental Protection
601 57th Street SE
Charleston, West Virginia 25304

Re: Proposed Changes to Title 47
Requirements Governing Water Quality Standards

Dear Mr. Mandirola:

On behalf of Appalachian Power Company and Ohio Power Company, American Electric Power (AEP) provides the following comments on draft changes to water quality standards as proposed by the West Virginia Department of Environmental Protection (WV DEP). AEP believes that many of the proposed changes are appropriate and reflect what is known to be the most recent scientific understanding.

There are some topics upon which AEP would like to offer comments.

Nutrient Criteria

WV DEP has proposed water quality criteria for both total phosphorus and chlorophyll-a to protect Water Use Categories B and C. AEP has no objection to the development and adoption of nutrient criteria as long as the process entails the most recent scientific understanding of how excessive eutrophication affects aquatic life. We would like to comment, however, that the proposed total phosphorus criterion for warm water lakes (not to exceed 50 µg/L) is unnecessarily stringent. This conclusion is based on a review of measured phosphorus levels in West Virginia waters, which indicate that the proposed warm water lake criterion is exceeded quite frequently in ambient water.

U. S. EPA's Division of Human Health and Ecological Criteria, Office of Water, maintains a national database on levels of nutrients that are measured and reported by state agencies. This database can be accessed at http://oaspub.epa.gov/nutdb/reports.control.

A search of measured phosphorus levels in each West Virginia county was conducted, and the corresponding search output is indicated in Appendix 1 of these comments. A review of the search results indicates that, for several counties where total phosphorus levels have been measured, the average concentration is greater than 50 µg/L.

ORSANCO, in addition, has monitored and reported measured levels of total phosphorus at lock and dam locations in the Ohio River for several years. In reviewing these data (see http://www.orsanco.org/data/datafiles/bimonthly/default.asp), at least 50% of the reported values (at lock and dam locations in West Virginia waters) exceed WV DEP's proposed warm water lake criterion. Although it may be argued that the Ohio River is not a lake and water quality from this water body may not reflect that of an inland West Virginia lake, the Ohio River does reflect lentic properties during low flow periods in summer months. During these times, the levels of nutrients, and algal biomass, could certainly reflect that of inland lakes.

Because of the high probability that the proposed phosphorus criteria could, if adopted, be exceeded in ambient waters where no point source (or obvious non-point source) influence exists, AEP recommends that the following wording be inserted into the proposed nutrient criteria language:

> 8.3.a. This subsection establishes nutrient criteria designed to protect Water Use Categories B and C. The following cool water nutrient criteria shall apply to cool water lakes (See Appendix F for a representative list.) The following warm water nutrient criteria shall apply to all other lakes with a summer residence time greater than 14 days. ***To the extent that it can be demonstrated by site-specific information, exceedances of the following criteria by natural causes is permitted.***

AEP believes that, without the recommended wording indicated above, WV DEP would be faced with pervasive exceedances of the proposed phosphorus criteria. The listing of numerous water bodies as "impaired" due to phosphorus levels being higher than the proposed criterion is not conducive to targeting watersheds, or sub-watersheds, where nutrient loading reductions are a priority. Simply put, setting a water quality criterion to a relatively stringent level could have the impact of diluting agency resources to the point that high priority, cost-effective pollutant loading reduction measures cannot be implemented. AEP recommends that WV DEP carefully consider the implications of adopting the proposed, relatively stringent, phosphorus criteria.

Warmwater aquatic life aluminum criteria

AEP supports WV DEP's proposed change to replace the warmwater chronic aluminum aquatic life criterion (87 µg/L total aluminum) to 750 µg/L (total aluminum).

Aquatic Life Copper Criteria

WV DEP has proposed to change the aquatic life criteria for copper by updating the coefficients for the hardness-based equation (Appendix E, Table 1, sections 8.10.1 and 8.10.2). The hardness-based equations for other trace metals have been similarly updated. AEP strongly believes that maintaining the hardness-based criterion calculation equation for copper is not scientifically defensible, as U.S. EPA has recently issued new nationally recommended aquatic life criteria for copper using the Biotic Ligand Model (BLM) approach (see http://www.epa.gov/waterscience/criteria/copper/).

AEP believes that the BLM approach for deriving protective aquatic life criteria for copper has a superior scientific basis compared to the existing hardness-based criterion equations. Because the BLM uses a suite of water chemistry variables that, cumulatively, are much better predictors of the bioavailable (toxic) fraction of copper in water than hardness alone, AEP urges WV DEP, at a minimum, to adopt the BLM-based copper criteria for application in site-specific settings.

When the BLM-based copper criteria was first proposed by U.S. EPA in 2003, the agency received numerous comments regarding the practical challenges of implementing a criterion that, due to its empirical foundation, requires site-specific (or watershed-specific) water quality data. U.S. EPA addresses these concerns in a supporting technical document to the 2007 criteria update – "Training Materials on Copper BLM: Implementation", which is attached as Appendix 2 to these comments.

The agency discusses several approaches that states can use to implement the BLM-based criteria. The agency states that:

> *For states and tribes choosing to implement the BLM-based criteria using an incremental approach, EPA recommends moving as quickly as possible to adopt the BLM methodology into State or tribal water quality standards (while retaining the hardness criteria) to utilize the latest available science to develop site-specific copper criteria on a targeted basis. This approach should result in more appropriate criteria more quickly for waters where the hardness-based copper criteria may be potentially overprotective, such as waters with high DOC, or potentially under-protective, such as waters with low pH. Under this approach, the hardness-based criterion remains in State (or tribal) water quality standards and applies to all waters except for those where site-specific criteria are derived using the BLM.*
>
> *States choosing to use the BLM on a targeted basis may consider adding a paragraph to their water quality standards noting that site-specific criteria for copper may be developed on a case-by-case basis using the approach described in EPA's Aquatic Life Ambient Freshwater Quality Criteria – Copper 2007 Revision (EPA-822-R-07-001). Or, states may choose to include a footnote indicating that if a site-specific criterion is generated using the BLM, the BLM-derived value becomes the site-specific criterion.*
> (Training material document, p. 1)

AEP recommends that a footnote, corresponding to Sections 8.10.1 and 8.10.2 of Appendix 1, Table 1, be inserted at the end of Table 1, which reads:

> **Site-specific criteria for this pollutant may be developed using the approach in U.S. EPA's *Aquatic Life Ambient Freshwater Quality Criteria – Copper 2007 Revision* (EPA-822-R-07-001).**

Adding this (or similar) language in Table 1 will allow WV DEP (or a permittee) to develop site-specific criteria that are more scientifically robust than the criteria based solely on total hardness in the effluent and/or receiving stream.

Methylmercury Water Quality Criteria

Within Appendix E, Table 1, WV DEP lists three separate water quality criteria for mercury: a methylmercury-based fish tissue criterion (protection of human health), a methylmercury-based water criterion (protection of aquatic life for acute exposure), and a total mercury (unfiltered) criterion (protection of aquatic life for chronic exposure).

From a permitting standpoint, WV DEP cannot implement a methylmercury effluent limitation because there is no approved laboratory method in 40 CFR 136 for the analysis of methylmercury in water (U.S. EPA has developed Method 1630 for the analysis of methylmercury in water, but this procedure has not yet been approved). Thus, in order to be protective of a methylmercury criterion the permit writer is obligated to calculate a total recoverable mercury water quality-based effluent limit (WQBEL). Such a situation is problematic because the current version of WV DEP's water quality standard regulations does not have an appropriate translator mechanism for total mercury and methylmercury. Placing a ***total mercury-based*** WQBEL in a permit that is meant to protect against an exceedance of a ***methylmercury*** water quality criterion, assuming that the concentrations of both forms are the same, is not appropriate. In practice, however, WV DEP does issue total mercury WQBELs that, somehow, are calculated to maintain an ambient methylmercury criterion. AEP believes this approach is erroneous and unduly penalizes permittees because the concentration of methylmercury in most natural waters (and permitted outfalls) is considerably lower than the concentration of total mercury.

In its Great Lakes Water Quality Guidance rulemaking (40 CFR Parts 9,122,123,131, 132; March 23, 1995), U.S. EPA used a default water column ratio of methylmercury to total mercury of 0.17 (17%). Typically, levels of methylmercury in water are less than 1.0 ng/L (Brumbaugh et al., 2001. A National Pilot Study of Mercury Contamination of Aquatic Systems Along Multiple Gradients: Bioaccumulation in Fish. USGS Science Report USGS/BRD/BSR-2001-0009). Moreover, at many outfall locations the mercury that is discharged is largely in particulate (non-dissolved) form. This particulate-bound mercury would be expected to settle to the water body sediments a short distance from the release location.

To correct for the lack of a translator mechanism which enables WV DEP to establish a total mercury WQBEL to maintain a methylmercury ambient criterion, AEP recommends that a new footnote corresponding to Section 8.18 and 8.18.2 of Appendix E, Table 1, be added to Table 1 that reads:

> **The ratio of methylmercury to total mercury may be determined on a site-specific basis, and this ratio shall be used to adjust a total mercury effluent limitation to maintain these ambient criteria.**

Scott G. Mandirola
Water Quality Standards Program
WV Department of Environmental Protection
July 16, 2007

Concerning the actual procedure of how site-specific values of paired methylmercury and total mercury measurements can be used to adjust a total mercury effluent limitation, AEP believes that the procedures discussed in U.S. EPA's dissolved metals translator technical manual (U.S. EPA, 1996. The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion. EPA 823-B-96-007) could be used for this purpose.

AEP appreciates the opportunity to provide these comments. If the agency has any questions or comments on the above, please consult with Mr. Rob Reash of my staff at (614) 716-1237.

Sincerely,

Alan Wood
RJR

Alan R. Wood, P.E.
Manager, Water & Ecological Resource Services
American Electric Power

Attachments

Appendix 1 – County-Specific Statistical Parameters for Total Phosphorus Concentrations in Water Samples Collected by West Virginia Water Quality Resource Agencies (Source: U.S. EPA)

U.S. Environmental Protection Agency

Water Quality Criteria

Aquatic Life

Human Health

Biocriteria

Nutrients

Microbial (Pathogen)

Criteria Table

Rulemakings, Withdrawals, and Other Federal Register Notices

Parameter Statistics Report by Agency

Nutrient Criteria Database

Search Criteria Entered
Waterbody Type: Lake or Pond
State: WV
All Counties Selected
All Ecoregions Selected
Parameter(s): Phosphorus, Total (TP)

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: State: WV **County:** WAYNE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	95	28.3158	63.2481	5.0000	440.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: State: WV **County:** BRAXTON **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	208	19.7957	31.0590	2.5000	230.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: State: WV **County:** WYOMING **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.

Phosphorus, Total (TP)	mg/L	100	25.1000	77.4368	5.0000	520.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: **State:** WV **County:** NICHOLAS **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	12	5.0000	.0000	5.0000	5.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 11COEHUN **State:** WV **County:** WAYNE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	95	32.0737	62.1303	10.0000	440.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 11COEHUN **State:** WV **County:** BRAXTON **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	228	26.4035	29.7160	5.0000	237.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 11COEHUN **State:** WV **County:** WYOMING **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	109	27.8716	73.3208	10.0000	520.0000

You may click the Parameter Name link to display the Parameter Values by

Agency/Station Report.

Agency: 11COEHUN **State:** WV **County:** NICHOLAS **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	12	10.0000	.0000	10.0000	10.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** OHIO **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	9	274.1111	248.9390	36.0000	630.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** GRANT **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	5	12.0000	12.6293	2.0000	31.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** HARDY **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	3	24.0000	14.1774	13.0000	40.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** MINGO **Ecoregion:**Central and

Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	8	13.6250	6.4794	8.0000	28.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** ROANE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	2	41.0000	9.8995	34.0000	48.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** BROOKE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	9	65.1111	29.4976	24.0000	110.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** MARION **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	5	56.8000	33.5812	26.0000	113.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** MONROE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.

Phosphorus, Total (TP)	mg/L	7	26.7143	28.3120	10.0000	90.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** BRAXTON **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	8	39.6250	15.7202	25.0000	65.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** FAYETTE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	9	12.3333	6.9101	8.0000	30.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** HANCOCK **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	3	66.6667	2.8868	65.0000	70.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** JACKSON **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	17	105.8235	193.8225	16.0000	850.0000

You may click the Parameter Name link to display the Parameter Values by

Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** KANAWHA **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	19	40.2105	18.4258	10.0000	80.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** RITCHIE **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	2	41.0000	8.4853	35.0000	47.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** MARSHALL **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	8	90.3750	83.3460	29.0000	282.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** RANDOLPH **Ecoregion:**Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	8	34.0000	27.6302	10.0000	100.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** HAMPSHIRE **Ecoregion:**Central

and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	2	52.0000	1.4142	51.0000	53.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** GREENBRIER
Ecoregion: Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	3	12.6667	6.4291	8.0000	20.0000

You may click the Parameter Name link to display the Parameter Values by Agency/Station Report.

Agency: 21WVWQAS **State:** WV **County:** MONONGALIA
Ecoregion: Central and Eastern Forested Uplands

Parameter		Statistics				
Name	Units	No. of Obs.	Avg.	Std. Dev.	Min.	Max.
Phosphorus, Total (TP)	mg/L	10	35.0000	55.3935	3.0000	160.0000

State Criteria Selection Screen

Appendix 2 – U.S. EPA Technical Support Document on Implementation of the Copper Biotic Ligand Model

Training materials on Copper BLM: Implementation

US Environmental Protection Agency
Office of Science and Technology
Standards and Health Protection Division
1200 Pennsylvania Avenue, N.W. (MC 4305T)
Washington, D.C. 20460

Training materials on the Biotic Ligand Model for copper

1. Implementation

1.1 What options are available to states and tribes for adopting and implementing the updated national recommended criteria statement?

States and tribes have flexibility in implementing the updated copper criteria. States and tribes can implement the BLM-based criteria as a performance-based approach and may choose either incremental or statewide implementation depending on their needs and resources. For many states and tribes, EPA regards incremental implementation as the most feasible and efficient means of implementing the updated criteria.

For states and tribes choosing to implement the BLM-based criteria using an incremental approach, EPA recommends moving as quickly as possible to adopt the BLM methodology into State or tribal water quality standards (while retaining the hardness criteria) to utilize the latest available science to develop site-specific copper criteria on a targeted basis. This approach should result in more appropriate criteria more quickly for waters where the hardness-based copper criteria may be potentially over-protective, such as waters with high DOC, or potentially under-protective, such as waters with low pH. Under this approach, the hardness-based criterion remains in State (or tribal) water quality standards and applies to all waters except for those where site-specific criteria are derived using the BLM.

States choosing to use the BLM on a targeted basis may consider adding a paragraph to their water quality standards noting that site-specific criteria for copper may be developed on a case-by-case basis using the approach described in EPA's *Aquatic Life Ambient Freshwater Quality Criteria – Copper 2007 Revision* (EPA-822-R-07-001). Or, states may choose to include a footnote indicating that if a site-specific criterion is generated using the BLM, the BLM-derived value becomes the site-specific copper criterion (see 40 CFR §131.36(b)(2) for an example). EPA recommends that states and tribes maintain an updated listing of the water bodies for which the BLM has been used as the basis for a site-specific freshwater copper criterion.

This incremental or targeted approach would provide states and tribes with the flexibility to use the BLM on a limited basis where it will have the most impact. Once developed for particular water segments, BLM-based criteria would provide the basis for permitting and assessment decisions.

In situations where states or tribes choose not to use the BLM, the state (or tribe) may continue to use the WER method as a means of developing site-specific criteria. Done this way, there would be two ways to develop site-specific criteria: 1) using the hardness-based criteria with a WER, and 2) using the BLM on a targeted basis. The permitting authority may consider requiring individual dischargers to collect the monitoring data in order to use the BLM, which EPA expects in most cases would be less expensive to obtain than site-specific toxicology data to develop a WER.

An alternative implementation approach would be where states or tribes choose to adopt the national criteria recommendation (the BLM) as the statewide standard. States and tribes can develop numeric results up front when adopting the revised criteria or later when developing permits or conducting assessments. Under this approach, the BLM-based criteria would replace the hardness-based criteria for copper. This approach allows states and tribes to use the latest available science to apply a copper criterion to each site that would best reflect predicted effects on aquatic life based on the behavior of copper in the receiving stream. States and tribes can incorporate BLM input parameters into their statewide monitoring programs to ensure that data are available to use the BLM. The additional monitoring data may later prove to be useful if and when the BLM is developed and calibrated for other metals, such as zinc and silver.

This statewide implementation option could likely result in increased costs to state monitoring programs, because some of the BLM input parameters (particularly DOC) are not routinely monitored. In addition, selecting this option may obligate the state or tribe to use the BLM, even for waters where the hardness-based criteria may be adequate.

1.2 Have any states or tribes used the BLM to calculate site-specific copper criteria?

Yes. Colorado has used the BLM as an alternative means to develop site-specific WER for several effluent dominated stream segments. The Colorado Water Quality Division developed informal guidance regarding use of the BLM. This informal guidance suggests the following:

- Water quality samples should be taken above and below wastewater treatment facilities. The downstream sample should be taken where the effluent has fully mixed with the receiving water. More than one sampling site is recommended for stream segments longer than five miles.
- Water quality samples should be taken below each National Pollutant Discharge Elimination System (NPDES) permit discharge for stream segments with more than one NPDES permit.
- Water quality data should adequately describe seasonal attributes of a stream.
- At least one year of water quality data is recommended, with a minimum of 24 sampling events.

The suggestions outlined in Colorado's informal guidance should not be construed as EPA's recommendations for how to use the BLM; rather, the guidelines are presented here as an illustrative example of how one State has used the BLM.

Additionally, Massachusetts Department of Environmental Protection (MA DEP) evaluated the applicability of the BLM to develop site-specific copper criteria in the Taunton River watershed. Water quality samples were collected at 13 sites (10 in stream locations and three publicly-owned treatment works (POTWs) discharge points) in the watershed; samples were taken in the spring (to capture average to high flow conditions)

and the summer (to capture low flow conditions). Samples were taken both upstream and downstream of three POTWs discharging to the Taunton River and its tributaries.

1.3 How does the BLM compare to the WER method in terms of cost?

In general, EPA expects the water chemistry data required by the BLM to be less expensive than WER toxicity testing on a per site basis. States routinely monitor for some of the BLM input parameters; therefore, the need for a state or tribe to initiate monitoring for all 10 input parameters to use the BLM represents a worst-case scenario. States and tribes may choose to work with direct dischargers to collect monitoring data for the BLM. Parameter estimation techniques may also eventually reduce the implementation costs.

It is difficult to do a direct cost comparison of the BLM and WER method because the cost of data collection and analysis will vary depending on the location and site-specific conditions of the site. Currently, dischargers typically pay for WER testing, while the costs of using the BLM may be borne by the discharger or the state (or tribe), depending on how states (and tribes) choose to implement the updated criteria.

Costs associated with implementing the BLM include those for field work (including sample collection containers and technician-hours in the field) and laboratory services (including analytical services and other lab charges, such as sample handling and disposal and reporting forms). EPA estimates that the total cost for one set of 10 input parameters is approximately $325. Depending on the number of data sets collected, BLM-related costs may range from $325 (the cost of an "instantaneous criterion") to $1300 (the cost of one sampling event per season, for a total of four) or more per site. There could be additional costs that vary depending on the location and complexity of the site, including study design to define the site, statistical evaluation of the sampling scheme, and transportation.

Costs associated with the Streamlined WER method to develop a site-specific criterion include the costs of two (or more) sampling events (with a representative sample of upstream water and effluent taken for each sampling event), side-by-side toxicity tests for laboratory and site water with one test species; and other measurements (including hardness, pH, alkalinity, total suspended solids (TSS), and DOC for both the site water and the laboratory water). EPA estimates the cost of the Streamlined WER method (two samples and one test species) to be approximately $10,000.

Costs associated with the 1994 Interim WER method (the "non-streamlined" method) are likely to be higher, given that the Interim WER method recommends three sampling events for one species, and one sampling event with a second species (for a total of four WER tests). EPA estimates the cost of using the1994 Interim WER method at a relatively simple site to be on the order of $20,000. Some more complex applications of the WER method have costs over $100,000.

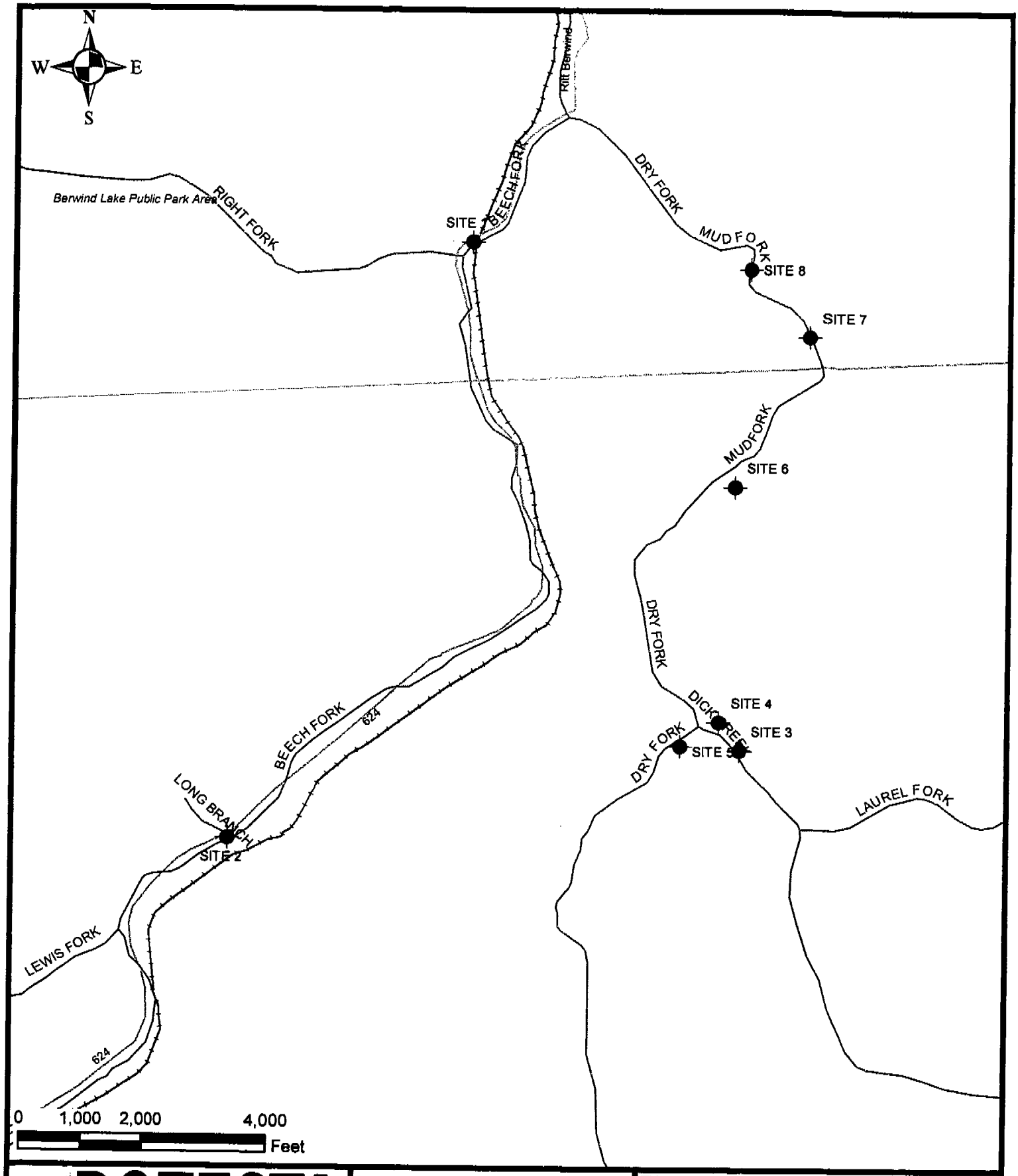
1.4 Will existing site-specific freshwater copper criteria derived using the WER method need to be revised using the BLM?

A state or tribe may choose to retain the WER-adjusted hardness criterion or use the BLM on a targeted basis to develop site-specific criteria. EPA developed different BLM implementation options for states and tribes to consider (see Question 1.1).

1.5 If the BLM results in a different criterion than a state currently has, will a use attainability analysis (UAA) be needed to change a use?

A UAA would not be required if application of the BLM for copper resulted in different criteria, assuming that the state or tribe would not be revising the underlying designated use. In that circumstance, a UAA would not be necessary regardless of whether application of the BLM results in a more or less stringent copper criterion. On the other hand, if the designated use would be revised to a different aquatic life use subcategory, and a less stringent criterion for copper (or any other parameter) would also be adopted, a UAA would need to be prepared pursuant to 40 CFR 131.10(j)(2).

1



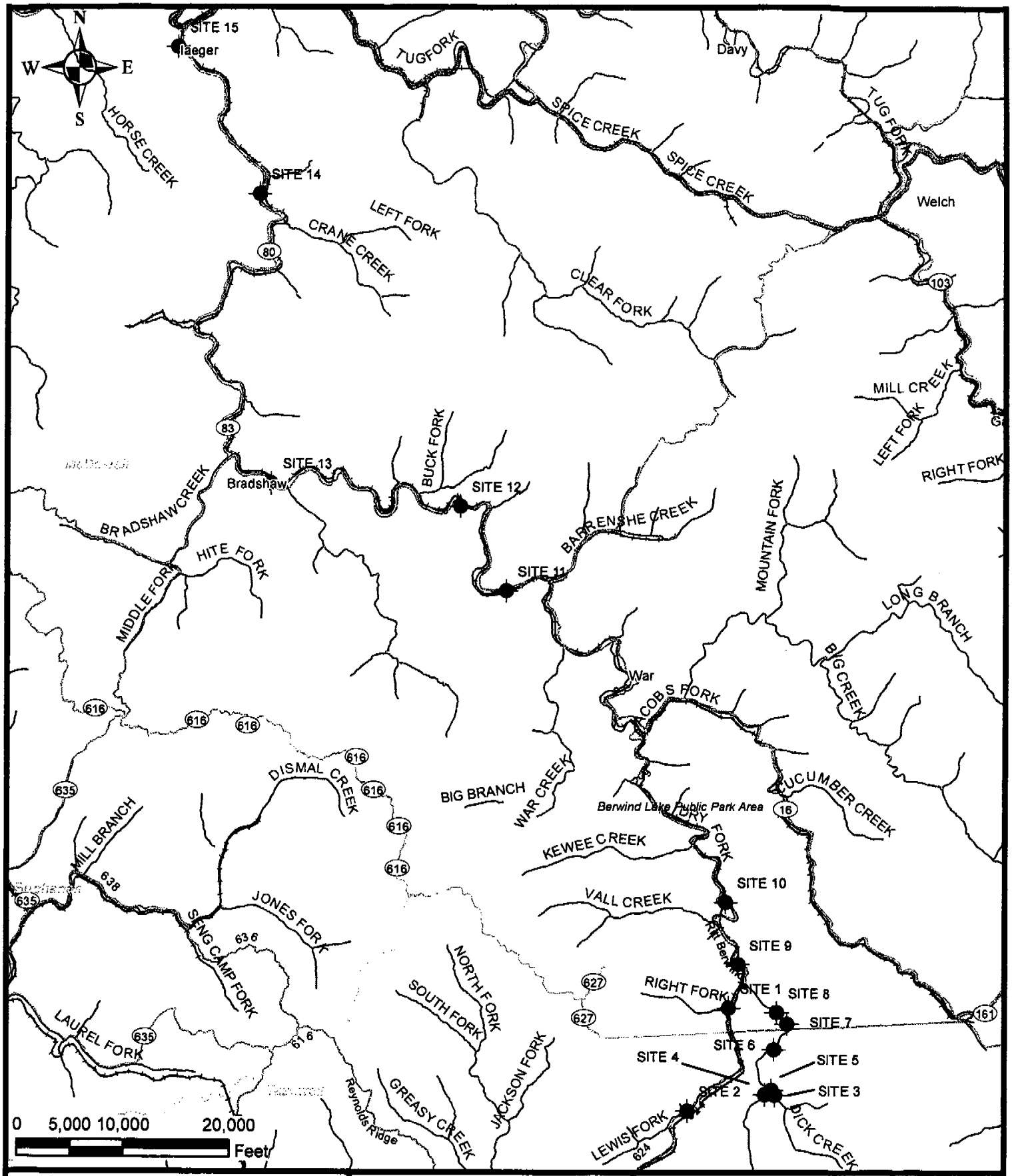
POTESTA
ENGINEERS AND ENVIRONMENTAL CONSULTANTS

SCALE: 1" = 2000'
DATE: FEBRUARY
PROJECT NO.: 06-0193
DRAWN: RWR
P:\Projects\2006\06-0193-005 Temperature Monitoring\Map Documents\Post KBR\pts near outfalls.mxd

Title

ATTACHMENT 1

2



POTESTA
ENGINEERS AND ENVIRONMENTAL CONSULTANTS

SCALE: 1:100,000
DATE: FEBRUARY
PROJECT NO.: 06-0193
DRAWN: RWR
P:\Projects\2006\06-0193-005 Temperature Monitoring\Map Documents\Post KBR\other pts.mxd

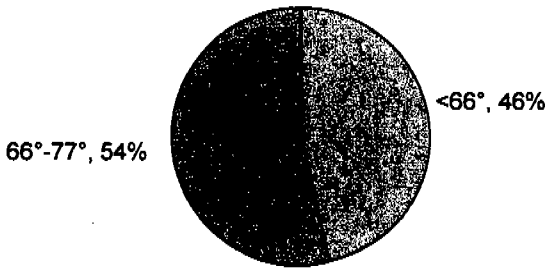
Title

ATTACHMENT 2

3

FIGURE 1a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

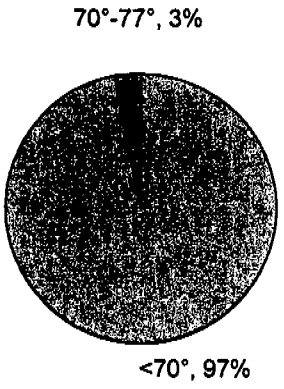
Site #1



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 1b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

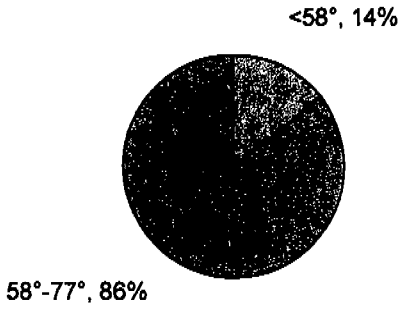
Site #1



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 1c
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

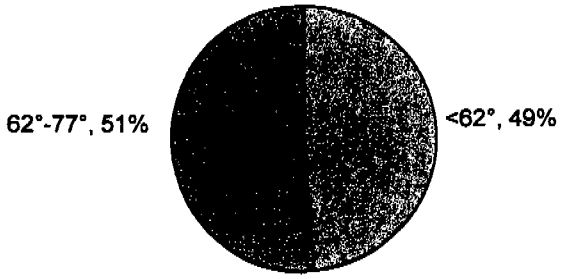
Site #1



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 1d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

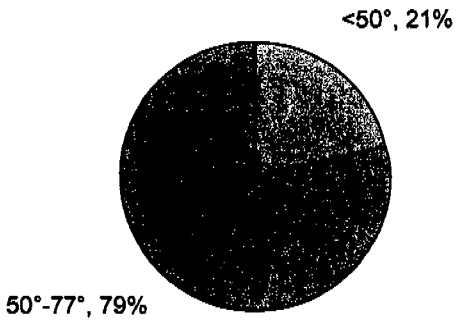
Site #1



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 1e
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

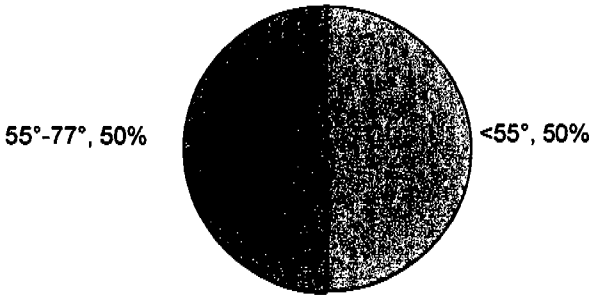
Site #1



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 1f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

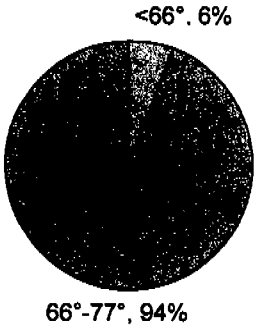
Site #1



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 2a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

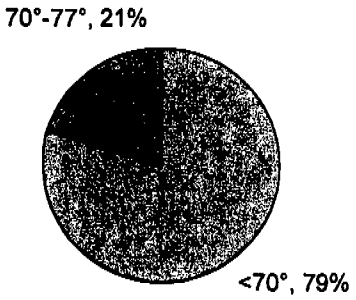
Site #3



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 2b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, July, 2006

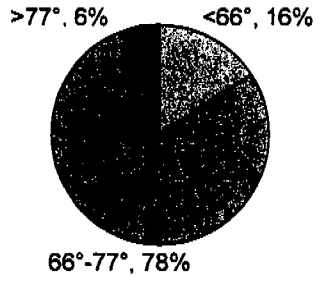
Site #3



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 2c
Frequencies of Temperature Data Relative to Daily Mean Limit (66°F)
Dry Fork, August, 2006

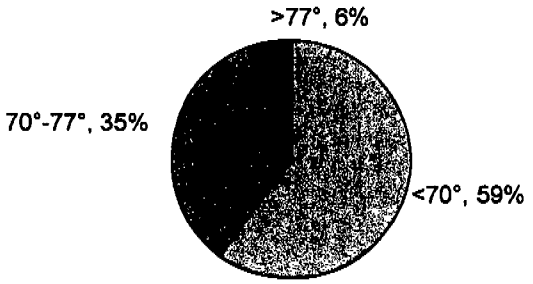
Site #3



Notes:
1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 2d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, August, 2006

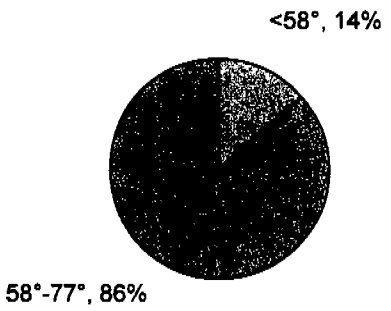
Site #3



Notes:
1. *All data in orange and red exceeded the Hourly Maximum Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 2e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

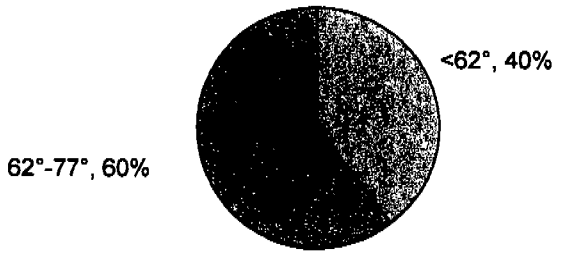
Site #3



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 2f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

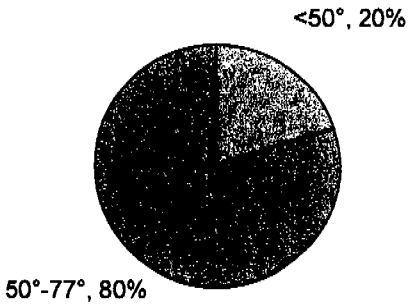
Site #3



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 2g
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

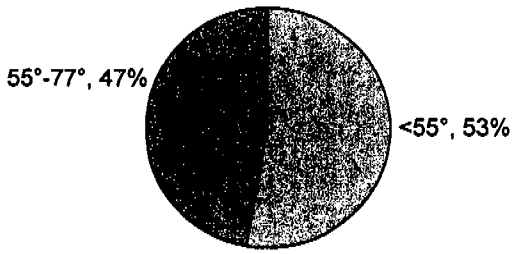
Site #3



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 2h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

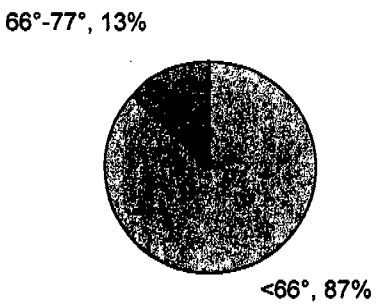
Site #3



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 3a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

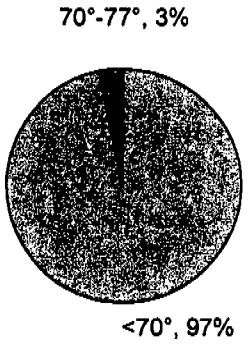
Site #4



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 3b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, July, 2006

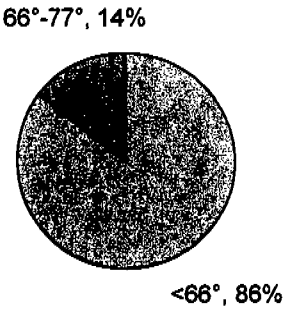
Site #4



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 3c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

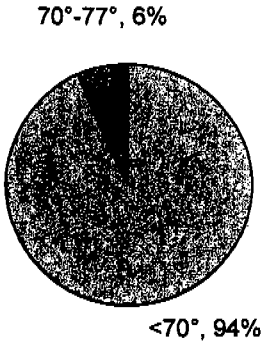
Site #4



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 3d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

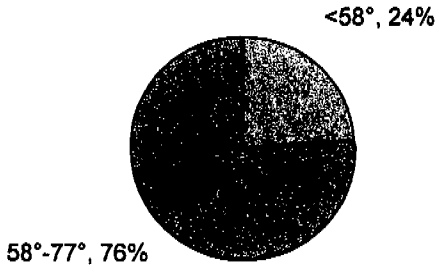
Site #4



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 3e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

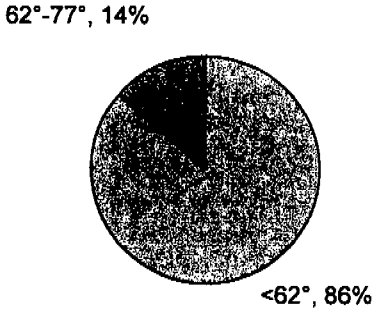
Site #4



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 3f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

Site #4



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

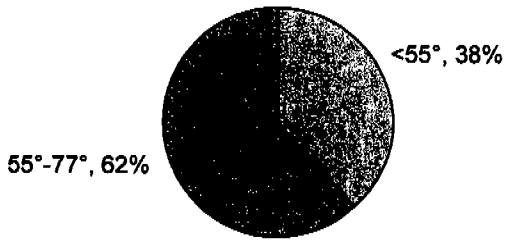
FIGURE 3g
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October 2006

Site #4

Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 3h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October 2006

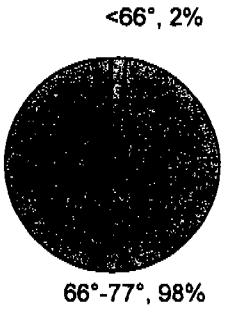
Site #4



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 4a
Frequencies of Temperature Data Relative to Daily Mean Limit (66°F)
Dry Fork, July 2006

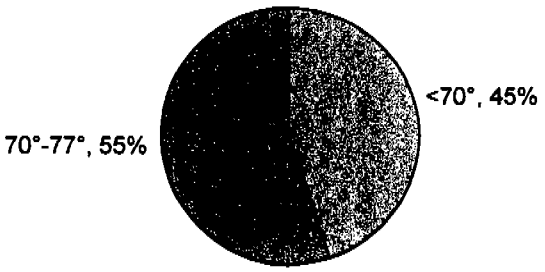
Site #5



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 4b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, July 2006

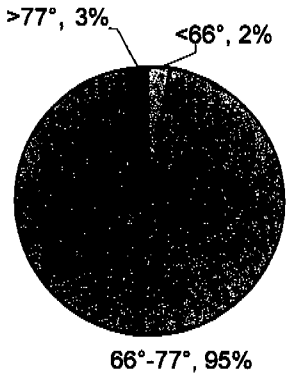
Site #5



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 4c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August 2006

Site #5

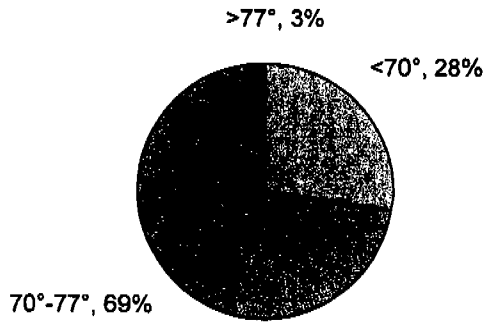


Notes:

1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 4d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

Site #5

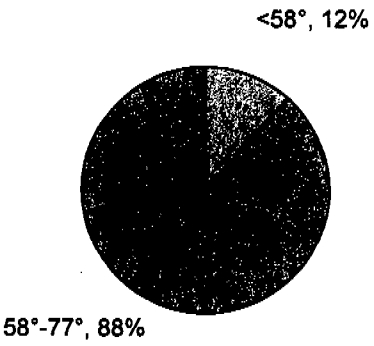


Notes:

1. *All data in orange and red exceeded the Hourly Maximum Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 4e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

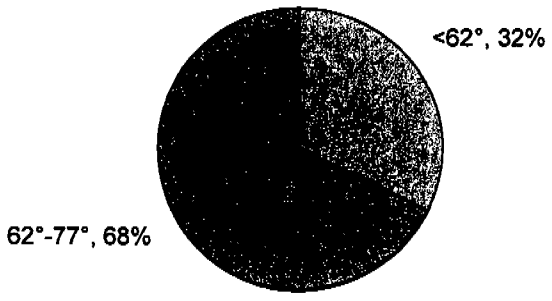
Site #5



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 4f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

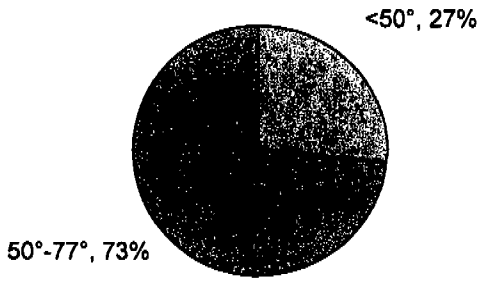
Site #5



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 4g
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

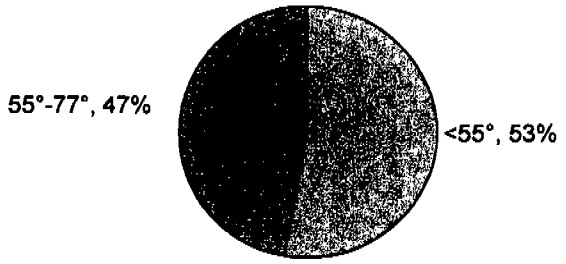
Site #5



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 4h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

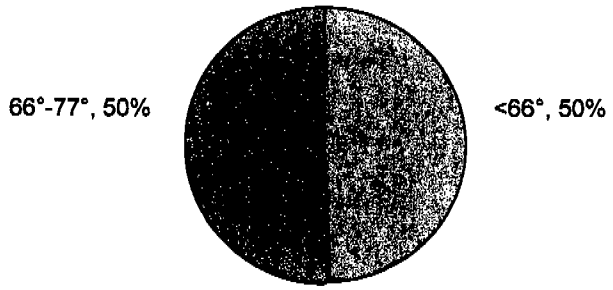
Site #5



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 5a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

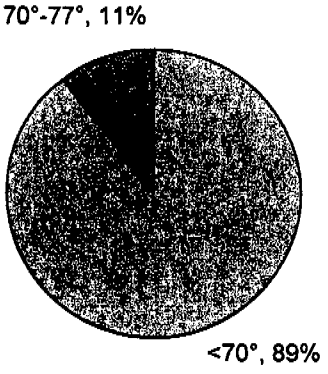
Site #6



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 5b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, July, 2006

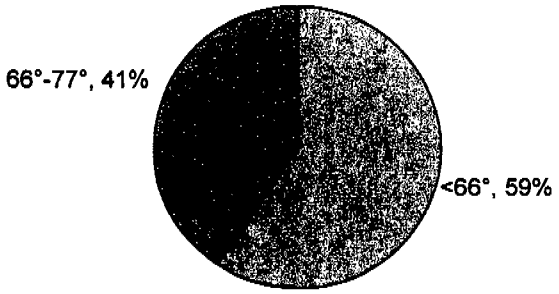
Site #6



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 5c
Frequencies of Temperature Data Relative to Daily Mean Limit (66°F)
Dry Fork, August, 2006

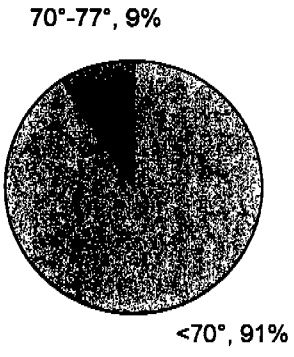
Site #6



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 5d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, August, 2006

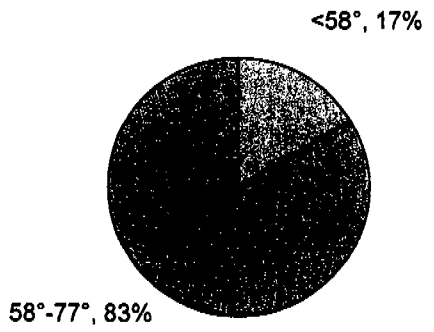
Site #6



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 5e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

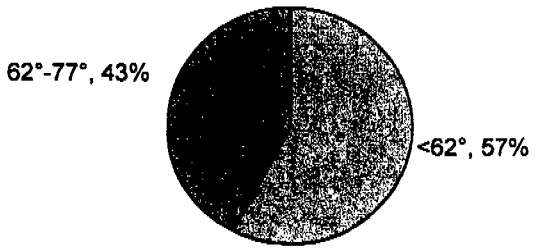
Site #6



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 5f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

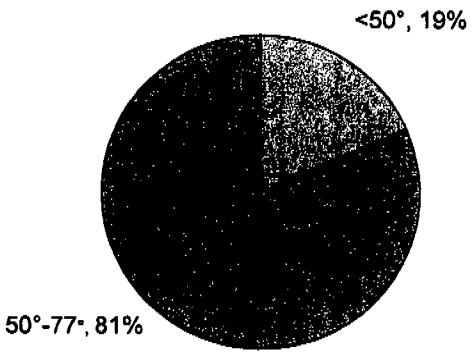
Site #6



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 5g
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

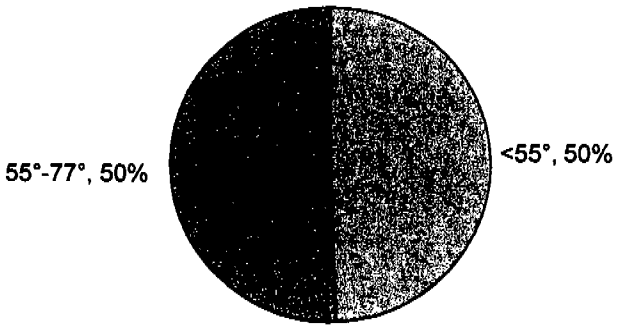
Site #6



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 5h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55 °F)
Dry Fork, October, 2006

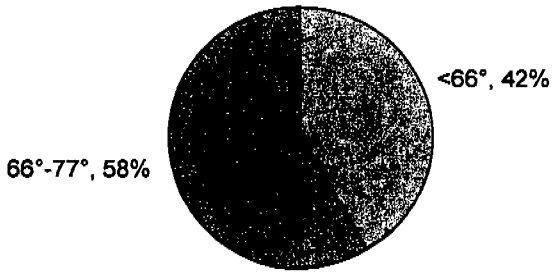
Site #6



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 6a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

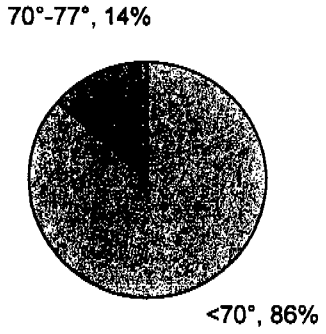
Site #7



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 6b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, July, 2006

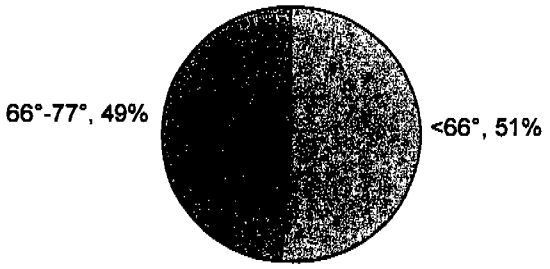
Site #7



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 6c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

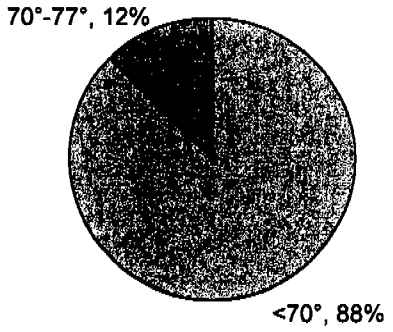
Site #7



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 6d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

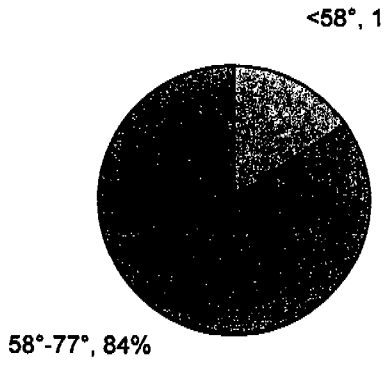
Site #7



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 6e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

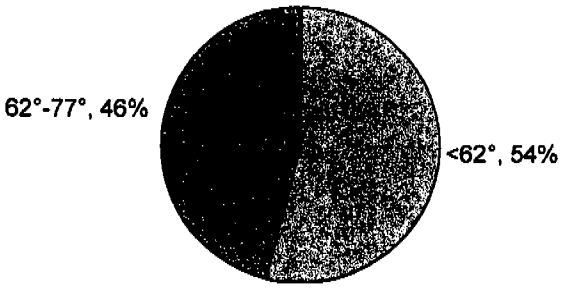
Site #7



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 6f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

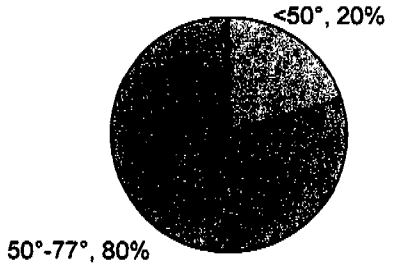
Site #7



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 6g
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

Site #7



Note:
All data in orange exceeded the Daily Mean Limit for the month.

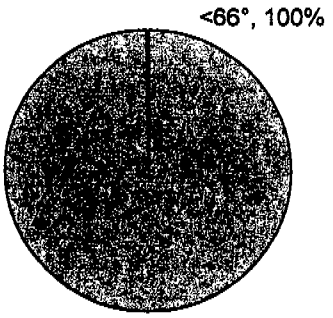
FIGURE 6h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

Site #7

Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 7a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

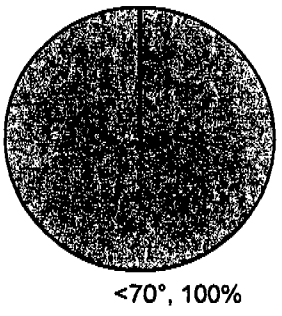
Site #8



Note:
All data in blue meet the Daily Mean Limit for the month.

FIGURE 7b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, July, 2006

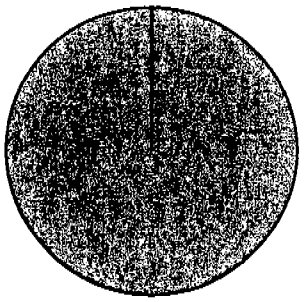
Site # 8



Note:
All data in blue meet the Hourly Maximum Limit for the month.

FIGURE 7c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

Site #8

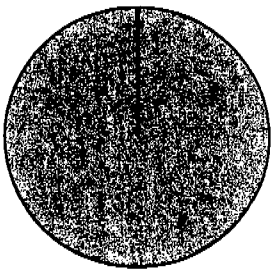


<66°, 100%

Note:
All data in blue meet the Daily Mean Limit for the month.

FIGURE 7d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

Site #8

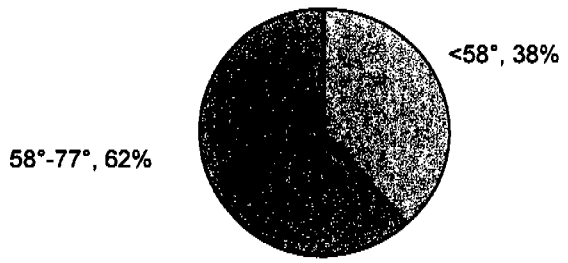


<70°, 100%

Note:
All data in blue meet the Hourly Maximum Limit for the month.

FIGURE 7e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

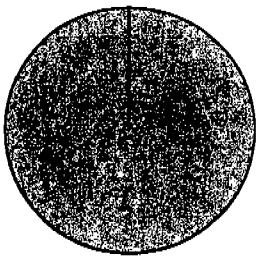
Site #8



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 7f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

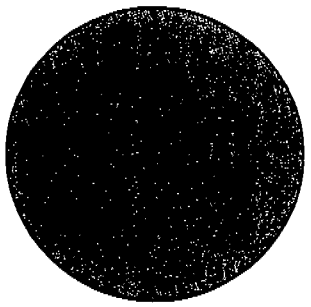
Site #8



Note:
All data in blue meet the Hourly Maximum Limit for the month.

FIGURE 7g
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

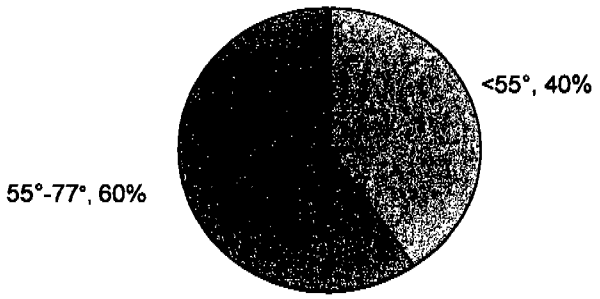
Site #8



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 7h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

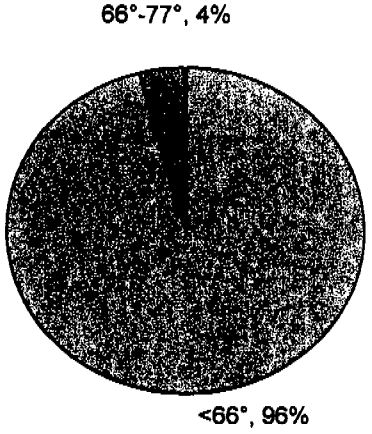
Site #8



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 8a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

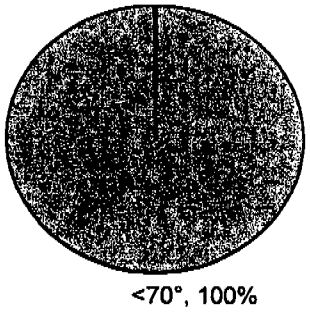
Site #9



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 8b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, July, 2006

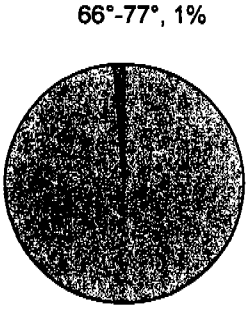
Site #9



Note:
All data in blue meet the Hourly Maximum Limit for the month.

FIGURE 8c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

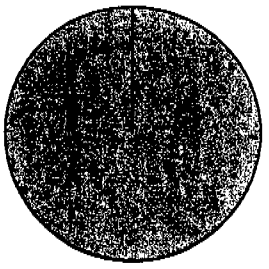
Site #9



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 8d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, August, 2006

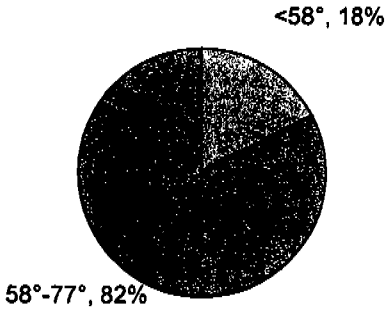
Site #9



Note:
All data in blue meet the Hourly Maximum Limit for the month.

FIGURE 8e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

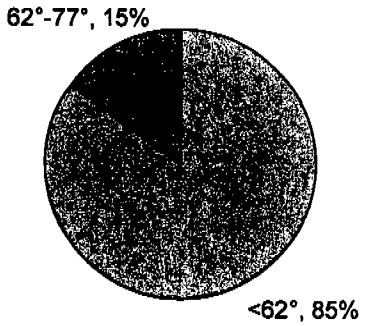
Site #9



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 8f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

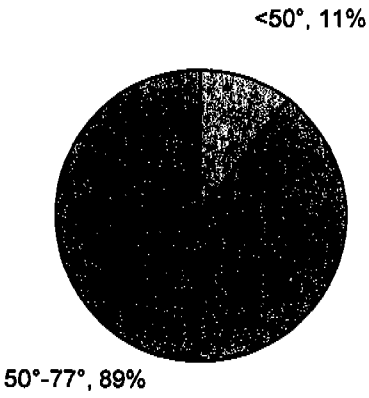
Site #9



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 8g
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

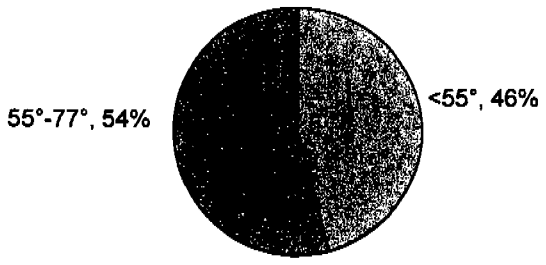
Site #9



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 8h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55 °F)
Dry Fork, October, 2006

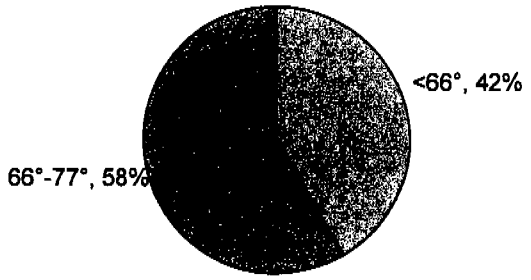
Site #9



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 9a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, July, 2006

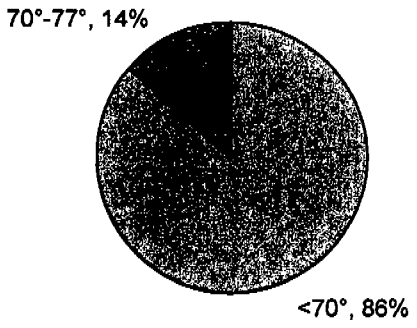
Site #10



Note:
All data in orange exceeded the Daily Mean Limit for the month

FIGURE 9b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, July, 2006

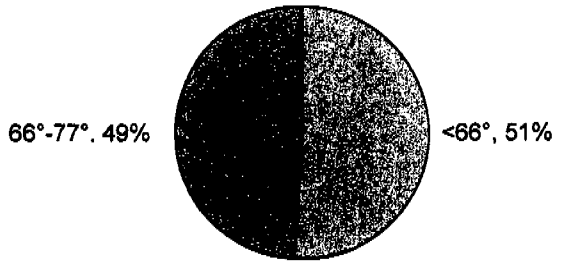
Site #10



Note:
All data in orange exceeded the Hourly Maximum Limit for the month

FIGURE 9c
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

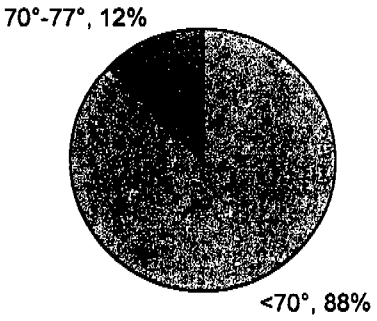
Site # 10



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 9d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, August, 2006

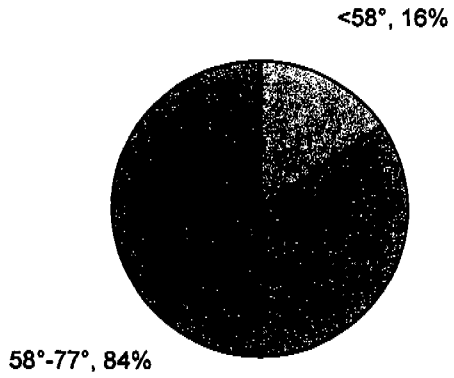
Site #10



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 9e
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

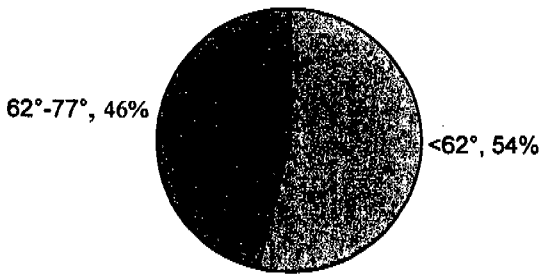
Site # 10



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 9f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

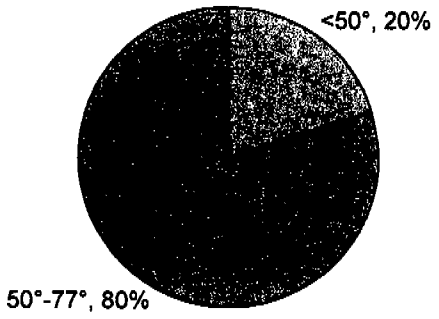
Site # 10



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 9g
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

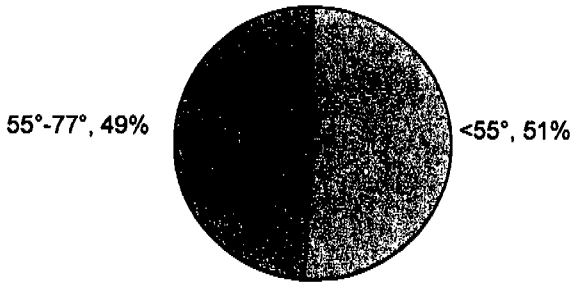
Site # 10



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 9h
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

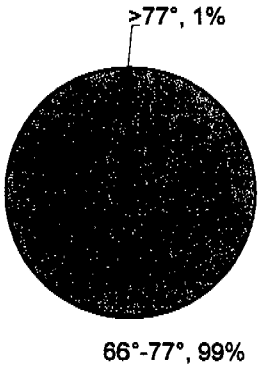
Site # 10



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 10a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

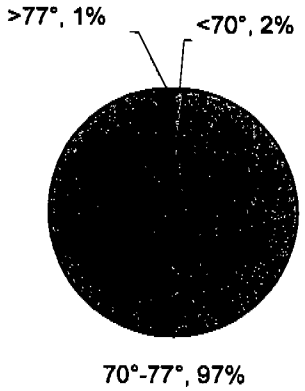
Site #12



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 10b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

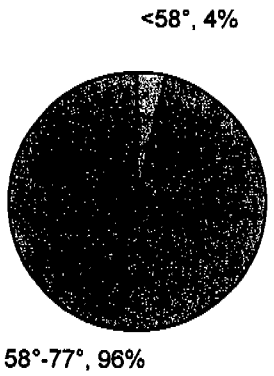
Site # 12



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 10c
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

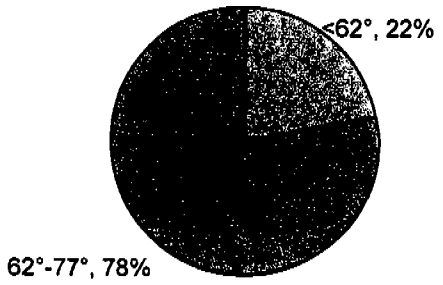
Site # 12



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 10d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

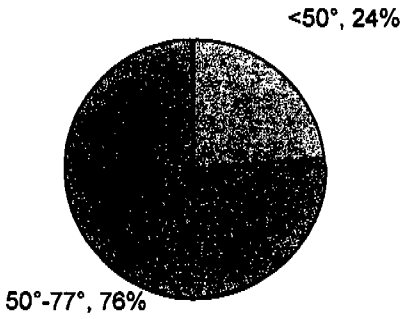
Site # 12



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 10e
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

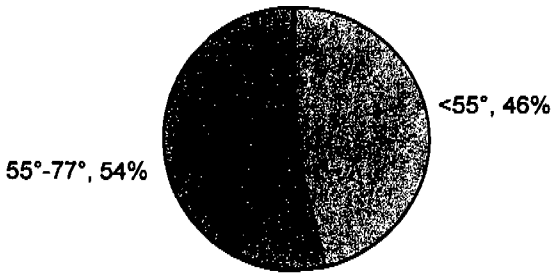
Site # 12



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 10f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55 °F)
Dry Fork, October, 2006

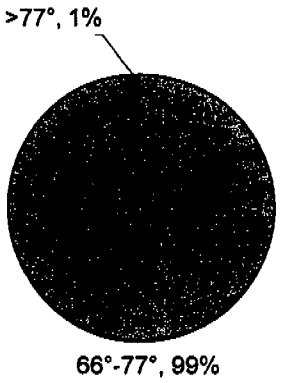
Site # 12



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 11a
Frequencies of Temperature Data Relative to Daily Mean Limit (66°F)
Dry Fork, August, 2006

Site #13

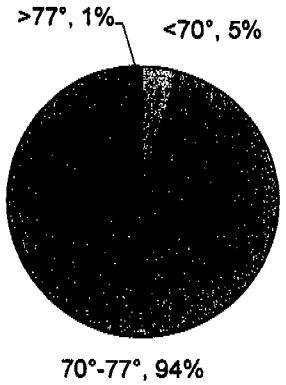


Notes:

1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 11b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Dry Fork, August, 2006

Site #13

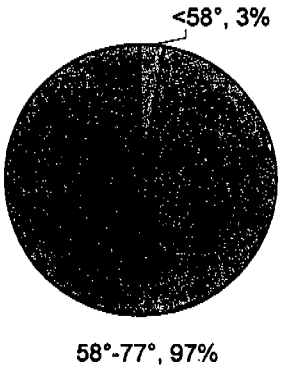


Notes:

1. *All data in orange and red exceeded the Hourly Maximum Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 11c
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

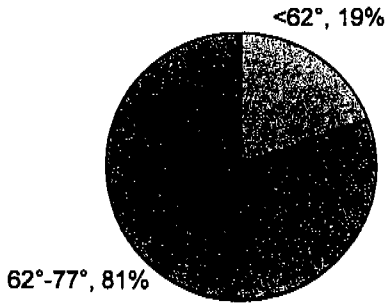
Site #13



Notes:
1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 11d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

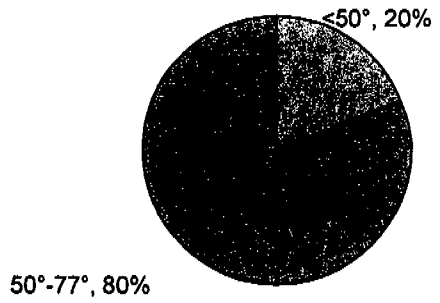
Site #13



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 11e
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

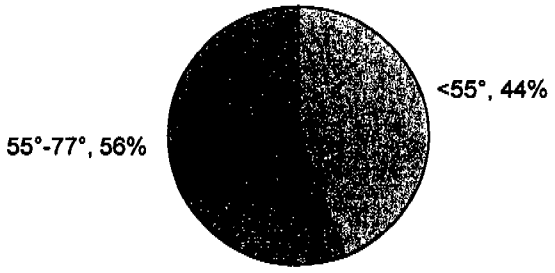
Site #13



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 11f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

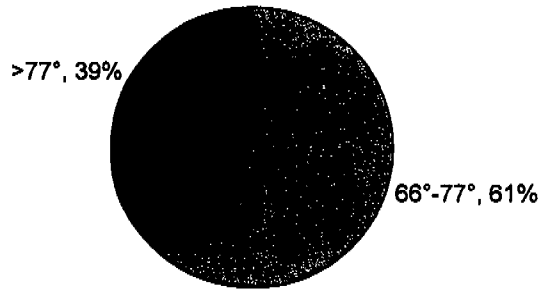
Site #13



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 12a
Frequencies of Temperature Data Relative to Daily Mean Limit (66°F)
Dry Fork, August, 2006

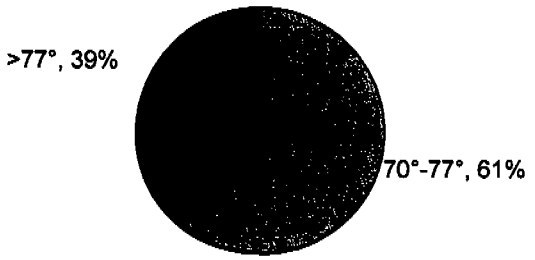
Site #14



Notes:
1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 12b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70°F)
Jacobs Fork, August, 2006

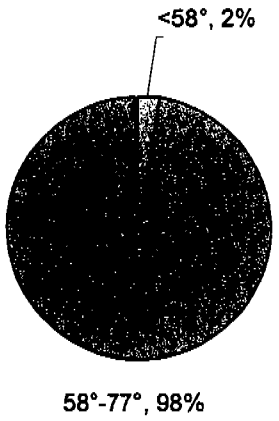
Site #14



Notes:
1. *All data in orange and red exceeded the Hourly Maximum Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 12c
Frequencies of Temperature Data Relative to Daily Mean Limit (58°F)
Dry Fork, September, 2006

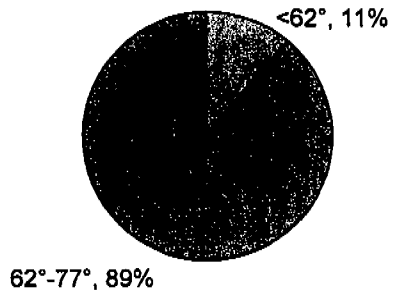
Site # 14



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 12d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62°F)
Dry Fork, September, 2006

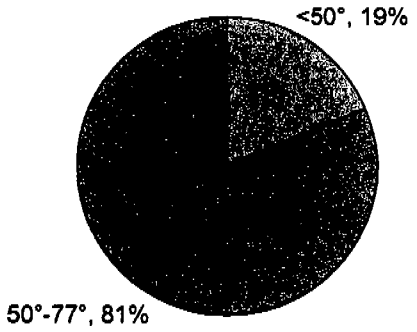
Site # 14



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 12e
Frequencies of Temperature Data Relative to Daily Mean Limit (50°F)
Dry Fork, October, 2006

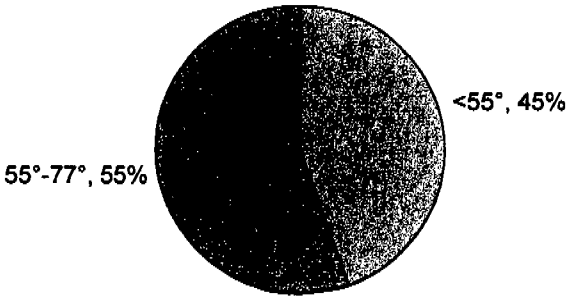
Site # 14



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 12f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55°F)
Dry Fork, October, 2006

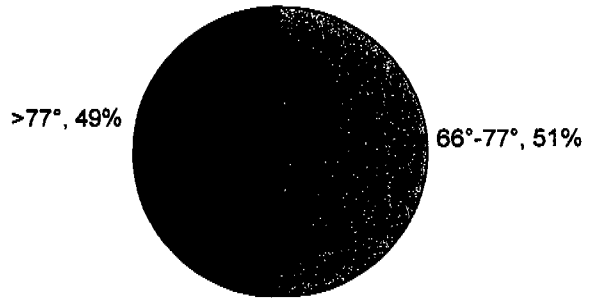
Site #14



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 13a
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Dry Fork, August, 2006

Site #15

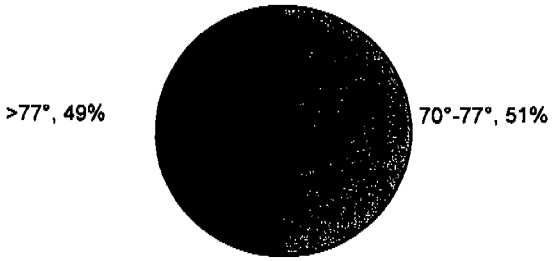


Notes:

1. *All data in orange and red exceeded the Daily Mean Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 13b
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Dry Fork, August, 2006

Site #15

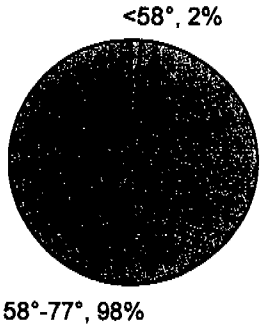


Notes:

1. *All data in orange and red exceeded the Hourly Maximum Limit for the month.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 13c
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Dry Fork, September, 2006

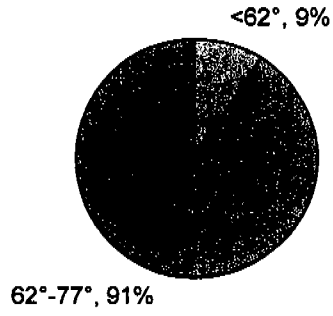
Site # 15



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 13d
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Dry Fork, September, 2006

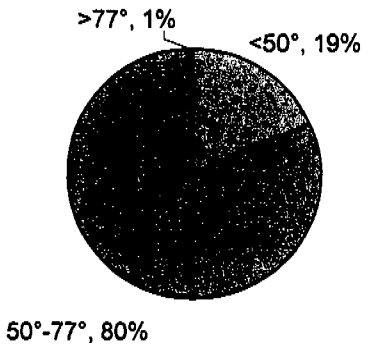
Site # 15



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

FIGURE 13e
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Dry Fork, October, 2006

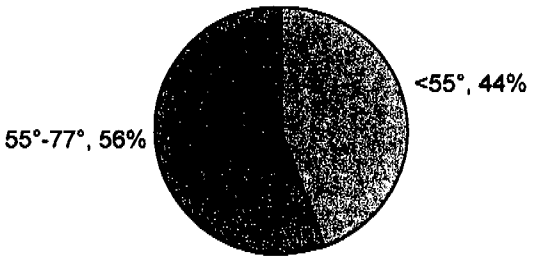
Site # 15



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 13f
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55 °F)
Dry Fork, October, 2006

Site # 15



Note:
All data in orange exceeded the Hourly Maximum Limit for the month.

4

TROUT PREFERENCES

According to Habitat Suitability Index Models published by the U.S. Department of the Interior's Fish and Wildlife Service, native brook trout (*Salvelinus fontinalis)* survive in water temperatures ranging from 0°C (32°F) to 24°C (75.2°F), but the optimal temperature range from growth and survival is between 11°C (51.8°F) and 16°C (60.8°F). The upper incipient lethal limit for brook trout is variable according to author, and has been reported in the range of 20°C (68°F) to 25°C (77°F). Embryo development occurs optimally between 4.5°C (40.1°F) and 11.5°C (52.7°F).

Introduced species, which may have been stocked in Dry Fork, include rainbow trout (*Salmo gairdneri*) and brown trout (*Salmo trutta*). Rainbow trout have an optimal temperature range between 12°C (53.6°F) and 18°C (64.4°F). The lower and upper incipient lethal temperatures for adult rainbow trout are 0°C and 25°C, respectively. Normal embryo development occurs between 7°C (44.6°F) and 12°C (53.6°F). Brown trout will not maintain viable populations above 27.2°C (81°F), which is considered the upper, near-lethal limit. While brown trout will tolerate ranges of 0°C to 27°C (80.6°F), the optimal temperature range is between 12°C and 19°C (66.2°F).

REFERENCES

Raleigh, R.F. 1982. Habitat Suitability Index Models: Brook Trout. United States Fish and Wildlife Services/OBS-82/10.24. 42 pp.

Raleigh, R.F., T. Hickman, R.C. Solomon, and P.C. Nelson. 1984. Habitat Suitability Information: Rainbow Trout. United States Fish and Wildlife Services/OBS-82/10.60. 64 pp.

Raleigh, R.F., L.D. Zuckerman, and P.C. Nelson. 1986. Habitat Suitability Index Models and Instream Flow Suitability Curves: Brown Trout, Revised. United States Fish and Wildlife Services. Biol. Rep. 82(10.124). 65 pp. [First printed as: FWS/OBS-82/10.71, September 1984].

IOGA
WEST VIRGINIA

July 17, 2007

RECEIVED

JUL 17 2007

WATER QUALITY STDS

VIA HAND DELIVERY
Mr. Scott G. Mandirola
Assistant Director
Water Quality Standards Program
WV Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: ***Revisions to Aluminum Criteria and Trout Waters - 47 CSR 2; Revisions to Antidegradation Implementation Procedures – 60 CSR 5***

Dear Mr. Mandirola:

On behalf of the Independent Oil and Gas Association of West Virginia, Inc. ("IOGA"), I am submitting comments regarding two rules proposed for public comment, the Water Quality Standards rule (47 CSR 2) and the Antidegradation Implementation Procedures (60 CSR 5). IOGA is a statewide non-profit trade association representing companies engaged in the exploration, production and development of natural gas and oil resources in West Virginia, and the companies and individuals who support these activities. We appreciate the opportunity to offer these comments.

Water Quality Standards Rule

1. Aluminum Criteria Changes

IOGA strongly supports the DEP's proposal to finalize the aluminum criteria which has been adopted by emergency rule. IOGA encouraged the Environmental Quality Board ("EQB") to permanently adopt these proposed limits in 2004 when the EQB adopted the current interim limits. Three additional years of study have only strengthened IOGA's belief that there is ample evidence that the standard contained in the emergency rule is protective of the aquatic environments in West Virginia's streams and should be permanently adopted. The United States Environmental Protection Agency has agreed with this approach, approving the proposed aluminum standard "based on a finding that the criteria are protective of aquatic life use regardless of whether they apply temporarily or permanently."[1] For all of these reasons, IOGA believes that the DEP's action in permanently adopting the aluminum standard is reasonable and justified.

[1] See letter from Jon Capacasa, USEPA to Lisa McClung DEP dated January 9, 2006.

2. Additions to Trout Waters List

IOGA also strongly supports the Department of Environmental Protection ("DEP") in its role of assuring the protection of the designated uses of state waters and, in particular, for the protection of streams that have been properly designated as trout waters. The actual determination that a particular waterbody qualifies as a "trout water" is a significant one and has ramifications for the activities that may occur along that stream in the future. Therefore, it is critical that the process followed in assigning a designation of trout water allows for the consideration of all relevant information and reflects an accurate and scientifically sound application of the water quality regulations. As will be discussed below, IOGA believes that the DEP's current approach of adding 337 streams at one time to the "trout waters" list in Appendix A does not allow for the development of important information for each stream. Neither is this broad sweeping approach to listing streams as "trout waters" necessary to assure full protection of streams that properly fall within this category.

IOGA believes that the DEP should consider an alternate approach to adding these 337 streams to the "trout waters" list. The addition of a stream to the trout waters list may significantly limit the type of development that may take place near to that stream. As such, the decision to add a stream to the trout waters list should be made after a thorough review of the available evidence and after ample time for public review and comment. Both the agency and the public would be better served by adding streams in phases as opposed to en masse, as has been proposed here. It is undeniable that adding over 300 streams at one time is an unwieldy process that has the potential to deny each stream the close scrutiny and examination that it deserves. We are concerned that if a stream is erroneously included on the "trout waters" use based upon insufficient data, it will be very difficult to correct this mistake at a later date.

In various public meetings the DEP has stated that it is not necessary that a stream be listed in Appendix A in order to receive the protections afforded by the rule for trout waters. IOGA concurs with this interpretation and urges the agency to defer the addition of any stream to Appendix A at this time. Instead, the DEP should make these determinations on a case-by-case basis at a time when some activity relative to the stream is under consideration, e.g. an application is made to discharge wastewater to the stream. This "as needed" approach to trout water designations would avoid the significant controversies that accompanied the agency's attempts to list streams on the grand scale reflected in this proposed rule.

Should the DEP determine not to make the trout water determination on an "as needed" basis, IOGA believes that a better method for updating the list of trout waters that avoids some of the procedural shortcomings of the massive listing of streams, while still moving the process forward at a reasonable pace, is to review the proposed list in phases. A phased approach would give the DEP and the public the opportunity to examine the data already collected by DNR, would allow the DEP to solicit comments on that data, to solicit additional information for each stream and, finally, to analyze all

information collected in making a determination on whether it supports a "trout waters" use for a manageable number of streams. In cases where the data is incomplete or does not establish that year-round trout populations exist in the stream, the DEP and DNR would have the opportunity to further study the streams and determine their current capability for supporting year-round populations of trout. By taking these streams in phases, the DEP will also have the chance to correct some of the deficiencies in the underlying data from DNR that have been addressed by other commenters in this rule-making and pursuant to the proposed listing of Tier 2.5 waters under the Antidegradation Implementation Rule.

IOGA also believes that holding hearings on the proposed addition of streams in the counties where these streams are located is essential to allowing full public participation in this process. While a phased approach will delay the inclusion of all the proposed streams on the "trout waters" list, this approach offers the benefit of providing the surrounding community the opportunity to become better educated and more involved in the process. Moreover, for the reasons stated above, a delay in adding a stream to the list in no way diminishes the protection that will be afforded to any stream that qualifies as a "trout water."

For all of these reasons, the mass addition of streams to Appendix A, as proposed, should not be pursued.

Antidegradation Implementation Procedures

IOGA has previously commented on most of the proposed changes to the Antidegradation Implementation Procedures rule as a part of the Antidegradation Coalition and incorporates by references the comments of the Antidegradation Coalition dated July 10, 2006 and previously filed with the DEP to the extent they apply to provisions of the Proposed Rule. In addition, IOGA requests clarification of two aspects of the proposed listing in Appendix A of Tier 2.5 waters. First, we ask that the agency indicate whether and to what extent the construction of a well service road across a stream would be affected by the listing of that stream in Appendix A. Second, we understand that if a segment of a stream is listed in Appendix A, then any tributary to that segment or any upstream portion of that stream would be accorded the same antidegradation protections as the listed segment. Please confirm whether our understanding on this point is correct.

Finally, we note that the agency's website includes a map which designates the location of the 156 streams proposed to be added to Appendix A. We have reviewed that map but believe more information is needed to determine the impact of the proposed listing. It would be helpful if the map included other reference points, e.g., highway route numbers, county boundaries and the boundaries of those areas deemed to be "public lands." Making this information available to the general public would be of significant assistance in determining the persons and activities likely to be affected by the proposed listing.

IOGA appreciates the opportunity to provide these comments on the proposed revisions to 47 CSR 2 and to 60 CSR 5, and looks forward to the DEP's response.

Very truly yours,

Charlie Burd/KDW

Charlie Burd
Executive Director

cc: Lisa McClung, Director – Division of Water and Waste Management

WEST VIRGINIA CHAMBER OF COMMERCE
The Voice of Business in West Virginia

July 17, 2007

Lisa McClung, Director
Division of Water and Waste Management
Department of Environmental Protection
601 57th Street, S.E.
Charleston, West Virginia 25304

Re: Comments on Proposed Revisions to Existing Legislative Rule 47 CSR 2

Dear Ms. McClung:

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-size 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 West Virginia Chamber's companies and firms.

I. Aluminum Criteria

The Chamber supports the Department of Environmental Protection's ("DEP") renewed proposal with respect to the aluminum criteria, and appreciates the DEP's filing of an emergency rule to retain the current interim aluminum criteria until, as proposed by this rule, it is adopted as the permanent aluminum criteria. The issue of the appropriate aluminum criteria for West Virginia waters has been studied and commented upon for many years. The Chamber participated with other groups representing the regulated community in presenting the DEP and the Environmental Quality Board with extensive information on the studies available on aluminum toxicity in aquatic environments, the flaws in the criteria developed by the United States Environmental Protection Agency ("USEPA"), the lack of any aluminum criteria in most of the surrounding states, the appropriateness of a dissolved standard for assessing impact on aquatic life, and many other issues. Given the considerable scientific evidence to support the protectiveness of the proposed criteria, given the USEPA's approval of the aluminum standard "based on a finding that the criteria are protective of aquatic life use regardless of whether they apply temporarily or permanently,"[1] and given the USEPA's recent approval of the DEP's emergency rule filing, the proposed action by the DEP is fully justified.

[1] See letter from Jon Capacasa, USEPA to Lisa McClung DEP dated January 9, 2006.

II. Addition of 335 Streams to Appendix A

The DEP has proposed to add 335 streams to the current list of trout waters in Appendix A of the rule. The decision to include a stream on the "trout waters" list will have a significant and lasting impact. The effect of listing a stream as a trout water is that more restrictive water quality criteria will be applied and any discharges to these waters will be severely restricted.

"Trout waters" in West Virginia are regulated as such based on whether a particular stream fits the rule's definition of a trout water. No list is needed to regulate a stream as a troutwater. Nevertheless, Appendix A of 47 CSR 2 purports to contain the list of known "trout waters" within West Virginia. The list, while informational, is not needed in order to protect trout waters. An error on the list, however, results in inappropriate and overly stringent regulation of the incorrectly listed stream.

"Trout waters" are defined as "waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round populations." 47 CSR 2-2.18. Using this definition, "known" trout waters should only include those waters for which sufficient information has been gathered to establish the existence of "populations" of trout – presumably by showing either the existence of populations of multiple species or by showing multiple populations of the same trout species at different locations within the particular water.
To show that even a single trout "population" lives in a stream throughout the year, the DEP must establish that natural reproduction of the trout species is occurring or that multiple age classes of the trout species are observed in the stream at one time, including young-of-the-year.[2] The DEP recognizes this method of determining the existence of a population, yet it continues to propose classifying and regulating streams with much less information.[3] Significantly, our review of the data submitted by the West Virginia Division of Natural Resources ("DNR") to the DEP--and relied upon by the DEP in proposing the additions to Appendix A--reveals many instances where the DEP has relied on insufficient data to classify a stream as supporting year-round populations of trout.

This issue of expanding the trout waters list without the requisite data is not new. In 2003, the Environmental Quality Board ("EQB") proposed to expand the list of trout waters which currently appears in Appendix A of the water quality standards rule by adding over 400 streams. Despite the criticism of the EQB regarding the lack of technical support for its proposal and the absence of any meaningful opportunity for comment on it, the Board refused to look behind the list that had been provided to them by the DNR. The EQB even refused to propose to

---

[2] The Chamber believes that in addition to evaluation of individual fish surveyed, streams proposed to be regulated as trout waters must be evaluated to insure that the steam's temperature regime and substrate are appropriate.
[3] The DEP's "Briefing Document" for the 2006 version of this rule states that "[n]atural reproduction is verified when multiple year classes, including young-of-the-year, are collected during population surveys. See Briefing Document p.3.

delete from its proposed list streams that the DNR had identified as not meeting the definition of trout waters. It is no surprise that the Legislature rejected this action by the EQB.

The DEP, just as it proposed last year, has again carried forward the EQB's effort to vastly expand the trout waters list without sufficient data. The Chamber objects to this effort, as it did last year, and has attached, and incorporates by reference herein, its comment letter to Lisa McClung filed July 12, 2006, regarding the proposed expansion of the trout waters list. The Chamber understands the appropriate updating of rules from time to time. The Chamber, though, objects to the DEP's renewed proposal to classify and list 335 streams on Appendix without a meaningful process and without sufficient data to support the proposed action.

If the DEP believes there are additional streams that should be added to the list of trout waters, we recommend that this be done on a case-by-case basis and only where there is sufficient and current evidence to support such a designation. The Chamber also recommends that the DEP hold a public hearing in the locale of any stream proposed for listing so that the local citizenry will have an opportunity to hear the agency's rationale for the listing and provide their comments.

The current proposal regarding trout waters met with significant objections during the 2006 rulemaking comment period and legislative session, and ultimately was unsuccessful. The Chamber urges the DEP to reconsider its approach to expanding the trout waters list. At a minimum, before adding any streams to the "trout waters" list, the DEP should (1) provide a written statement explaining its basis for adding each proposed new stream to the trout waters list and (2) address the many substantive and procedural concerns raised by the Chamber and others regarding the proposed expansion of the list.

III. Cool Water Lakes.

The Chamber participated with the DEP and other interested groups, as part of the "Nutrient Criteria Committee," in the development of nutrient criteria for West Virginia's lakes and reservoirs. As part of that effort, the participating groups developed and agreed to a recommended list of cool water lakes. The list was created to add certainty for regulated entities regarding whether a lake was managed as or considered to be a warm water or cool water lake or reservoir. The Chamber is concerned, however, that the list developed by the interested groups, with guidance from the DNR and DEP, has been proposed as a representative list only. The Chamber believes that this approach is inconsistent with the consensus recommendation of the NCC, and is concerned that the approach eliminates the certainty of having a list. The Chamber therefore requests that the list be included in the rule as the list of cool water lakes—not a representative (and therefore uncertain) list. The list can be updated based on new information in the future, but should not be characterized in the rule as a representative list.

IV. Proposed terminology of "water" vs. "water body"

The DEP has proposed to change all references to "water bodies" or "water segments" to "water." As a general matter, this effort seems to promote consistency within the rule. The Chamber, however, urges the DEP to review all of the references to "water" to insure that no unintended ambiguity results from the revisions. For example, in section 4.1.a., the new reference to "water" is in fact ambiguous. It could refer to a specific stream segment or to all streams or all "water." The Chamber suggests that this issue can be resolved by using appropriate modifiers, such as "a water."

In addition, the DEP has proposed to adopt the consistent term "water" without defining it in the rule. The Chamber suggests that the definition of "water" from the West Virginia Water Pollution Control Act be added to the rule for clarity.

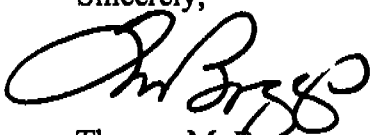
V. Proposed deletion of "not to exceed" language

The DEP has proposed deletion of all references to "not to exceed" in Appendix E of the rule. The Chamber would like to better understand this proposed change, and would invite further information from the DEP to explain these proposed revisions and its implementation. If implementation will differ from current practices, the Chamber requests that the DEP allow for additional dialogue with regulated entities regarding any follow-up comments, questions, or concerns.

In addition to the comments set forth above, the Chamber endorsed the comments being filed by the West Virginia Manufacturers Association on this rule.

We appreciate the opportunity to provide these comments and the efforts of the agency to maintain an up-to-date regulatory program.

Sincerely,



Thomas M. Boggs
Vice President

ROBINSON
&McELWEE

DAVID L. YAUSSY
ATTORNEY AT LAW

P.O. BOX 1791
CHARLESTON, WV 25326

DIRECT DIAL: (304) 347-8358
E-MAIL: dly@ramlaw.com

July 17, 2007

BY HAND DELIVERY

Scott G. Mandirola
Assistant Director
Water Quality Standards Program
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: **Comments on the Water Quality Standards Proposed Rules**

Dear Mr. Mandirola:

Please find enclosed herewith the **COMMENTS OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION AND THE WEST VIRGINIA OIL & NATURAL GAS ASSOCIATION REGARDING REQUIREMENTS GOVERNING WATER QUALITY STANDARDS, 47 C.S.R. 2.**

Please contact me with any questions you may have regarding the enclosed.

Very truly yours,

David L. Yaussy/sjs

David L. Yaussy

Counsel for
West Virginia Manufacturers Association
and
West Virginia Oil & Natural Gas Association

DLY/sjs
Enclosures
cc: Ms. Karen Price (w/encl.)
Mr. Nicholas DeMarco (w/ encl.)

COMMENTS OF THE
WEST VIRGINIA MANUFACTURERS ASSOCIATION
AND THE
WEST VIRGINIA OIL & NATURAL GAS ASSOCIATION
REGARDING
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
47 C.S.R. 2

July 17, 2007

I. INTRODUCTION

The West Virginia Manufacturers Association (WVMA) is a trade association composed of manufacturers and related businesses that are dedicated to the advancement of manufacturing activities in West Virginia. The WVMA regularly comments upon rules of interest to its members. It is concerned about West Virginia's water quality standards and their effect on West Virginia businesses.

The West Virginia Oil & Natural Gas Association (WVONGA) serves the entire oil and gas industry. WVONGA members are engaged in exploration, production, gathering, processing, transmission, storage, sales and distribution of natural gas.

The WVMA and WVONGA offer the following comments on changes to those standards that have been proposed by the West Virginia Department of Environmental Protection (DEP) under 47 C.S.R. 2. Because the DEP is re-proposing the changes that were made last year, the WVMA is reiterating some of the previous comments where no changes were made in response to our comments.

II. COMMENTS

A. Definition of cool water lakes.

Section 8.3 states that "the following cool water nutrient criteria shall apply to cool water lakes. (See Appendix F for a representative list.) The following warm water nutrient criteria shall apply to all other lakes with a summer residence time greater than 14 days." The rule defines cool water lake as lakes "managed by the West Virginia Division of Natural Resources for cool water fisheries with summer residence times greater than 14 days." Section 2.2.2. These two provisions when read together leave us uncertain as to how one is to distinguish between cool water lakes and warm water lakes. Since the descriptions of cool water and warm

water lakes are similar—both have a residence time in the summer greater than 14 days – the difference must be that cool water lakes are those managed as such by the Division of Natural Resources (DNR). However, since there is no reference to where the DNR keeps that list, it is impossible for the regulated community to know what lakes are managed as cool water lakes. There is a "representative list" of cool water lakes in Appendix F, but it is not exclusive of any other lakes that meet the definition in Section 2.2.

The DEP should develop a complete, definitive list (not a representative list) of cool water lakes managed by the DNR and place it in Appendix F. If it does not do so, it will be impossible to be certain whether a lake that is not listed in Appendix F is a cool water lake.

There is another change that we would urge be made to the criteria set out in Section 8.3.b. The rule should specify that the criteria apply in the hypolimnion, and compliance samples should be taken in the non-flowing lacustrine zone of the lake. These were the conditions and locations on which the nutrient criteria were predicated, and they should be acknowledged in the rule.

B. Trout streams.

The DEP proposes to designate hundreds of West Virginia streams and rivers on Appendix A as Category B-2 Trout Waters based primarily on a recommendation from the DNR. We believe that many of these streams do not meet the definition of trout waters and therefore should not be designated as such. Furthermore, we are unaware of any technical demonstration supporting the assertion that the instream water quality of each stream can sustain a "year-round trout population." We urge the DEP to withdraw this proposal and develop a more comprehensive and suitable process for making this and future designations.

1. The proposal is not supported by fact or law.

The proposed water quality standards define trout waters in Section 2.19 as "waters which sustain year-round trout populations" but specifically exclude "those streams or stream segments which receive annual stockings of trout, but do not support year-round populations." When the DEP initially proposed the trout stream listings last year, in its *Statement of Circumstances Which Require Rule* that accompanied the proposed water quality revisions, the DEP explained how it and the DNR collaborated on deciding which streams to list as trout waters. The DEP stated that it was given a list of waters that meets the foregoing definition.

There was apparently no independent analysis of the streams on that list by the DEP. We have not received any information since then indicating that the DEP has done any independent analysis of the DNR's list.

We do not believe that the representations of the DNR, no matter how well-intentioned, are sufficient to allow the DEP to perform its task of determining which streams support year-round populations of trout. The Legislature has given the DEP, not the DNR, the responsibility for setting water quality standards, and if it is going to place a list of a trout streams in an appendix to the standards, it should confirm that those streams meet the definition of trout waters. Without that analysis, the state's citizens are unable to determine whether the DEP and the DNR have accurately evaluated the situation.

The only documents justifying the DNR's lists of trout streams that we are aware of are the stream survey sheets prepared by the DNR. These were made available by the DEP, but apparently were not relied upon by the DEP in evaluating the DNR's list. In any event, these surveys provide limited data that should not serve as the basis for making such an important decision as a use determination. Some of the streams are listed as trout waters based on observations of trout in a stream (sometimes 20 to 30 years ago) and often on just a single occasion. Some surveys do not report young-of-the-year, or any other basis for considering the stream a trout water. Such data cannot support a finding that trout were present then, or are present now, on a year-round basis.[1] There is a serious disconnect between DNR's listing approach and the definitions specified in the standards.

Waters of sufficient quality to attain the trout water classification are protected by Category B-2 water quality criteria that are generally more restrictive than the Category B-1 criteria applied to warm water fisheries. The one-time or periodic report of trout in a water body, or a portion thereof, by the DNR does not mean that it, or that portion, should be reclassified as a cold water fishery subject to the more stringent Category B-2 water quality criteria.

---

[1] When the DEP initially proposed the trout streams listing last year, the DEP noted in its *Statement of Circumstances Which Require Rule*, that the list had to include every trout stream where year round trout populations or reproduction have been established since November 28, 1975, because those trout streams were existing uses. Given the limited data available, there are insufficient grounds for stating that the B2 use applied at any time in the past, and that it is therefore an existing use. Determining whether the use is present should require much more data than one or two observations, as discussed below.

A systematic evaluation of stream reclassification is needed to determine whether a water body is a legitimate trout stream. We recommend that, prior to listing a water in Appendix A, the DEP require a demonstration that the water will "sustain year-round trout populations" in accordance with the Section 2.19 definition of trout waters. Such a showing should include, at a minimum, multiple reports of seasonal water quantity and quality, as well as biological data that demonstrate that the instream water quality can sustain a "year-round trout population." This approach is consistent with the antidegradation implementation procedures, 60 C.S.R. 5, for nominating and designating Waters of Special Concern and Outstanding National Resource Waters, which require objective classifications based on sound science.

It is important to have a process in place that accurately identifies trout streams, because once a stream is added to an appendix in the water quality standards, it is extremely difficult to remove. In contrast, adding a stream that satisfies the definition is much easier. Furthermore, the cost to the regulated community posed by an incorrectly listed trout stream could be significant, and it is not unreasonable to expect the DEP to expend resources to verify that the listing is accurate.

2. The DEP should develop alternative trout water classifications.

In addition to improving the data used to determine which streams are trout waters, we urge the DEP to recognize that not all trout waters are of the same quality, and some may not deserve the same level of protection as others. Due to many factors, natural as well as anthropogenic, the quality of West Virginia waters ranges from those streams that can support trout for only a limited portion of the year to those that support native trout. In order to reflect this reality, DEP should change the definition of "trout waters" and/or develop appropriate scientifically-based implementation procedures to recognize the following three trout water classifications: (1) waters that sustain stocked trout for a portion of the year; (2) waters that sustain stocked trout year-round; and (3) the more ecologically and socially important "native" or "naturally reproducing" trout waters. Since they sustain trout for only a portion of the year, Classification 1 waters should be protected with Category B-1 water quality criteria. Classification 2 streams would require somewhat more protective criteria than Classification 1 streams because they support trout year-round but do not support propagation.

Classification 3 streams should receive Category B-2 criteria protection because they support "native" or naturally-reproducing populations.

Both Pennsylvania (Title 25, Chapter 93.3) and Virginia (9 VAC 25-260-370) differentiate seasonally stocked trout waters from the higher classifications of Cold Water Fishes (Pennsylvania) and Wild Natural Trout Streams (Virginia) and apply the appropriate numeric criteria specific to protecting that use. For example, Pennsylvania has a use designation, TSF, which is specific to waters suitable for maintenance of stocked trout for the period from February 15 to July 31. Water quality criteria protective for the TSF use are found in Chapter 93.9 of Title 25 and, in the case of temperature, are clearly different from criteria for the protection of year-round trout fisheries under the Cold Water Fishes (CWF) designated use. Virginia's classification system differentiates between waters suitable for maintenance of wild trout populations (Wild Natural Trout Water) and for the year-round hold-over of stocked trout (Stockable Trout Waters). In Virginia, a stream is considered unsuitable for any type of trout fishery under any of the following conditions: (1) summer temperatures are unsuitable for trout survival; (2) the stream contains a significant population of warm water gamefish; (3) insufficient flow; or (4) intolerable water quality. The Virginia and Pennsylvania approaches are pragmatic and enjoy broad-based public support because they recognize the realistic attainability of the use within specific waters and indirectly incorporate both social and economic considerations into the designations.

The Pennsylvania and Virginia approaches are also consistent with an example of properly designating uses contained in EPA's Water Quality Standards Handbook: Second Edition (EPA-823-B-94-005a, August 1994). Section 4.4.2 of the EPA handbook describes a scenario where a stream does not support an existing use as a cold water fishery even though it sustains a small cold water fish population. In this example, the existing stream temperatures are unsuitable for a thriving cold water fishery, with only a small marginal population. EPA states that under this type of situation "[a] use attainability analysis or other scientific assessment should be used to determine whether the aquatic life population is in fact an artifact or is a stable population requiring water quality protection."

We believe that adopting the DEP's proposed list of trout waters will result in the incorrect designation of many streams, which could yield serious socioeconomic impacts. In light of the above, we recommend that the DEP withdraw its current proposal to modify the

Appendix A list. We also recommend that West Virginia develop a more comprehensive process for determining whether the characteristics of water are adequate to support the B-2 trout waters use and that this process be used in developing subsequent listing proposals.

C. Aluminum Criterion.

We support the DEP's proposed modification of the chronic criterion for aluminum from 87 ug/l to 750 ug/l for all waters except trout waters. (Appendix E, Table 1). As the EPA has acknowledged, this change is consistent with the Clean Water Act and water quality standards program requirements in 40 C.F.R. Part 131. The EPA has recently approved the modification of the aluminum criterion. Therefore, we believe the DEP's action in adopting the EPA's conclusions and proposing to make the criterion change permanent is scientifically supportable and reasonable.

D. Use Classifications.

Currently, the DEP assumes that all uses described in Section 6 of the water quality standards apply in all waters, whether that is correct or not. The effect is to greatly increase the burden on industries in the course of permitting, and increase the likelihood that water bodies will be found to be in violation of water quality standards. For example, even if a stream is not used for irrigation activities, permit writers must set limits as if it were. Streams that are too small to serve as Category A public water supplies must still be protected as drinking water sources, even though they are often dry, and have never been used as a water supply. To avoid having permit limits based on the criteria for a use that has never existed, the permittee must go through the process of removing the use, or seeking a determination that the use does not apply. In either event, the permittee must petition the agency for a change in water quality standards, obtain approval for the change from the West Virginia Legislature, and wait years for EPA to approve the change before it becomes final. Only then can the permit be revised.

Examples of this situation crop up regularly. The DEP was involved in a lengthy process, which required years of negotiation and amendment of the West Virginia Water Pollution Control Act, before many mine discharges could be relieved of the requirement of meeting the Category A criteria for manganese. All those involved acknowledged that treating for manganese often presented more problems than the manganese itself, but the DEP's approach to water quality standards implementation delayed a resolution that was cost-effective and still environmentally protective. In recent years, the issue has arisen for Dow Chemical Company

and Huntington Alloys, which discharge into Ward Hollow and Pats Branch, respectively. In each of these two situations, the Category A use clearly does not apply, as there is no public drinking water supply even possible in the streams. Nevertheless, the affected companies have had to go to great expense to request changes to the water quality standards in order to clarify that the Category A use does not apply in those locations. The effect of the DEP's position is to cause businesses to spend inordinate amounts of money and time obtaining approval for changes to the water quality standards, first from the state and then from EPA, to address a situation that presented no environmental harm in the first place. DEP should reconsider all current Cateogry A use designations and limit such designations to only those streams or stream segments that warrant such a designation.

This is a situation that could be improved by a simple change in the way the DEP writes NPDES permits. If at the time a permit is written the permit writer identified which water uses applied, and what criteria would be used to set water quality-based permit limits, the permittee would have the opportunity to show to the permit writer's satisfaction that a certain use did not apply. That might be done by, for example, showing that there was insufficient flow for a water body to serve as an irrigation source, or public water supply. The permit still would be drafted to protect those uses that were present, and the public and the permittee would have ample opportunity to comment on the permit at the time it is issued, and could appeal the permit if they were dissatisfied with the uses that were deemed to be existing. That appeal could be taken up to the West Virginia Supreme Court of Appeals, if necessary. Any person unhappy with that result could ask the DEP or the Legislature to approve a change to the water quality standards to remove or impose the use. In short, there would be plenty of opportunity for the public to weigh in on the applicable uses, the permit writer's decision would be reviewed every time the permit was renewed, and limits would be set in a rational fashion.

Determining which uses exist, and therefore what criteria apply, has a significant effect on how water quality standards are implemented in permits and development of total maximum daily loads. We urge the DEP to amend its practices by determining, on a case-by-case basis, where uses apply, so that permits can be better written. Unless the DEP alters its approach, the permittee must convince the DEP to propose a rule change, get the Legislature to approve that rule change, and wait several years for EPA to act on the change of standards. The DEP has made this far more difficult than it needs to be, and a simple change of policy could make permit

issuance much easier for all concerned. We urge the DEP to implement that policy change without delay.

E. Elimination of Appendix D.

Because of the way the DEP approaches the current use designations, Appendix D should be eliminated. Category C "Water Contact Recreation" is a default use that is applied in all streams. Therefore, listing streams with that use is misleading because it suggests that there are streams that do not have that designation. DEP should either alter its approach in applying Category C to all streams or eliminate Appendix D.

F. Overlap of mixing zones.

We believe that the DEP should add a section to clarify that mixing zones may overlap for discharges of pollutants of different types under Section 5.2. In the past, permit writers have interpreted this section to mean a prohibition of the overlap of a mixing zone from any nearby downstream outlet, even if the outlet discharges a different pollutant than the other outlet(s). This interpretation is not necessary to protect designated human health or aquatic life uses. The DEP should add a section under 5.2.h authorizing mixing zones that overlap another discharge *of the same pollutant.* The permit writer can then look at individual mixing zones and the pollutants discharged and determine whether or not the cumulative use of mixing zones will impact water quality standards.

The addition of this clarification will prevent mixing zones from being restricted in size solely because of the location of downstream discharges. These nearby upstream or downstream discharges may actually have a dilutive effect on in-stream concentrations of discharged pollutants. As the rule is currently interpreted, it is unduly restrictive.

G. Mixing zones granted for outlets in close proximity on a case-by-case basis.

Currently, the DEP does not allow mixing zones for multiple outlets discharging the same pollutant under its interpretation of Section 5.2. However, in some instances, water quality is not impacted, even with multiple discharge outlets. The permit writers should have the discretion to determine, on a case-by-case basis, whether water quality standards will be impacted by a mixing zone.

H. The EPA human health criteria should be adopted by DEP.

The DEP has implemented the 7Q10 water quality standard for human health criteria. The EPA and ORSANCO have both adopted the harmonic mean flow (HMF) rather than the

7Q10 under subsection 7.2.b. The DEP's use of 7Q10 results in limits that are more restrictive than necessary to protect human health standards. These more restrictive than necessary limits, combined with other water quality standard, often create limits that are not attainable and not measurable with current commercially available analytical methods. Therefore, the WVMA and WVONGA propose that DEP adopt the HMF, as adopted by EPA.

I. Polynuclear aromatic hydrocarbons (PAHs) should be permitted using HMF.

Under Appendix E, Table I, the DEP adopts a proposed human health criteria. This proposal is almost identical (except for fluoranthene) to the EPA and ORSANCO standards. The EPA and ORSANCO both recommend that human health PAH water quality standards be applied at the HMF, and we believe that DEP should adopt this approach.

The WVMA and WVONGA are concerned with the seven B2 PAH compounds which are listed at 3.8 ng/L. This level is not detectable using conventional EPA analytical methods. This level is also not detectable using the gas chromatography/mass spectroscopy (GS/MS) method. Therefore, if the B2 PAH criteria were applied directly as effluent limits with no mixing zones, most PAH dischargers would not be able to comply with the standard. DEP should adopt a "Total B2 PAHs" standard, establishing a Total B2 PAH criterion of 26.6 ng/L. NPDES permits would then be based upon Total B2 PAH standards. Human health criteria would be protected because the total levels would be controlled so that the other PAH compounds are controlled well below the human health criteria levels.

J. The DEP did not adequately consider economic impacts.

The DEP is required by law to evaluate the economic effects of this proposal. There are two independent requirements for doing so. First, all legislative rules must include a fiscal note "and a statement of the economic impact of the rule on the state or its residents." See *W. Va. Code* §29A-3-4(b), made applicable to legislative rules by *W. Va. Code* §29A-3-9. The second requirement is found in *W. Va. Code* §§22-11-2, which requires that the DEP establish water quality standards that are consistent with "the expansion of employment opportunities, maintenance and expansion of agriculture and the provision of a permanent foundation for healthy industrial development." Therefore, an economic analysis of this proposal should have been developed and made available for comment by interested and affected parties.

The fiscal note attached to the DEP's proposal is inadequate because it states that "[n]o fiscal impacts on state government are anticipated," without considering whether there are costs that will be imposed on state residents, lost (or gained) employment opportunities, and other effects. Some of the changes the DEP has proposed, such as the revision to the chronic aluminum criterion, may result in a positive fiscal impact, as unnecessary permit limits are avoided. Other changes, such as the addition of streams to the trout waters list or the development of nutrient criteria, may result in greater compliance costs, and this should be estimated and provided to the Legislature.

We understand that these costs may be difficult to quantify with precision, but the Legislature has required the analysis in order to better weigh the effect of rules on state citizens. We urge the DEP to undertake this exercise before it files its final rule.

III. CONCLUSION

We appreciate the opportunity to provide comments on the proposed changes to the West Virginia water quality standards. We concur with the comments offered by the West Virginia Chamber of Commerce, especially those comments regarding aluminum criteria and trout stream classification. We hope these comments will be given careful consideration.

Karen S. Price/REK

Karen S. Price, President
West Virginia Manufacturers Association

Nicholas DeMarco/REK

Nicholas DeMarco, Executive Director
West Virginia Oil & Natural Gas Association

From: "Janet Gagnon" <jsgagnon@mindspring.com>
To: <comments@wvdep.org>
Date: 7/17/2007 10:27:33 AM
Subject: 60CSR5 and 47CSR2

I am commenting on 60CSR5 and 47CSR2.

I believe:

1. West Virginians, represented by their government, rightly own the rivers and streams, and hold them in trust for themselves and the rest of the country (including tourists).

2. The good waters in West Virginia's trout streams won't last long without government protection. We need to offer a very high level of protection to at least the 309 streams (including world-renowned Slaty Fork) designated as warranting strong protection.

3. The list of 309 streams was apparently compiled in a manner that was fairly rational and not too political, and it should be respected.

4. Potential violators of the laws and rules protecting streams (e.g., owners of adjacent land, municipalities, timber and energy companies) should be given adequate notice and measurable standards of compliance.

5. The rules and laws should be broadly, consistently, and impartially enforced.

6. Experts and agency people should be carefully selected for their expertise, energy, integrity, and dedication to the standards of their professional disciplines and/or the missions of their agencies. They should be respected and they should NOT be subject to undue political pressure.

I am a West Virginia resident/citizen, an owner of energy company stock, an owner of property in Kanawha and Tucker Counties, and a future fisherwoman.

Thank you for the opportunity to be heard.

Janet S. Gagnon
1714 Rolling Hills Circle
Charleston, WV 25314
(304) 344-2684

CC: "JRGagnon" <jgagnon@mindspring.com>

From: Paula Finck <paulafinck@yahoo.com>
To: <comments@wvdep.org>
Date: 7/9/2007 10:09:13 PM
Subject: Re: Bills 47C9R2 and 60CSR5

To governing officials,

Please do all you can to keep our streams and fishing waters in the pristine condition that nature and God meant them to be in. Dirty water polluters should not hold the keys to destroying West Virginia's natural treasurers. Clean water act must remain just that.

Thank you for following the rules of nature for the benefit of the people.

Sincerely,

Paula Finck

Gloria J. Shaffer - Tier 2.5 Stream List

From: "Robert A. Mertz" <ramertz@mountain.net>
To: <comments@wvdep.org>
Date: 7/12/2007 5:34 AM
Subject: Tier 2.5 Stream List

West Virginia Department of Environmental Protection

DEP rule 47CSR2, Requirements Governing Water Quality Standards
DEP rule 60CSR5, Antidegradation Implementation Procedures.

As a Science teacher with many years experience teaching in the public school systems, I have studied the environmental problems our world faces today. All the major problems are due to two related issues, the growth of our human population, and the wasteful over consumption of our natural resources by the more privileged passengers on "Spaceship Earth". As a member of the lower middle class I feel that I personally have all the material wealth I need. In addition I feel very happy with my wife and the two fine sons we have raised. It is the welfare of my sons, my son's cousins, and all the children that I have had the pleasure to teach that motivates me.

Like a ship at sea our Earth moves through the hostile vastness of space, and like a ship we are all in the same boat. If Earth's life ecological sustaining systems fail we will all perish. On the Titanic the rich as well as the poor died. Today we are taxing the ability of our Earth to support the multitude of persons on board. It is becoming increasingly important that we make wise decisions. Too often we are making decisions based upon the shaky basis of Economics rather than Science. If Economics could place a valid long-term value on the environmental systems and living creatures living on our Earth perhaps this would be valid, but Economics is too short sighted to place realistic values on these things. Today I am writing to you concerning an issue that is well beyond the grasp of today's economics.

The WV DEP went through a 6-year process and spent about $1 million to develop the antidegradation policies and to establish the initial Tier 2.5 list. Tier 2.5 allows some stream degradation as it is, but such degradation is limited to no more than 10% of a stream's assimilative capacity. Lowering the standard from Tier 2.5 to the next level – Tier 2 – would allow for stream degradation of up to 20% of the stream's assimilative capacity.

If DEP's rule is adopted by the Legislature the probable outcome for a large number of streams which currently support reproducing trout populations would be the loss of their Tier 2.5 protection, and a consequent DEP endorsed degradation of these streams to a point that may significantly reduce such trout populations.

The Tier 2.5 concept was a compromise with industry in the first place to avoid having to list all reproducing trout streams in the Tier 3 category, which would allow no degradation. But now, the "Dirty Water Coalition" – a powerful group of polluters including agriculture, timber, coal, oil and gas, manufacturers and the Chamber of Commerce – is rejecting the very compromise it demanded and agreed to and has launched an all-out assault on West Virginia's most pristine rivers and streams.

- The Federal Clean Water Act requires that states prevent the degradation of their highest quality

waters.

- The original "presumptive list" of Tier 2.5 streams adopted by the Legislature in 2001 contained 444 streams.
- These are high quality streams -- including popular native trout waters such as Shavers Fork of the Cheat River and Big Spring Fork of the Elk River. The original Tier 2.5 list would have protected streams such as the Blackwater River, the Cranberry River, the Elk River, Seneca Creek and Loop Creek, and almost all of the headwater streams in the Monongahela National Forest.
- Last year DEP cut the original "presumptive list" down to a list of 309 streams which the agency documented as qualified for Tier 2.5 protection. The Legislature failed to act on DEP's recommendation.
- This year DEP is proposing to slash the list again – down to just 157 streams – based purely on politics, not science.

I hope you will keep in mind that the title "Department of *Environmental Protection"* says it all. The function of your agency was intended to be one of protecting our environmental concerns, not to protect the selfish interests of profit seeking industries that would take any short cut to enhance their bottom line. Please put the long term interests of our children above what is politically expedient at the moment.

Thank you for consideration of my comments.

Sincerely,

Robert A. Mertz

Robert A. Mertz
1205 Mulberry Ridge Road
Spencer, WV 25276-8561

ramertz@mountain.net

e-mail: Karen Light

Ms. Jessica Greathouse
W.V. D.E.P.
601 57th St.
Charleston, W.V. 25304

Dear Ms. Greathouse,

July 17, 2007

I attended your D.E.P. meeting for citizen comments last night, and appreciate the opportunity you had given us and your listening. I hope you will gather there is a broad and growing citizen support for preserving and improving water quality. For example, the million dollars for improved septic systems for W.Va., and all the federal programs including the old Clean Water Act itself.* I believe this U.S. E.P.A. will be forced to prevent degradation by court order, if necessary - as they had to do on so many other issues. The next administration in Washington will not let this issue so stray from the thrust of law of the land, with its clean-up, T.M.D.L.s, etc. Citizen suits, again may have to play a role, unless the Governor changes and would rather take the high ground. Cutting a contested 157 in half is not a compronize; it is a compitulation to would be polluters - not what he or your E.P.A. is supposed to do.

W.Va. can become characterized as Wild and Wonderful Water. With the highest average elevations in the east, W.Va. is a headwater state. This is attractive to tourism, growing at 10%+ per year, and to industry looking for clean water for their intake and quality of life. The nature perception is enhanced by the presence of an abundance of water recreation grounded in clean water: swimming, boating, fishing. Trout fishing and the mere presence near-by of a native brook stream enhances the entire area's outdoor experience - and property values. Nothing connotes pristineness like their presence in the minds of a growing number. This is very important for our future. It was stated we have "the Mother Load" of clean water.

I will be brief, but please note "existing use" maintenance should not allow you to reduce standards for coal or other development.

I need not remind you that you often heard that water is a public good. It is a "commons", not owned by the landowner. There is no "taking" of landowner rights as the Farm Bureau said, rather the "taking" argument applies to a polluter who has degraded water quality for downstream users and the rest of the area that might have otherwise been considered pristine. Few landowners want to pollute "his" stream. and that of his downstream neighbors - should he have any "right" to? What does the Clean Water Act say?

Lastly, "stewardship", a word I did not hear. The Farm Bureau understands it well. They know "legacy" too. There is common-ground, and hope. You can be a proud Environmental Protection Agency.

Thank you for your time. Good luck.

Sincerely,

*Enclosed notes

Donald C. Gasper, Fish Biologist
WV DNR - Retired
4 Ritchie Street

B-2 "TROUT WATERS" (337 streams)

1. Public enjoyment
2. Propagation & protection of animal, bird, fish and other aquatic and plant life.
3. Expansion of agriculture & industry providing a healthy permanent foundation.

We would comment briefly on each as to their meaning and spirit. In our view no consideration of a short-term goal of degradation is stated or implied to any degree. Pollution is viewed as bad and unlawful ta king of our common natural resource of clean water.

"PUBLIC ENJOYMENT" of good water quality is expressed:

1. In cleansing, relaxing fun of swimming.
2. In boating.
3. In merely trips to the shore to look at it, in walking along our many beautiful streams with their clean water.
4. In living near by.
5. In traveling to an area characterized by clean water, spending time there and experiencing a greater enjoyment of the area enhanced by it. The best expression of this is how values (even property values) are raised by the presence of trout or native brook trout.

"PROPAGATION", of ecosystem integrity, and its "protection" should mean to most regulat ors that appropriate biological science was followed. The highest water quality should be "protected" to nourish the greatest biodiversity, stability and productivity.

"EXPANSION", as immediately above, with the added clear aspect of "sustainability" is implied in "providing a healthy, permanent foundation". It will not permit "a race to the bottom", that should be illegal.

We submit that these are the fair biological implications of these three legal guidances.

Note 1A "Trout Waters" are next defined.

"TROUT WATERS"

"Waters that sustain year-round trout populations."

Trout that do not survive the maximum summer temperatures disqualify that reach - more exactly.

They may be sustained by fingerling stockings that do aurvive the summer temperatures!

Many of our fingerling trout stocked waters qualify, expecially brown.

Example: Rt.Fk. Leathersood (Brook), Homney Cr. (Brown)

They are not limited to reaches where

Natural reproduction has been found, at all; or has been sufficient to sustain the population, as do our N.Brook Trout Populations.

Natural reproduction is not a factor at all.

"Year-round" can (should, does) mean any trout stocking that that survives the summer temperatures to any extent - no specific extent is required - --no percent. A trace will do. Further, survival any one summer will do; it need not be successful every summer - every other summer -- etc.

Some catchable-size stocking results in at least a few that survive the summer temps, and escape the fishery to populate the reach the next year -as "hold-overs". Most do.

The unknown extent of micro-habitats of cooler water, enabling trout to survive the maximum summer temperatures of the main flow, is important downstream.

The last troubling suggestion is that reaches with only trout potential (not yet limed, etc.) are not protected.

NOTE 2

Again, expert input is required by law, and the agency responsible is WV DNR - Fish. It should be noted that if they do not know they have said so - a professional, and to us, a reassuring statement.

NOTE 3

The definition of "trout water" for these regulations should remain "waters where sustained year-round trout populations or trout reproduction have been documented". See Note 1A.

NOTE 4

The date Nov. 28, 1975 has nothing to do with the professional judgement whether trout are present year-round in a reach or not, or the potential of that reach. Much fishery data prior to 1975 is valid and useful in expert evaluations.

4A

The brown trout fingerling introductions have resulted in excellent populations and extensions of "trout waters".

4B

A second fortunate circumstance is that stream-side tree canopies have closed over many miles of trout stream - extending them downstream as cool trout water.

4C

Acid Rain, in contrast, unfortunately, is continuing to acidify watersheds and headwater streams. This loss is particularly significant for native brook trout. It is a moving target. Restoration though is possible because DNR-Fish has a very effective "fix" - limestone sand can be dropped from helicopters into headwaters, neutralizing acid and enriching streams and restoring particularly trout streams. (See the detail on the Middle Fork River that follows - though it is delivered by truck.) Such potential trout streams should be added to this protective list. There are 100 miles of such streams on the National Forest and 100 miles in counties to the west of it.

It is instructive to look more closely at Mill Creek in Kumbrabow and Right Fork of Leatherwood for they indicate why DNR-Fish expertise must be relied upon. (Some landowners will know some of what is going on in their particular stream but do no understand Acid Rain effects regionally and through time. Only a brief partial tutorial would be appropriate here.

Mill Creek historically W.Va.'s longest native brook trout stream, lost the four less acid tolerant fish species

associated with the brook trout through the 1960's as it acidified. Then brook trout reproduction also began to fail in the 1980's, being restricted to one tiny richer tributary. As only a few larger brook trout were present and reproduction was so rare, it was limed in the 1990's. This fishery was restored just in time throughout all its 11 miles with all its complimentary sustaining food web. Further the upper 7 miles is above a waterfall and the other 4 fish species could not return. They are competitors and predators on brook trout. It permits the brook trout to become twice as abundant - twice as good a fishery in a stream that without liming now would be barren.

Further, DNR-Fish has a fish toxicant that will do the same thing - eliminate competing fish that become dominant as streams become warmer. (In the original forest all these mountain streams were cool enough that brook trout was the only fish present.) Fish toxicants can be used above a barrier generally after removal of some adult spawners for restocking and/or leaving "trout-only" cooler headwater reaches untreated - or spawners can be brought from a near-by population if none any longer exist there. Originally many brook trout streams were connected. It is called "restoration"; it restores the trout-only population to these lower reaches. They do well without the other fish species as in the original forest. Such potential trout waters should be protected.

Right Fork of Leatherwood is a beautiful stream draining 8 miles from the National Forest. It drops in a 35' waterfall to private land on its way to Elk River 4 miles below. There were, as in Mill Creek the same 4 species and the native brook trout above the falls. They disappeared in the 1960's from this undisturbed watershed. Their loss takes place always first in the more acid headwaters. Some reinvasion from below, even to the headwaters at first, takes place as streams all become less acid in summer. In this case, once lost in acid spring-time flows, above the waterfall, they could not reinvade above.

The U.S.F.S. noted this loss above the falls in 1972, and DNR-Fish confirmed and noted its significance. For 30 years now, a Trout Unlimited Chapter from Clarksburg has been backpacking 3-4" hatchery brook trout in the lower almost 2 mi. to the water fall. These fish grow well without competition, populating the stream. They do not reproduce successfully either. One day limestone sand will be added to its remote headwaters, and native brook trout from its Left Fork or Bergoo Creek stocked - and anglers will have to return only to fish this beautiful stream.

Further DNR-Fish has a marvelous "tiger trout" that does not reproduce at all. It is very strong, clean and beautiful; and as all its food is used in body building. It is very productive. It produces a fine fishery of such density that it can support a greater fishing pressure. It can probably utilize a little warmer water that would be dominated otherwise by creek chubs. It would soon reduce

creek chubs. Its numbers and distribution can be absolutely controlled as it does not reproduce. Such potential "trout waters" should be protected.

Finally it should be added that this same pattern of "fish loss" due to regional Acid Rain has been repeated in the Cranberry River (where even the smallmouth bass moved downstream out of the Backcountry Wilderness in the 1960's and 1970's) and in the North Fork of Cherry. Stream reaches near Davis and Shavers Fork have similarly been effected. They are so acid in the spring that hatchery catchable-size stockings have to be restricted until May in these streams.) It is a familiar pattern known to experts; some have been limed, some have not.

"Trout stream" reach identification had best be left to DNR-Fish experts. No one approaches their knowledge or has their responsibility to understand W.Va.'s trout fishery resources.

NOTE 5

Within the Federal Rules, Sections 4.1a and 6.16 of 47 CSR2 existing uses must be protected. Where did the idea that degradation could occur come from? Compromises have already been made. Are they legal?

NOTE 6

Rather Section 101(a) requires their water quality be restored. This is the clear intent of the US EPA as evidenced by their list of impaired waters and their T.M.D.L. recovery program. What makes any one think anything less would be legal?

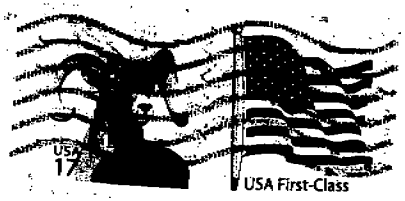
8.1.a.2.C The location of the water

In its numerous justification documents for continued stream inclusions, WVDEP provided very general information regarding the location of streams. In many circumstances, there is no substantive information that can be used by the agency to aid in its decision whether to list a stream for Tier 2.5 protection. We highly recommend that WVDEP add information to this category that will allow a more accurate consideration of how the location of a stream may affect its listing.

The location of a stream is important because it may maintain a reproducing trout population, or may be one of many linked streams that together provide an integrated trout habitat. Trout populations depend upon adequate stream lengths to reproduce. In particular, because of their tendency to migrate from downstream reaches into the headwaters during the spawning season, it is crucial that continuous lengths are protected in order to maintain the reproducing population. By delisting headwaters streams such as Big Spring Fork of the Elk (KE-138), Shavers Fork (MCS), Glady Fork (MC-60-K), Cold Knob Fork (KG-34-G10), South Fork of Cherry (KG-34-G), Cup Run (KE-138-B), and numerous other headwaters stretches, WVDEP is threatening both the water quality and trout populations in these streams and others nearby. ***We therefore recommend that WVDEP relist all headwaters streams in order to protect vital spawning grounds that maintain reproducing trout populations in these and nearby streams.***

Donald Gasper
4 Ritchie St.
Buckhannon, WV 26201

CLARKSBURG WV 263
17 JUL 2007 PM 2 L



RECEIVED
WVDEP
JUL 18 2007
PUBLIC INFORMATION OFFICE

Ms. Jessica Greatnouse
W.V. D.E.P.
601 57th St.
Charleston, W.V.
25304

25304+2345

cc: Scott M.

Brooks Run
MINING COMPANY, LLC.

25 Little Birch Road/Sutton WV 26601
Ph. 304-765-4006 / Fax 304-765-0390

July 13, 2007

WV Department of Environmental Protection
Stephanie Timmermeyer; Cabinet Secretary
601 57th Street, SE
Charleston WV 25304
Attn: Lisa McClung; Director of Water and Waste Management

Ms. McClung;

This letter is being written on behalf of Brooks Run Mining Company LLC in response to the request for public comment on 47CSR2 Proposed Rule for 2008.

Brooks Run Mining Company LLC wishes to again strongly object to the listing of Jacobs Fork (WVBST-70-W) of Big Creek of the Tug River in McDowell County as a trout stream. Brooks Run has repeatedly addressed the listing of Jacobs Fork with scientific data to support the assertion that a trout stream designation is unwarranted. Flow data, population surveys, and average annual temperature data all confirm that Jacobs Fork should be removed from this proposed list.

Attached to this letter you will find data to support the delisting of Jacobs Fork. If after review of this data any questions or concerns remain, please do not hesitate to contact me at the number listed above.

Thank you for your time and attention to this matter.

Respectfully Submitted,

Russ Lambert
Brooks Run Mining Company

Jacobs Fork Trout Stream Designation Objections

- Jacobs Fork Data is over 20 years old.
- WV DNR Jacobs Fork Data from 1983-1985 indicates a poorly stocked warm-water fishery. FOIA Surveys and field notes indicate no reproducing or breeding population.
- Jacobs Fork WVSCI (stream condition index) score indicates "poor" water quality.
- Potesta Engineering Consultant studies of stream habitat indicates "poor" stream quality environment for trout.
- Potesta Trout Surveys indicates the presence of NO trout the entire length of Jacobs Fork.
- Potesta Temperature studies of Jacobs Fork indicate average summer peak temperatures in excess of trout survival threshold thereby eliminating the possibility of sustained or reproducing trout population.
- Brooks Run Mining Company investments and future development of over $50 million in McDowell County in jeopardy.
- Anticipated loss of over 300 direct mining related jobs and an additional 1200 employment opportunities in support services. (4:1 ratio of direct to indirect employment statistics)

Brooks Run
MINING COMPANY, LLC.

208 Business Street Beckley WV 25802
Ph. 304-256-1015 / Fax 304-256-0430

Ms. Lisa McClung, Director
West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street
Charleston, West Virginia 25301

RE: Trout Stream Objection
Jacobs Fork (BST-70-W)

Brooks Run Mining Company (BRM) is the leaseholder of property along Jacobs Fork (BST-70-W) in McDowell County, West Virginia. We will be adversely affected by the inclusion of Jacobs Fork on the Trout stream list and formally object to the stream's listing. We provide below our general objections to the ongoing process of developing the Trout Stream list, as well as our specific objections to inclusion of Jacobs Fork on the list.

Regarding the inclusion of Jacobs Fork on the Trout stream list, BRMC believes sufficient information have not been provided to warrant the streams listing. The justification for listing Jacobs Fork on the Trout list is that the stream is a naturally reproducing trout stream based on data collected by West Virginia Division of Natural Resources (WVDNR). In response to a Freedom of Information Act (FOIA) request pertaining to the data used for listing this stream segment, we were provided information from three surveys conducted by the WVDNR from 1983 to 1985. The 1983 survey indicated a warm water fish community with several types of suckers, dace, chubs, darters, stonerollers, and sunfish. There were also 4 rainbow trout in the 5 to 6 and 0-14 inch size range (3 trout and 1 trout, respectively). No brook trout were found in this survey. There is no indication that the trout were anything but stocked fish with the large size classes indicated. In 1984, 3 large rainbow trout (10 to 12 inches) and 7 large brown trout (8 to 12 inches) were found. Again, these were clearly stocked individuals representing larger size classes only. Field notes from the 1985 survey indicates that the purpose of the survey was to evaluate the fingerling stocking program, although no fingerlings were found. Three sites were surveyed during this endeavor. One site had no trout and the community appears to have consisted of warm water taxa however, the data are questionable as described below. This community appears to have included small mouth bass, rockbass, stoneroller, creek chubs, and northern hog sucker. Fifteen brown trout were found at one site during this survey. These individuals were clearly stocked fish ranging in size from 8 to 12 inches with no other size classes found. At another sampling station, one large rainbow trout was found (0-12 inches) along with 8 rainbow trout in the 0-0 size range. Although the meaning of the size ranges is not clear, this may indicate that the biologist identified some larval fish as juvenile rainbow trout. However, there is no additional information provided to support this conclusion. Adults were not found in sufficient numbers to indicate a breeding population or to establish an age class structure in any of the three surveys. If there were juveniles found, it would appear to be the

exception in this stream rather than a demonstration of a naturally reproducing trout population.

BRM objects to the quality of data used in determination to list Jacobs Fork on the trout stream list. In addition to being 20 years old, the data are incomplete. The data provided are not the original data sheets but are transcribed onto datasheets which were revised in January of 1997. The taxa list from one site sampled in 1985 indicates zero abundance for each species listed and 0-0 for several of their size ranges. The 8 rainbow trout found at another site are also shown to be in the 0-0 size range but at this site that is interpreted to mean a reproducing population (based on a field note). This quality of data does not meet the today's standards and was likely not acceptable 20 years ago either. BRMC requests that the Agency provide some quality assurance standards in the data which will be used for development of the trout stream list, as they have for data submitted for other purposes.

In order to collect additional information on the status of Jacobs Fork, BRM enlisted Potesta & Associates, Incorporated to conduct a fish survey in the listed stream reach (Attached). The survey was conducted in November when the evidence of spawning activity should have been apparent. No trout were found in the survey. Further, the habitat and stream conditions did not indicate suitable habitat for a trout population as the stream had an open canopy, was characterized by runs with few riffles, and had obvious sedimentation with marginal substrate. Additionally, there were indications of sewage inputs in limited water chemistry collected by POTESTA. This impairment was also indicated in the water chemistry data made available by the WVDEP where a fecal coliform value of 12,000 colonies per 100 milliliters was found. The habitat data presented by the WVDEP also indicate the sediment deposition and vegetative cover limitations found in the POTESTA survey.

The data from the WVDNR are not sufficient to demonstrate that a naturally reproducing trout population is present in Jacobs Fork as would be necessary to appropriately list it on the trout stream list. The three surveys provided show that a few stocked trout were present in the stream 20 years ago. The recent survey by POTESTA indicated that trout are not present in this stream reach. BRM requests that sufficient information is provided to warrant the listing of Jacobs Fork, or the nomination of the stream is immediately returned to the nominating party as insufficient and the stream removed from the trout stream list.

Clearly, the data presented supporting the inclusion of Jacobs Fork on the trout stream list are inadequate. Further, your consideration of the effect this listing will have on BRM and other parties with interest in the watershed have not been sufficient. BRM respectfully requests that you reevaluate the Agency position on the listing and remove the Jacobs Fork from the trout stream list.

Thank you for your attention to this matter.

Sincerely,

Russ Lambert
Environmental Manager
Brooks Run Mining Company LLC

POTESTA Engineers and Environmental Consultants
7012 MacCorkle Avenue, SE, Charleston, WV 25304 • (304)342-1400 • FAX (304)343-9031; www.potesta.com

December 6, 2006

Mr. Russ Lambert
Environmental Compliance Engineer
Brooks Run Mining Company LLC
208 Business Street
Beckley West Virginia 25801

RE: Temperature Monitoring Results
Related to the Trout Stream Designation for Jacobs Fork
Project No. 0101-06-0373

Dear Mr. Lambert:

Potesta & Associates, Inc. (POTESTA) is pleased to provide this letter report regarding temperature monitoring conducted in Jacobs Fork, McDowell County, to determine whether the stream could support a year-round trout population. This work was performed in accordance with our July 17, 2004 Proposal for Environmental Consulting Services Related to the Trout Stream Designation for Jacobs Fork.

BACKGROUND

Jacobs Fork (BST-70-W) is listed as a "Trout Water" in the West Virginia Division of Environmental Protection's (WVDEP's) draft Trout Stream list (47CSR2 – Appendix A). This designation indicates that the stream is believed to sustain a year round trout population. Jacobs Fork discharges into Dry Fork of the Tug Fork of the Big Sandy River in McDowell County, West Virginia. Brooks Run Mining Company (BRM) has mining activities in the watershed and may receive more stringent National Pollutant Discharge Elimination System (NPDES) permit limits as a result of the trout water designation. POTESTA collected temperature data in Jacobs Fork to accurately determine whether the stream could reasonably be expected to support a year round trout population.

The WVDEP has established the following threshold temperatures for Trout Waters, or Category B2 streams:

	Daily Mean (°F)	Hourly Maximum (°F)
April and October	50	55
May and September	58	62
June through August	66	70

Five monitoring locations were selected for this study in areas of the stream where trout had been previously collected. The monitoring locations are described below and are mapped in Figures 1 and 2 (Figures are presented in Attachment 1):

- Site #1 - Jacobs Fork downstream of the town of Bishop;
- Site #2 - Jacobs Fork upstream of Outfall;
- Site #3 - Jacobs Fork downstream of Outfall;
- Site #4 - Dry Fork downstream of Jacobs Fork; and
- Site #5 - Dry Fork upstream of Jacobs Fork.

One Onset Computer Corporation HOBO data logger was secured at each location and programmed for hourly temperature recordings. Data were continuously logged every hour beginning July 18, 2006 and ending October 31, 2006.

Between July 18 and August 31, 2006, 87 percent of recorded stream temperatures exceeded the *daily mean* threshold of 66° F (Figure 3), and 47 percent exceeded the *hourly maximum* limit of 70° F (Figure 4). Three percent of the recorded temperatures were greater than 77° F, in which most trout cannot survive for more than a few hours, and which is the upper incipient lethal limit for rainbow trout (see Trout Preferences, Attachment 2). Additionally, there were two occurrences of stream temperatures greater than 81°F, which is the upper limit for brown trout, and several occurrences of temperatures greater than 80°.

In September, 88 percent of temperatures were above the 58° F *daily mean* limit (Figure 5). During this time, 23 percent of temperatures remained above the threshold set for June through August. The *hourly maximum* limit of 62° F was exceeded in 65 percent of recordings (Figure 6).

The *daily mean* limit of 50° F set for October was exceeded in 74 percent of recorded measurements during that month (Figure 7). Thirty-two percent of this time included temperatures above the 58° F threshold set for September. Additionally, the *hourly maximum* limit was exceeded in 49 percent of measurements during October (Figure 8).

CLOSING

During the months of July through October, 2006, stream temperatures in Jacobs Fork were above the *daily mean* limits set forth by the WVDEP no less than 74 percent of the time, and *hourly maximum* limits were exceeded no less than 47 percent of the time. These data indicate that temperatures in this stream are consistently too warm to support a viable, year-round trout population.

POTESTA suggests that BRM submit a letter to Scott Mandirola with the WVDEP requesting reclassification of Jacobs Fork from a Category B2 trout stream to a Category B1 "warm water fishery stream" based on the above information. A draft letter is enclosed, which you may choose to use or modify at your convenience for this purpose.

If you have any questions regarding this letter report, or require any additional information, please do not hesitate to contact me at (304) 342-1400.

Sincerely,

POTESTA & ASSOCIATES, INC.

Ann E. Schoolcraft

Ann E. Schoolcraft
Staff Scientist

AES/ljk

Attachments

December 6, 2006

Mr. Scott Mandirola
Environmental Resources Program Manager II
Division of Water and Waste Management
601 57th Street, SE
Charleston, West Virginia 25304

RE: Temperature Monitoring in Jacobs Fork, McDowell County, West Virginia

Dear Mr. Mandirola:

Brooks Run Mining Company, LLC (BRM) is hereby requesting the West Virginia Department of Environmental Protection's (WVDEP) review of the following information regarding Jacobs Fork (BST-70-W) located in McDowell County, West Virginia. Jacobs Fork is currently classified as a Category B2 stream. However, based on a recent study conducted by Potesta & Associates, Inc. (POTESTA), of Charleston, West Virginia, we believe that temperature data indicate that the stream exhibits characteristics more like those of a Category B1 warm water fishery stream.

POTESTA installed monitoring devices programmed for hourly temperature recordings in five locations within a 10-mile reach of Jacobs Fork (Figures 1 and 2, Attachment 1). Data were collected hourly from July 18, 2006 to October 31, 2006. Results indicate that maximum temperatures required to support a Trout Water (Category B2) were exceeded more often than they were met. The data summarized here can be provided at your request.

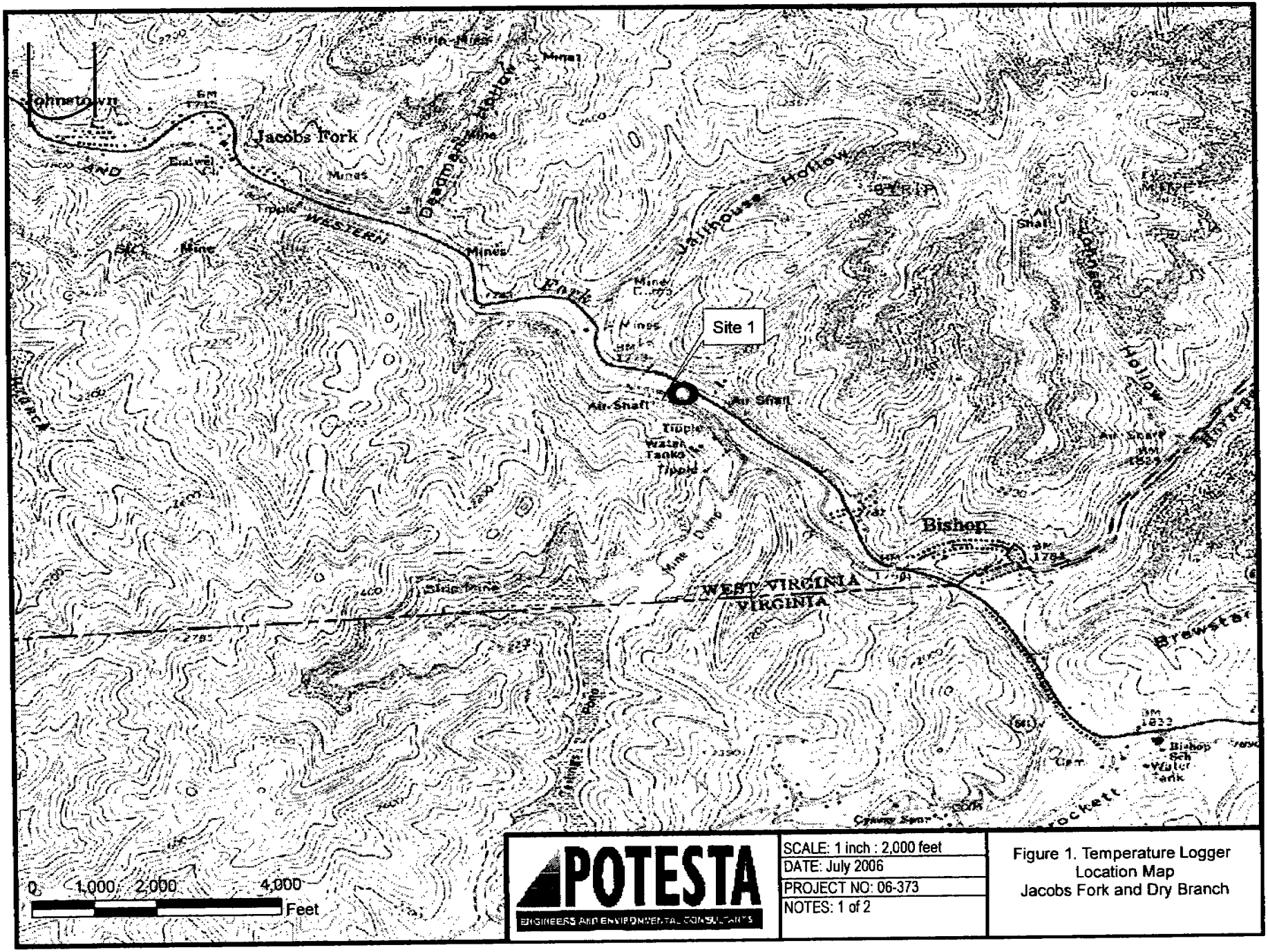
In the months of July and August, 87 percent of recorded stream temperatures exceeded the *daily mean* threshold of 66° F (Figure 3), and 47 percent exceeded the *hourly maximum* limit of 70° F (Figure 4). Three percent of the recorded temperatures were greater than 77° F, in which most trout cannot survive for more than a few hours, and which is the upper incipient lethal limit for rainbow trout (see Trout Preferences, Attachment 2). Additionally, there were 2 occurrences of stream temperatures greater than 81°F, which is the upper limit for brown trout, and several occurrences of temperatures greater than 80°.

In September, 88 percent of temperatures were above the 58° F *daily mean* limit (Figure 5). During this time, 23 percent of temperatures remained above the threshold set for June through August. The *hourly maximum* limit of 62° F was exceeded in 65 percent of readings (Figure 6).

The *daily mean* limit of 50° F set for October was exceeded in 74 percent of recorded measurements (Figure 7). Thirty-two percent of this time included temperatures above the 58° F threshold set for September. Additionally, the *hourly maximum* limit was exceeded in 49 percent of measurements during October (Figure 8).

The data compiled by POTESTA indicate that temperatures in Jacobs Fork are consistently too warm to support a viable, year-round trout population. Therefore, we respectfully request your consideration to reclassify this stream and remove it from the Category B2 list. Thank you for your consideration.

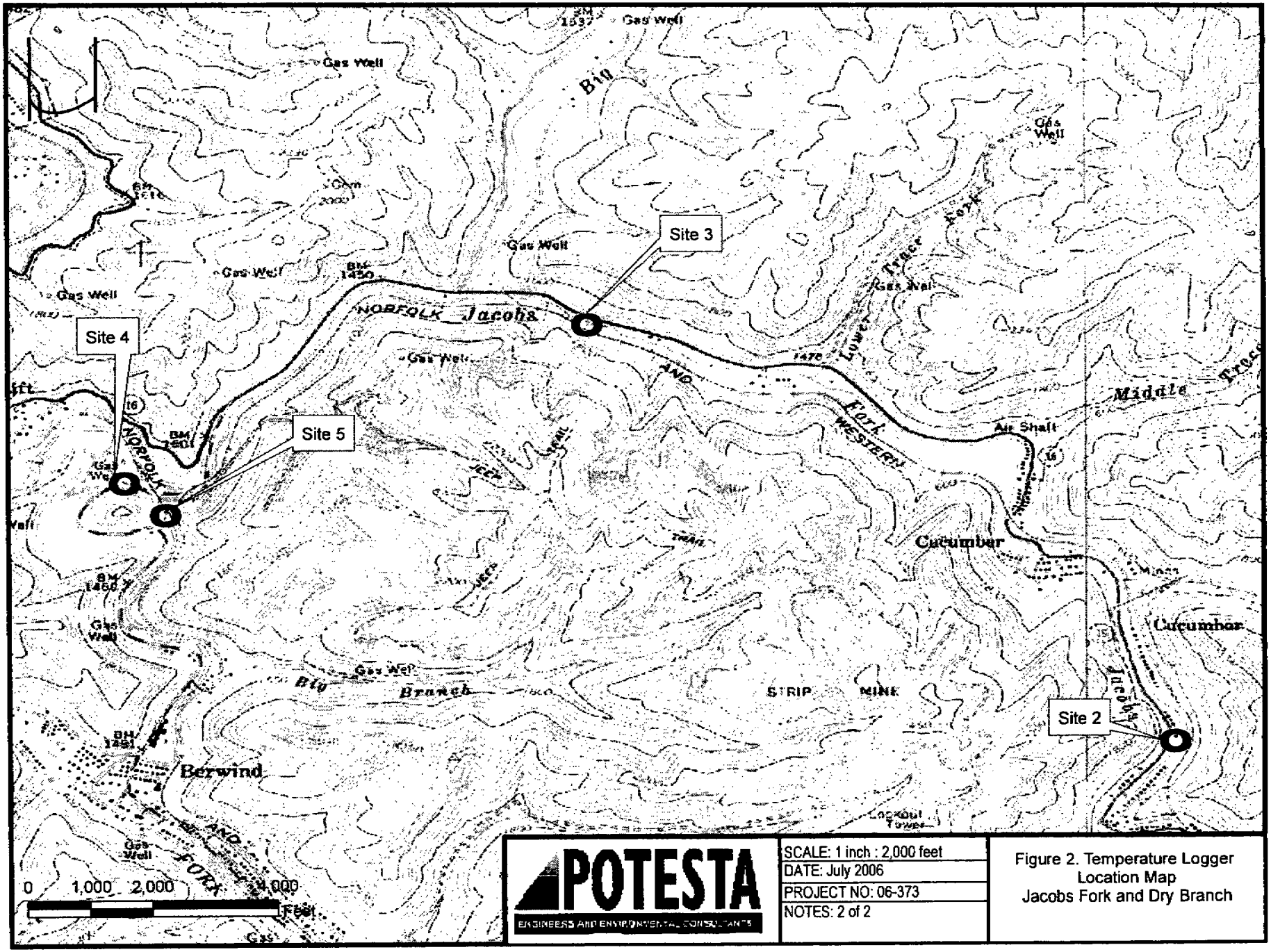
Sincerely,



POTESTA
ENGINEERS AND ENVIRONMENTAL CONSULTANTS

SCALE: 1 inch : 2,000 feet	
DATE: July 2006	
PROJECT NO: 06-373	
NOTES: 1 of 2	

Figure 1. Temperature Logger Location Map
Jacobs Fork and Dry Branch

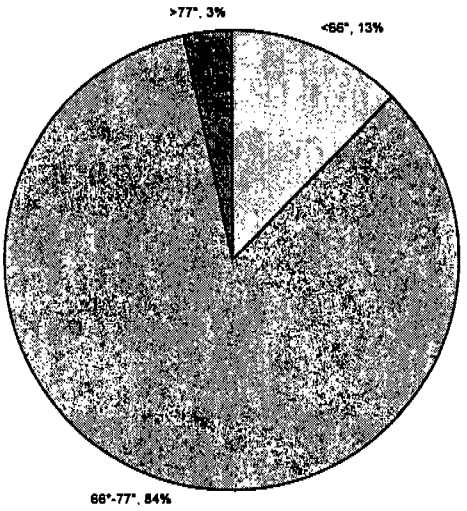


POTESTA
ENGINEERS AND ENVIRONMENTAL CONSULTANTS

SCALE: 1 inch : 2,000 feet	
DATE: July 2006	
PROJECT NO: 06-373	
NOTES: 2 of 2	

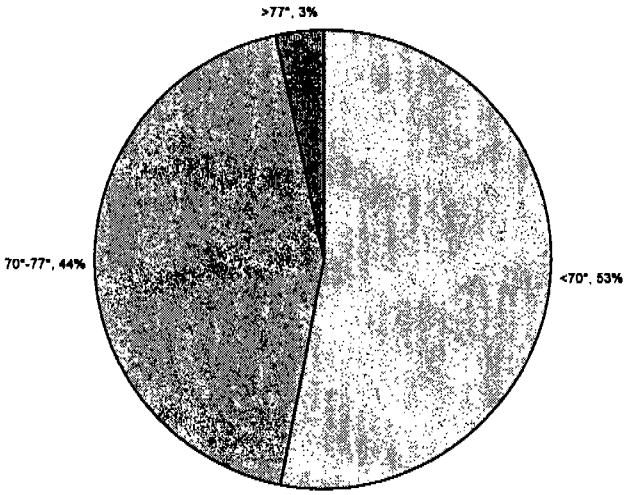
Figure 2. Temperature Logger Location Map
Jacobs Fork and Dry Branch

FIGURE 3
Frequencies of Temperature Data Relative to Daily Mean Limit (66 °F)
Jacobs Fork, July and August, 2006



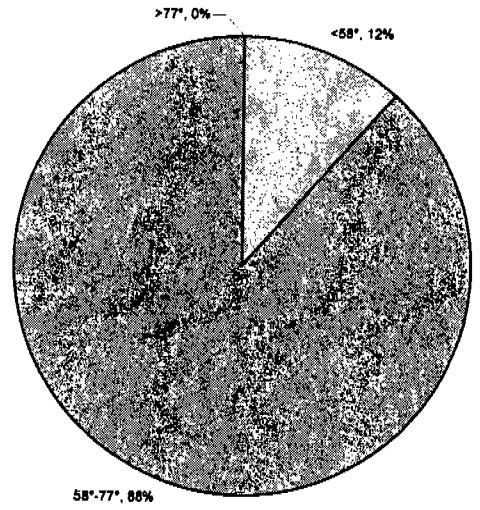
Notes:
1. *All data in orange and red exceeded the Daily Mean Limit for those months.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 4
Frequencies of Temperature Data Relative to Hourly Maximum Limit (70 °F)
Jacobs Fork, July and August, 2006



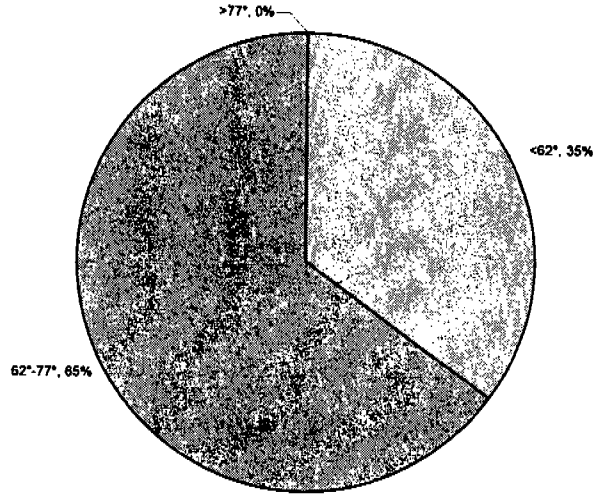
Notes:
1. *All data in red and orange exceeded the Hourly Maximum Limit for those months.*
2. *Data in red also exceeded upper lethal incipient limit for most trout species.*

FIGURE 5
Frequencies of Temperature Data Relative to Daily Mean Limit (58 °F)
Jacobs Fork, September, 2006



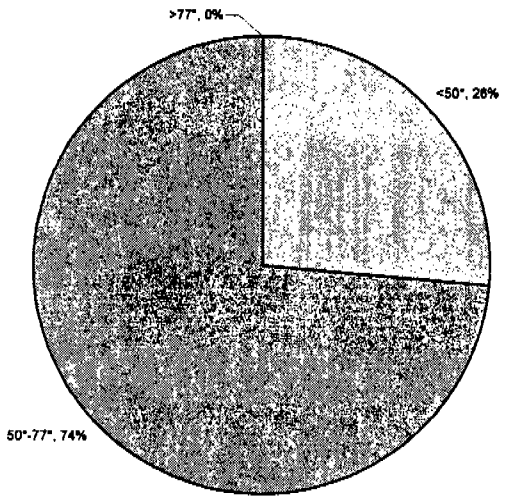
Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 6
Frequencies of Temperature Data Relative to Hourly Maximum Limit (62 °F)
Jacobs Fork, September, 2006



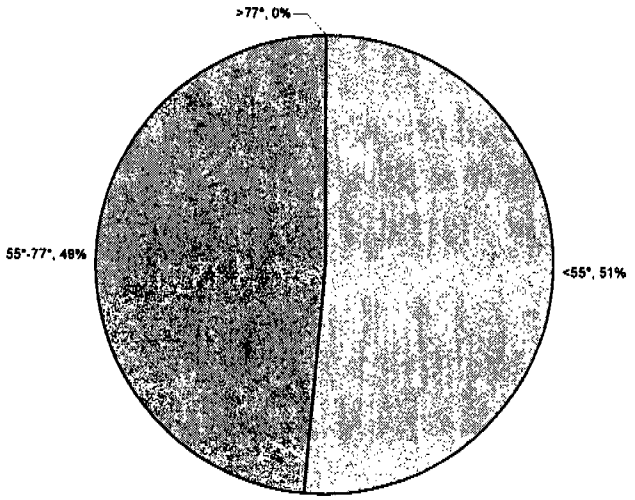
Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 7
Frequencies of Temperature Data Relative to Daily Mean Limit (50 °F)
Jacobs Fork, October, 2006



Note:
All data in orange exceeded the Daily Mean Limit for the month.

FIGURE 8
Frequencies of Temperature Data Relative to Hourly Maximum Limit (55 °F)
Jacobs Fork, October, 2006



Note:
All data in orange exceeded the Daily Mean Limit for the month.

TROUT PREFERENCES

According to Habitat Suitability Index Models published by the U.S. Department of the Interior's Fish and Wildlife Service, native brook trout (*Salvelinus fontinalis)* survive in water temperatures ranging from 0°C (32°F) to 24°C (75.2°F), but the optimal temperature range from growth and survival is between 11°C (51.8°F) and 16°C (60.8°F). The upper incipient lethal limit for brook trout is variable according to author, and has been reported in the range of 20°C (68°F) to 25°C (77°F). Embryo development occurs optimally between 4.5°C (40.1°F) and 11.5°C (52.7°F).

Introduced species, which may have beeen stocked in Jacob's Run include rainbow trout (*Salmo gairdneri*) and brown trout (*Salmo trutta*). Rainbow trout have an optimal temperature range between 12°C (53.6°F) and 18°C (64.4°F). The lower and upper incipient lethal temperatures for adult rainbow trout are 0°C and 25°C, respectively. Normal embryo development occurs between 7°C (44.6°F) and 12°C. Brown trout will not maintain viable populations above 27.2°C (81°F), which is considered the upper, near-lethal limit. While brown trout will tolerate ranges of 0°C to 27°C (80.6°F), the optimal temperature range is between 12°C and 19°C (66.2°F).

REFERENCES

Raleigh, R.F. 1982. Habitat suitability index models: Brook trout. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.24. 42 pp.

Raleigh, R.F., T. Hickman, R.C. Solomon, and P.C. Nelson. 1984. Habitat suitability information: Rainbow trout. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.60. 64 pp.

Raleigh, R.F., L.D. Zuckerman, and P.C. Nelson. 1986. Habitat suitability index models and instream flow suitability curves: Brown trout, revised. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.124). 65 pp. [First printed as: FWS/OBS-82/10.71, September 1984].

Brooks Run
MINING COMPANY, LLC.

208 Business Street Beckley WV 25802
Ph. 304-256-1015 / Fax 304-256-0430

July 17, 2006

RECEIVED
JUL 17 2006
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Ms. Lisa McClung, Director
West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street
Charleston, West Virginia 25301

RE: Trout Stream Listing Objection
Jacobs Fork (BST-70-W)

Brooks Run Mining Company (BRM) appreciates the opportunity to provide comments on the draft Requirements Governing Water Quality Standards (47 CSR 2) (WQS) put forth by the West Virginia Department of Environmental Protection (WVDEP) which are currently out for public review and comment. BRM is the leaseholder of property along Jacobs Fork (BST-70-W) in McDowell County, West Virginia. This letter is being submitted to provide additional or supplemental information regarding the listing of Jacobs Fork (BST-70-W) in Appendix A of the WQS Trout Waters and to formally object to the listing.

Recently, BRM contracted Potesta & Associates, Inc. (POTESTA) to conduct a stream investigation and evaluation of Jacob's Fork due to the streams inclusion on the WVDEP proposed Tier 2.5 Anti-degradation protective status list. The survey, which is enclosed, documented various anthropogenic activities and subsequent disturbances in the watershed. No salmonid species of any type were collected at the three stations sampled in Jacob's Fork and none were expected based on the existing stream conditions.

BRM has reviewed the data provided by the West Virginia Division of Natural Resources (WVDNR) which were utilized by the WVDNR and WVDEP in the determination that Jacobs Fork supports a year-round trout population and should be designated as a Trout Water. BRM believes that this information is insufficient to warrant the streams listing. Specifically, there were three fish surveys conducted in this reach between 1983 and 1985. The 20 year-old data indicate a warm water fish community with several types of suckers, dace, chubs, darters, stonerollers, and sunfish. While two non-native salmonids, the rainbow trout and the brown trout, were found in the stream, no native brook trout were found during these surveys. Although in one sampling event, young-of-the-year individuals were said to be found. The

surveys were conducted to evaluate a stocking program and clearly documented the presence of stocked fish. Only once were size classes found that represented anything but stocked fish. The WVDNR website does not indicate the stream still receives trout stockings and trout are not found in the stream currently.

With the absence of temperature data indicating that Jacob's Fork could support coldwater species, and the absence of coldwater species in these waters when they are not continuously stocked, there appears to be no support for inclusion of Jacob's Fork on the Trout Stream List in Appendix A.

As no data exist to support the inclusion of Jacobs Fork in Appendix A of 47-CSR-2, BRM respectfully requests that you remove Jacobs Fork from the draft Trout Stream list.

Thank you for your consideration in this matter.

Sincerely,

Mindy Amstead for Russ Lambert

Russ Lambert
Environmental Compliance Engineer

RL:MYA/ljk

Enclosure

STREAM INVESTIGATION AND EVALUATION

Jacob's Fork (WVDNR Code WVBST-70-W*) McDowell County, West Virginia*

Prepared for:

Brooks Run Mining Company
208 Business Street
Beckley, West Virginia 25802

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304
Phone: (304) 342-1400 Fax: (304) 343-9031
E-Mail: potesta@potesta.com

Project 0101-05-0635

December 2005

TABLE OF CONTENTS

APPENDICES

STREAM INVESTIGATION AND EVALUATION

Jacob's Fork
(WVDNR Code WVBST-70-W*)*
McDowell County, West Virginia

1.0 INTRODUCTION

Potesta & Associates, Inc. (POTESTA) has been retained by Brooks Run Mining Company (BRM) to conduct a stream investigation and evaluation of Jacob's Fork regarding its proposed listing on the West Virginia Department of Environmental Protection (WVDEP) proposed Tier 2.5 Anti-degradation protective status list. The West Virginia Department of Natural Resources (WVDNR) stream code is WVBST-70-W.

Jacob's Fork is a tributary of Dry Fork of the Tug Fork River. The Tug Fork River is a tributary of the Big Sandy River. The stream is depicted on a topographic map provided as Appendix A.

Jacob's Fork is listed on the presumptive Tier 2.5 list as a trout stream. In order to meet this designation, the stream must have a documented naturally reproducing trout population. POTESTA's evaluation was conducted to determine whether a naturally reproducing trout population exists in Jacob's Fork.

2.0 METHODS

Habitat evaluations were conducted utilizing the United States Environmental Protection Agency's (EPA) "Rapid Bioassessment Protocol for Use in Wadeable Streams and Rivers" (RBP Protocol).

POTESTA performed fish surveys utilizing a combination of EPA's Environmental Monitoring and Assessment Program (EMAP) Field Operation and Methods for Measuring the Ecological Condition of Wadeable Streams (EPA, 1998) and the West Virginia Division of Natural Resources (WVDNR) Scientific Collecting Permit Standard Conditions for Environmental Assessments (WVDNR, 2000). Fish sampling was conducted using a backpack electro-fishing unit and started at the downstream limit of the station and proceeded in an upstream direction, which characterized one pass. Two complete passes were performed throughout each station. Fish were placed into holding tubs or buckets until the pass was completed and then taken to a suitable area (i.e., the stream bank) for processing. Fish were identified to the lowest practical taxonomic level, weighed and measured, external anomalies noted, and then released after the final pass was complete. No specimens were retained and preserved. Taxonomic identification was performed by an ichthyologist familiar with the taxonomy of the fish species found in the study area.

Water quality samples were collected at each station and submitted to a state certified laboratory for analyses of: fecal coliform, total iron, total aluminum, and total manganese.

Additionally, basic field water chemistry measurements were recorded. Field measurements consisted of the following:

- pH
- temperature
- conductivity
- dissolved oxygen
- turbidity

3.0 DESCRIPTION OF STREAM INVESTIGATION & EVALUATION

POTESTA established sampling stations at three locations on Jacob's Fork. All three stations were sampled in a perennial reach of the stream. Stream assessments were conducted at each location. The first assessment was completed just upstream of the mouth of Jacob's Fork, 1,200 meters upstream of the confluence with Dry Fork (Photos 1 and 2). This station was located between Route 16 and an existing rail line downstream of one active coal tipple and one small coal mining facility. Heavy beaver activity downstream prevented establishing this station at the actual mouth of Jacob's Fork. This station is located downstream of several towns and therefore is affected by moderate human influence.

Table 1 presents the scores assessed to select criterion for the station located at the mouth of Jacob's Fork.

TABLE 1
Jacob's Fork, 1,200m Upstream of Confluence with Dry Fork
Stream Assessment Criteria

Date	Cover	Channel Alteration	Sediment Deposition	Bank Protection	Vegetative Station	Total RBP Score
11/30/05	13	16	14	17	13	153

The second stream assessment station was conducted on Jacob's Fork at the town of Squire (Photos 3 and 4). This station was located between Route 16 and an existing rail line within the town of Squire; therefore, a moderate/high human influence is expected.

Table 2 presents the scores assessed to select criterion for the station located in Jacob's Fork at the town of Squire.

TABLE 2
Jacob's Fork at the Town of Squire
Stream Assessment Criteria

Date	Cover	Channel Alteration	Sediment Deposition	Bank Protection	Vegetative Station	Total RBP Score
12/2/05	14	15	14	16	18	152

The third stream assessment station was conducted on Jacob's Fork downstream of the town of Bishop (Photos 5 & 6). This station was located between Rt. 16 and an existing rail line downstream of a road crossing. Human influence was evident at the station as well as beaver activity downstream.

Table 3 presents the scores assessed to select criterion for the station located in Jacob's Fork downstream of the town of Bishop.

TABLE 3
Jacob's Fork, Downstream of the Town of Bishop
Stream Assessment Criteria

Date	Cover	Channel Alteration	Sediment Deposition	Bank Protection	Vegetative Station	Total RBP Score
12/2/05	13	15	14	14	12	130

4.0 FISH SURVEY RESULTS

No salmonid species of any type were collected at the three stations sampled in Jacob's Fork. The fish community upstream of the mouth of Jacob's Fork was comprised of 596 individuals representing 16 primarily warm water species. The central stoneroller (*Campostoma anomalum*) was the most abundant species at this station. The fish community in Jacob's Fork at the town of Squire was comprised of 1,090 individuals representing 17 primarily warm water species. The blacknose dace (*Rhinichthys atratulus*) was the most abundant species at this station. The fish community in Jacob's Fork downstream of the town of Bishop was comprised of 695 individuals representing 9 primarily warm water species. The blacknose dace (*Rhinichthys atratulus*) was the most abundant species at this station.

Table 4 presents the fish survey results collected at three stations in Jacob's Fork.

TABLE 4
Fish Species Collected at Three Stations in Jacob's Fork

Genus	Species	Number of Fish Collected		
		Jacob's Fork – Upstream of Mouth	Jacob's Fork at Squire	Jacob's Fork - Downstream of Bishop
Ambloplites	*rupestris*		4	2
Campostoma	*anomalum*	144	229	115
Catostomus	*commersoni*	4	2	56
Cottus	*bairdi*	105	83	134
Cyprinella	*spiloptera*	2	5	
Etheostoma	*blennioides*	31	8	
Etheostoma	*caeruleum*	55	112	94
Etheostoma	*flabellare*	4		
Etheostoma	*nigrum*	14		
Etheostoma	*zonale*	15	4	
Hypentelium	*nigricans*	84	74	
Luxilus	*chrysocephalus*	5	5	43
Micropterus	*dolomieui*	1	2	
Moxostoma	*erythrurum*		2	1
Notropis	*ludibundus/volucellus*		62	
Notropis	*rubellus*		2	
Notropis	*sp.*	29		
Pimephales	*notatus*	6	26	
Rhynichthys	*atratulus*	94	381	248
Semotilus	*atromaculatus*	3	89	2

5.0 WATER SAMPLE ANALYSIS RESULTS

POTESTA collected water samples at three stations in Jacob's Fork on November 30 and December 2, 2005. Samples were analyzed by a state certified laboratory. An exceedance of the fecal coliform limit of 800 colonies/mL was observed at Jacob's Fork at Squire and Jacob's Fork downstream of Bishop stations. No other water quality violations were observed.

Table 5 presents the results of the water sample analysis for three stations in Jacob's Fork.

TABLE 5
Water Sample Analysis Results Collected at Three Stations in Jacob's Fork

Station	Aluminum (mg/L)	Iron (mg/L)	Manganese (mg/L)	Fecal Coliform (col/100mL)
Jacob's Fork – Upstream of Mouth	0.070	0.206	0.028	550
Jacob's Fork at Squire	0.065	0.121	0.010	2100
Jacob's Fork – Downstream of Bishop	0.080	0.031	0.006	1200

6.0 FIELD WATER CHEMISTRY RESULTS

POTESTA measured basic water chemistry at the three Jacob's Fork assessment stations on November 30 and December 2, 2005. The field readings were taken from field monitoring equipment calibrated by POTESTA. No field water chemistry values exceeded acceptable ranges.

Table 6 presents the water chemistry field readings.

TABLE 6
Water Chemistry Field Readings

Station	pH (SU)	Temperature (^{0}C)	Conductivity (uS)	Dissolved Oxygen (mg/l)	Turbidity (SU)
Jacob's Fork – Upstream of Mouth	7.90	7.8	571	11.87	7.9
Jacob's Fork at Squire	8.12	3.3	508	13.45	2.0
Jacob's Fork - Downstream of Bishop	8.31	6.4	461	12.05	2.5

7.0 DISCUSSION

Two point source discharges were identified in the Jacob's Fork watershed; both were small coal mining facilities. Several non-point source discharges were also identified in the watershed. Jacob's Fork flows through six small towns and can be expected to be affected by a moderate/high amount of human influence. A two lane asphalt road (Route 16) and a railroad line run the length of Jacob's Fork as well.

Habitat at the three stream assessment stations in Jacob's Fork was not indicative of brook trout stream habitat. Jacob's Fork is characterized by a flat riffle/run type of habitat and not the high gradient riffle/pool complex that brook trout prefer. Also, the overall open canopy in Jacob's Fork would not provide the shading required for trout stream temperature regulation.

No salmonid species of any type were collected at the three stations sampled in Jacob's Fork and none were expected based on the stream habitat. Two Jacob's Fork stations, one at the town of Squire and the other upstream of the mouth, exhibited good diversity and abundance indicative of a moderately healthy warm water stream. Jacob's Fork downstream of Bishop lacked good diversity but had an acceptable abundance. Beaver activity below this station has changed the habitat into a long run with little riffle and pool habitat.

High fecal coliform concentrations at Jacob's Fork at Squire and Jacob's Fork downstream of Bishop indicate the influence of human activities in the watershed.

8.0 CONCLUSION

Various anthropogenic activities and subsequent disturbances in the watershed were documented in the Jacob's Fork watershed. Although total habitat scores from the three stream assessment stations did not indicate impairment, the habitat in Jacob's Fork is not suitable for brook trout populations. No salmonid species of any type were collected at the three stations sampled in Jacob's Fork and none were expected based on the stream habitat. Jacob's Fork, overall, supports a moderately healthy warm water fish population **but would not be expected to support a naturally reproducing trout population.**

With the information presented in this document regarding Jacob's Fork and its proposed listing on the proposed Tier 2.5 Anti-degradation protective status list, it does not appear this stream meets the necessary criteria to be listed as a trout stream.

9.0 CLOSING

This report was prepared to assist BRM in evaluating and planning with respect to the subject site. The scope of this study was mutually devised by POTESTA and BRM and is limited to the specific project, location, and time period described herein. The work scope and report represent POTESTA's understanding of site conditions as discernible from information provided by others and obtained by POTESTA using the methods specified. POTESTA assumes no responsibility for information provided or developed by others or for documenting conditions detectable with methods or techniques not specified in the work scope. In addition, no activity, including sampling, assessment or evaluation of any material or substance, may be assumed to be included in this study unless specifically considered in the scope of work and this report. Sketches and maps in this report are included only to aid the reader and should not be considered surveys or engineering studies. If

additional data concerning this site becomes available, POTESTA should be informed so that we may examine the information and, if necessary, modify this report accordingly.

July 17, 2007

Ms. Lisa McClung
Director- Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: Comments on 2007 Triennial Review of Water Quality Standards

Dear Director McClung:

Pursuant to the notice published in the State Register by the West Virginia Department of Environmental Protection (WV DEP), Brooks Run Mining Company LLC offers the following comments and observations regarding the agency's proposed revision of water quality standards rule.

Brooks Run is a West Virginia mining company operating in a six-county area with permitted operations with various state and federal agencies that regulate coal extraction, processing, transportation and consumption. Brooks Run as a company promotes efficient and environmentally responsible coal extraction and processing through reasonable, equitable and achievable state and federal policy and regulation. Brooks Run appreciates the opportunity to provide comments to WV DEP regarding the proposed revisions to the state's water quality standards rule.

General Comments

Brooks Run is pleased that in the proposed rule WV DEP has moved to permanently codify the chronic aluminum criterion that has been approved by the federal Environmental Protection Agency (EPA). As we detail in subsequent comments, the revised chronic aluminum standard properly reflects the level of scientific research that exists with respect to aluminum, reversing an ill-advised acceptance of a scientifically-deficient standard by the Environmental Quality Board (EQB) and ending a 10-year plus effort to revise the chronic aluminum criterion. With respect to trout streams, Brooks Run has serious concerns regarding the agency's proposed expansion of these stream classifications. As the agency is well aware, classifying a stream as a trout stream through a formal Legislative rule means that any subsequent change to such a list requires additional Legislative action. Brooks Run believes that this is unnecessary because WV DEP can, and has adequately protected trout streams through its administration of the NPDES permitting program.

Specific Comments

Aluminum

Brooks Run actively supports the rulemaking initiatives with WV DEP, the EQB and the West Virginia Legislature regarding aluminum that have culminated with the approval by EPA of a revised chronic aluminum criterion for West Virginia. As in past rulemaking efforts, Brooks Run supports the revised

aluminum criterion as approved by EPA and totally supports the current proposal to permanently codify the revision.

Trout Streams

WV DEP has proposed to massively expand the list of streams codified within the water quality standards rule as "trout streams". As noted in previous Brooks Run comments to this agency, the permitting ramifications of classifying a water segment as trout stream are significant, with different water quality standards (uniformly more stringent) applying to trout streams. Incorrectly classifying a water segment as a trout stream will have serious economic and environmental ramifications for mining operations and mineral reserve holders situated in proximity to such streams.

Brooks Run believes that the agency already has the adequate tools necessary to protect trout streams absent expanding the codified list contained in this rule. WV DEP, in the NPDES permitting process, will apply appropriate trout stream effluent limitations if the agency believes a stream to have a trout population regardless of whether or not the stream or stream segment is on the codified list contained in the water quality standards rule or not. The only difference is that in the permitting process, the applicant has the opportunity to present data such as water samples and fish surveys to refute the agency's assertion that a stream is a trout stream, and has a right of appeal if they continue to disagree with agency's assignment of trout stream limits. The ability to dispute

the trout stream designation is very important, especially since some of the data supporting the current initiative to expand the codified list is decades old.

Additionally, some streams proposed for codification on the trout stream list are stocked, not native trout streams, and as such do not deserve the restrictive water quality effluent limitations that were intended for application on native, naturally reproducing trout streams. The failure of the codified trout stream list to recognize the difference between native and stocked populations reveals another shortcoming that exists in West Virginia's approach to protecting trout streams. While Brooks Run believes that the best approach to protecting trout streams is for the agency to assign limits on a permit-by-permit basis (see proceeding comments), we also believe that the both WV DEP and the West Virginia Department of Natural Resources should develop a classification system that acknowledges the differences among the trout populations found in West Virginia. Ideally, such a classification system would differentiate streams that support native, naturally reproducing trout streams. Similar classification approaches exist in other states (see attachment "B"), and we believe the development of a similar system for West Virginia would better facilitate the protection of the state's most pristine waters versus the current approach where every single "trout stream" receives the most restrictive effluent limitations.

Once again, Brooks Run would like to thank you for the opportunity to comment on these important issues.

Respectfully submitted,

Russ Lambert

Brooks Run Mining Company LLC

July 17, 2007

Ms. Lisa McClung
Director- Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Re: Comments on 2008 Proposed Revisions to Water Quality Standards

Dear Director McClung:

The West Virginia Department of Environmental Protection (WV DEP) has proposed to expand the list of streams codified within the state's water quality standards rule as "trout streams". The proposed expansion of the trout stream list was done without consideration of the existing water quality of the proposed stream. By using data that is old and incomplete, the agency has also failed to consider whether or not the streams are currently supporting trout at all or if the proposed streams have a stocked or naturally reproducing trout population. The permitting ramifications of classifying a water segment as a trout stream are significant, with different water quality standards (uniformly more stringent) applying to trout streams. **Incorrectly classifying a water segment as a trout stream will have serious economic and environmental ramifications for landowners, mining operations and mineral reserve holders situated in proximity to such streams.**

Specifically, Peabody Energy is concerned about the proposed classification of Hopkins Fork and Marsh Fork as "trout streams" within the

codified water quality standards rule. Based on information and data collected by Peabody Energy, we believe that the proposed listing of Hopkins Fork and Marsh Fork is incorrect. The ambient water quality in these streams and their tributaries shows exceedances of the water quality standards required for successful trout reproduction.

Further, Peabody Energy believes that the agency already has the adequate tools necessary to protect trout streams absent expanding the codified list contained in this rule. WV DEP, in the NPDES permitting process, will apply appropriate trout stream effluent limitations if the agency believes a stream to have a trout population regardless of whether or not the stream or stream segment is on the codified list contained in the water quality standards rule or not. The only difference is that in the permitting process, the applicant has the opportunity to present data such as water samples and fish surveys to refute the agency's assertion that a stream is a trout stream, and has a right of appeal if they continue to disagree with agency's assignment of trout stream limits. The ability to dispute the trout stream designation is very important, especially since some of the data supporting the current initiative to expand the codified list is decades old.

Respectfully Submitted,

James Boswell

From: Lisa McClung
To: Scott Mandirola
Date: 7/20/2007 2:54:03 PM
Subject: Fwd: Peabody Energy Comments on Proposed Changes to Trout Streams

>>> James Boswell <JBoswell@peabodyenergy.com> 7/17/2007 4:39 PM >>>

Peabody Energy would like to submit the attached comments on the proposed changes to the rule Requirements Governing Water Quality Standards (47 CSR 2). We appreciate the opportunity to comment on the proposed rule. If there are any questions about the comments, I can be reached at the contact information provided below.

Jimmy

James S. Boswell
Peabody Energy
7100 Eagle Crest Blvd., Ste. 200
Evansville, IN 47715
Direct Line (812) 434-8553
Cell (812) 604-8613
Fax (812) 424-9064
Email: jboswell@peabodyenergy.com

RESPONSE TO COMMENTS---47CSR2

The following is a response to the comments provided during the public comment period on the Department of Environmental Protection's rule, 47CSR2-- "Requirements Governing Water Quality Standards." Written comments were accepted until July 17, 2007. A public hearing was held on July 16, 2007. Both oral and written comments were received and each will be addressed below.

I. COMMENTER: Lydia Work

COMMENT A. *The reference date of 40 CFR part 136 needs to be updated to reflect the most currently amended version.*

RESPONSE A. The DEP acknowledges the comment and agrees with the commenter that the reference date of 40 CFR part 136 needs to be updated.

II. COMMENTER: Jerry and Julie McKeen

COMMENT A. *We strongly support the water quality standards rule, (47CSR2).*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenters.

III. COMMENTER: Michael Davis

COMMENT A. *We strongly support the water quality standards rule, (47CSR2). It is important to maintain the water quality at the highest possible standards.*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

IV. COMMENTER: Dave Buhrman

COMMENT A. *DEP has proposed an excellent Water Quality Standards rule (47CSR2), and this is one I strongly DO support.*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

V. COMMENTER: John Mathwin

COMMENT A. *I am a Maryland resident who frequently travels to near-by West Virginia to fish, usually for trout, therefore I want to encourage you to support water quality standards rule 47CSR2.*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

VI. COMMENTER: Tim Webb

COMMENT A. *I want you to know that I support the water quality standards rule (47CSR2).*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

VII. COMMENTER: Kathryn A. Stone

COMMENT A. *I wholeheartedly support the water quality standards rule (47CSR2).*

At a time when clean water is the world's most precious commodity, one that is disappearing rapidly, it behooves those of us who are still fortunate enough to have access to clean water to protect it with the zeal that it deserves.

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

VIII. COMMENTER: Judith Rodd (Director For Friends of the Blackwater)

COMMENT A. *We strongly support the water quality standards rule, 47CSR2.*

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

IX. COMMENTER: Wayne Miller

COMMENT A. *I strongly support the water quality standards rule, 47CSR2.*

As a registered voter, tax-paying resident of West Virginia, and member of Trout Unlimited, I wish to state that I strongly support the water quality standards rule (47CSR2). The time has come to protect the quality of our water. No one, whether business or individual, has the right to pollute this valuable resource.

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

DEP notes that U.S. EPA's comments were received after the close of the official public comment period. Generally speaking, the State Administrative Procedures Act at W.Va. Code Chapter 29A-3-5 prohibits the agency from considering comments filed after the comment period and characterizes such comments as "ex parte." However, due to the fact that the U.S. EPA is in the unique position of having authority to approve or disapprove the State's program, the DEP believes EPA's comments should be treated differently from

other interested parties and its comments considered before the DEP files its rules with the Secretary of State and the Legislative Rulemaking Review Committee.

X. COMMENTER: U.S.EPA Region III (Cheryl Atkinson)

COMMENT A. *Section 2.2. Definitions.*

This section defines "cool water lakes" as lakes managed by the West Virginia Division of Natural Resources (WVDNR) for cool water fisheries, with summer residence times greater than 14 days. EPA supports West Virginia adopting a definition for cool water lakes; however, the definition provided simply references the lakes managed by WVDNR, without actually defining a cool water lake. What is WVDNR's definition of cool water lakes? EPA recommends that West Virginia more precisely define cool water lakes, with reference to the aquatic life communities that are supported in those waters or the physical conditions that define those lakes. In addition EPA recommends that West Virginia add a warm water lake definition for clarity.

RESPONSE A. The cool water lake criteria apply to the lakes listed in Appendix F, which are the lakes currently being managed by DNR as cool water fisheries. Warm water criteria apply to all other lakes in the state with a residence time greater than 14 days. The wording by the DEP, is based on the consensus statement published by the members of the Nutrient Criteria Committee. DEP believes that it is clear which lakes the criteria apply to in the rule.

COMMENT B. *14-day residence time*

Concerning the14-day residence time, please explain how West Virginia calculates and applies the 14-day residence time. The information should discuss whether the residence time is adjusted to account for seasonal variation in tributary discharge, and whether a residence time has been calculated with respect to differences in residence time of the epilimnion and hypolimnion during summer stratification (when it develops). This information will assist in providing support for the lake water classification and on how the proposed criteria protect those classifications.

RESPONSE B. The Nutrient Criteria Committee reviewed a study performed by the Freshwater Institute in relation to impoundment size, inflow rates, and catchment areas resulting in a list of about 30 lakes which supported a 14-day residence time definition. The "14-day" criterion is also justified since "Pennsylvania, with justification through EPA working papers chose the 14-day as a cutoff" (Strawman prepared by Martin Christ 12/8/03). A literature review was then performed February 24, 2004 and a subsequent residence summary time prepared in March 12, 2004 determining that the 14 day time cutoff was appropriate. Residence times are calculated as the average lake volume divided by the average lake outflow in summer months and the following months likely to occur before fall turnover i.e. essentially June thru October.

COMMENT C. *Please provide rationale.*

Please provide rationale showing how total phosphorus criteria of 50 ug/l for warm water lakes and 30 ug/l for cool water lakes protect the designated uses. The supporting rationale should include adequate justifications for both the warm water and the cool water criteria. Please provide rationale showing how chlorophyll-a criteria of 30 ug/l for warm water lakes and 15

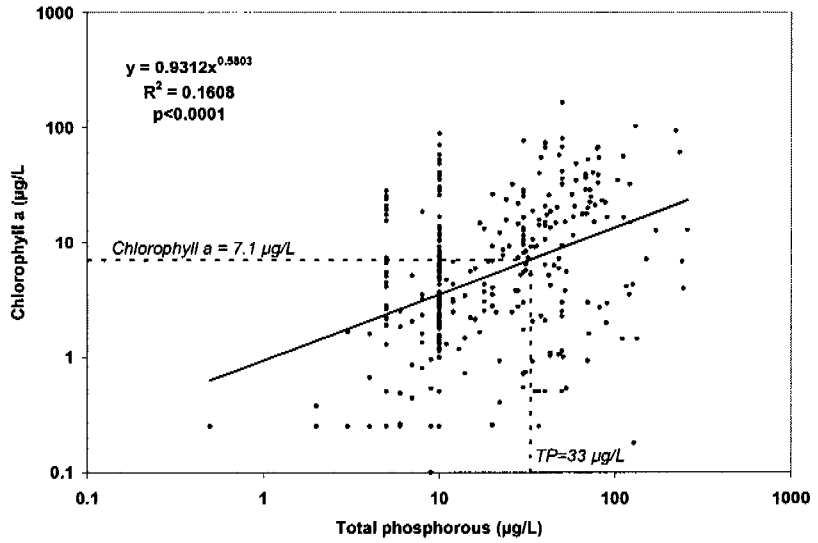
ug/l for cool water lakes protect the designated uses. The supporting rationale should include adequate justifications for both the warm water and the cool water criteria. The rationale should include an analysis to show that the criteria are protective against "worst case" conditions (i.e., hot summers with low flow).

RESPONSE C. Data searches were conducted by the NCC, as well as a statistical evaluation of existing information to support the proposed criteria. The DEP will provide a more detailed justification in its rationale accompanying the final rule.

COMMENT D. *West Virginia should show how the total phosphorous and chlorophyll-a proposed criteria relate to the Trophic State Index scale of eutrophication. Please also show how the expected levels of chlorophyll-a correlate, if at all, to the expected levels of total phosphorus, and how this correlation is reflected in the criteria.*

RESPONSE D. The chlorophyll-a criterion is based on the current DEP practice of listing lakes as impaired with Topographic State Index (TSI) scores greater than 65. This TSI of 65 corresponds to a chlorophyll-a concentration of 33.3 ug/L. (see figure below) TSI relationships will be fully discussed in the rationale document submitted to EPA with the final rule.

Figure 1: Relationship between chlorophyll a and TP in the USACE and CLP datasets



COMMENT E. *Additional Nutrient Criteria for other uses.*

The proposed regulations state that the criteria protect water use categories B and C. Will these criteria also protect other uses from the impact of nutrients? If not, how does West Virginia intend to adequately protect the other uses from nutrients? Does West Virginia plan to adopt additional criteria in the future?

RESPONSE E. The DEP's proposed rule will not protect other uses from the impact of nutrients at this time. Discussions commenced in the summer of 2004 regarding criteria for "A"

use protection but the focus was on the development of category "B" and "C" criteria for lakes. In the coming year the DEP will make a closer examination of this issue in addition to looking at criteria for river and streams.

COMMENT F. *Do all of the lakes in Appendix F have a residence time greater than 14 days? If not, or if for some reason the residence time decreases, do the criteria still apply?*

RESPONSE F. The lakes represented in Appendix F have a residence time greater than 14 days. It is possible that retention time could change over time due to sedimentation buildup and DEP would then need to consider removing the lake from the list. By the time this would occur, presumably the criteria for rivers and streams would be in place and would then be applicable.

COMMENT G. *In addition to providing a list of all cool water lakes, West Virginia should provide a list of all warm water lakes, to more clearly specify the particular waters subject to criteria.*

RESPONSE G. The DEP acknowledges the comment but believes that the definition in the rule clearly delineates the difference between warm water and cool water lakes and no further description is required.

COMMENT H. *Downstream water*

EPA's regulations at CFR Part 131.10(b) require that in "designating uses of a waterbody and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters." How do the proposed criteria account for downstream effects?

RESPONSE H. The issue of protecting downstream uses will better be addressed when river and stream criteria are pursued in the coming year. Currently downstream waters, presumably rivers or streams, lack nutrient criteria if they are within the state borders. DEP recognizes this issue and will work to address it.

COMMENT I. *Please explain how the proposed nutrient criteria will be protective against the degradation of more pristine lakes with much lower level of nutrients.*

RESPONSE I. The State's antidegradation policy contained in 47CSR2 and 60CSR5 applies to all State waters and would thus address this issue.

COMMENT J. *Please explain why a determination of whether a water segment meets the criteria should depend on an average of at least four samples, instead of simply on one sample, or the average of the samples actually taken. How is the sampling procedure establish in the rule protective of the designated uses?*

RESPONSE J. Nutrients levels can be highly variable, especially in smaller waterbodies. The consideration of an average value over the growing season allows for occasional higher values that may be associated with rainfall events. The median value was also considered, but the NCC

and DEP believe that the average value is more appropriate than the median because it is affected more by occasional higher values, which can have an ecological impact.

COMMENT K. *Does West Virginia expect to sample all lakes more than four times within the index period? If not, what would trigger additional sampling to determine compliance with the WQS?*

RESPONSE K. DEP's Watershed Assessment Section has started a lakes monitoring program that includes the analysis of at least four nutrient samples during the growing season from each lake according to the established 5-year rotating basin approach.

COMMENT L. *Please explain how the criteria will be assessed to determine impairment for the purpose of the Section 303(d) list.*

RESPONSE L. If the average of the four samples is above the appropriate criteria, the waterbody will be listed as impaired for those uses for which the criteria apply (Aquatic Life and Contact Recreation). However, if it is clear that the data was collected under anomalous conditions (e.g. - each of the sampling events were preceded by heavy rainfall) WVDEP may determine that there is insufficient data to determine impairment.

COMMENT M. *EPA supports the language in the proposed regulations which explicitly provides that impairment for nutrients also can be determined based on the application of narrative criteria. EPA recommends that West Virginia further define impairment from nutrients by specifying that in the case of nutrients, a water would be deemed impaired if the nutrients have directly or indirectly caused: nuisance algae or excessive growth of macrophytes; unacceptable water clarity, odor or microbial growth; or an increase or decrease in the relative abundance of species or in the diversity of indigenous communities beyond the normal range.*

RESPONSE M. The DEP believes that the commenter's suggested additions are adequately covered by section 3.2 of the current rule. The DEP will continue to review this issue to determine if further refinement is necessary.

COMMENT N. *Additional nutrient criteria.*

EPA's recommended parameters for nutrient assessment are total phosphorus, total nitrogen, chlorophyll-a, and some measure of water clarity." Please explain and support West Virginia's rationale for not proposing total nitrogen and secchi nutrient criteria for lakes.

RESPONSE N. Secchi depth criteria is not appropriate for WV lakes because clarity is affected more often by sediment than by nutrients. West Virginia water quality rules regulate concentrations of nitrite and ammonia permissible in surface waters. These rules apply to lakes. At the time the NCC was evaluating criteria there was no evidence found that West Virginia lakes are limited by nutrients other than phosphorus.

COMMENT O. *Weirton Socioeconomic Variance*

This section extends the socioeconomic variance until July 1, 2009. EPA reminds West Virginia that documentation in support of the extension of this variance should show that the conditions for granting a variance still apply and that the variance provisions are consistent with 40 CFR 131.10(g). Discharger-specific variances based on the substantial and widespread economic and social economic impact factors should include a demonstration that alternative control strategies were evaluated as part of the showing that standards were not attainable.

RESPONSE O. The DEP understands the criteria that apply for extending a socio-economic variance and will submit complete documentation to EPA for final approval, upon successfully completing the legislative process.

COMMENT P. *Chloride Variance for Union Carbide on Ward Hollow*

This section extends the variance from July 1, 2008 to July 1, 2010. The exception was approved by EPA in September 2006. West Virginia should still provide documentation that the conditions for granting the variance still apply and that the variance provisions are consistent with 40 CFR 131.10(g).

RESPONSE P. The DEP acknowledges the comment and understands that the documentation showing that the conditions for granting the variance still apply and will need to be provided at the time of final EPA approval.

COMMENT Q. *Pats Branch Use Removal*

This section removes Category A (Public Water Supply) and Category D1 (Irrigation) designated uses for Pat Branch. EPA notes that a "Use Removal Request Information Sheet" was attached to the proposed rule. West Virginia's submission for approval should include the full assessment of factors affecting the attainment of a use, which may include physical, chemical and biological and economic factors and documentation supporting that the use is not attainable nor existing for the stream subject to use removal.

RESPONSE Q. The DEP acknowledges the comment and understands that the full assessment of factors affecting attainment of a use and all the supporting documentation showing that the use is not attainable, nor existing, will need to be provided at the time of final EPA approval.

COMMENT R. *Appendix A Category B-2 Trout Waters*

USEPA states that a number of streams were removed from the trout water list. Submission to USEPA for approval should include a use attainability analysis (UAA) covering each stream or stream segment that is being removed from the trout list. For streams that may have been erroneously designated as trout streams, a UAA could consist of data showing that the natural conditions (such as physical and chemical conditions) that prevent the water body from sustaining a year-round trout population have been present all along, and that those conditions are not subject to change.

RESPONSE R. The DEP has removed the streams that were erroneously identified as trout streams. Reclassification forms will be submitted to the USEPA with the appropriate information for approval.

COMMENT S. *Fecal Coliform exception for the Ohio River*

Appendix E, Section 8.13.1 expands the fecal coliform exception for the non-recreational season of November - April on the Ohio River to include Category A (Public Water Supply). The WVDEP Briefing Document states that the revision is based on a 1986 Rationale document from the Environmental Quality Board (EQB). It is unclear how this document provides sound scientific rationale to protect the Ohio River's drinking water use. Public water supply use shall be protected at all times. EPA reminds West Virginia that water quality criteria must be based on a sound scientific rationale and must contain sufficient parameters to protect the designated use(s). West Virginia's submission for approval to EPA of adopted criteria for the Ohio River Drinking water use should include documentation of that rationale.

RESPONSE S. The DEP acknowledges the comment and understands that water quality criteria must be based on a sound scientific rationale and must protect the designated uses. Sound scientific rationale to show that public drinking water supplies are protected on the Ohio River during the non-recreational season, will be provided at the time of final EPA approval.

COMMENT T. *Fluoride Standard*

Section 8.14.1 changes the fluoride standard for Category D (Agriculture and wildlife uses) to Category D1 (Irrigation). The WVDEP Briefing Document states the revisions are based on a 1986 Rationale document from the Environmental Quality Board (EQB). West Virginia's submission for approval should include rationale on how this change protects the use.

RESPONSE T. The DEP acknowledges the comment and will supply the 1986 Rationale document from the EQB. The DEP would take this opportunity to point out that the intent at the time the fluoride limit for category D was added to the rule was for it to apply to category D1. The DEP's submission for approval will include the rationale to support this change.

COMMENT U. *Coordination with the U.S. Fish and Wildlife Service (FWS)*

In February of 2001, EPA entered into a Memorandum of Agreement (MOA) with the FWS and the National Marine Fisheries Service (NMFS) regarding coordination under the CWA and the Endangered Species Act (ESA). We would appreciate your cooperation in meeting the spirit of these commitments under the MOA in order to expedite our 303(c) action once revisions to West Virginia's WQS rule are submitted for our review. While we recognize that this MOA does not bind the state, dischargers, construction projects and others who are individually responsible for compliance with the Endangered Species Act. West Virginia can assist EPA in meeting our commitment by facilitating early exchange of information with the FWS and helping in early identification of potential problems.

RESPONSE U. The DEP understands and is willing to help in any way to expedite the EPA review process.

XI. COMMENTER: West Virginia Coal Association (WVCA)

COMMENT A. *Supports proposed revision of chronic aluminum criteria*

The commenter supports the proposed revision of the chronic aluminum criteria, and asks that the DEP consider the WVCA's original comments, provided in October 2005, with respect to the current rulemaking effort.

RESPONSE A. On June 12, 2007 the DEP filed an emergency rule related to dissolved aluminum which would make the interim number permanent, replacing the 87 value with the 750 value. The emergency rule was approved by the Secretary of State on June 14, 2007. A complete package in support of the revision was submitted to EPA on June 15, 2007 for final approval, which was given on July 5, 2007. The DEP agrees that the revision to the aluminum criteria is protective of aquatic life in West Virginia and acknowledges the commenter's support.

COMMENT B. *Listing a stream is not necessary to protect the "trout waters" use.*

The DEP has proposed to massively expand the list of streams codified within the water quality standards rule. Incorrectly classifying a stream as a trout water will have serious environmental and economic ramifications on mining operations and mineral reserve holders in close proximity to such streams. WVCA believes the agency already has the adequate tools needed to protect trout streams without codifying the list. During the NPDES permitting process the DEP will apply appropriate trout stream limits if it believes a stream is a trout water, regardless of whether it is listed in Appendix A. The difference is the permit applicant has the opportunity to dispute the trout stream designation if they believe it to be unfounded.

RESPONSE B. The DEP agrees that trout streams can be protected in the NPDES permitting process. However, it does not follow that because streams may be considered "trout waters" (independent of the rulemaking process) that there is not value in having as accurate and current a list as possible contained in the State water quality standards rule. A list of all the known trout streams should be available to all citizens of the State so that a person can know from the outset whether a particular stream is considered a trout stream and therefore protected by several more protective criteria. Certainly any person or company considering discharging wastewater into a stream in the future would benefit by knowing whether a stream is a trout stream Also, by finalizing the determination in the rulemaking process as opposed to on a case-by-case basis, everyone has the opportunity to participate in this most important decision. Once a stream is placed on the list in the rule, there is no need for further argument before a board or a court. This is no different than any other issue, e.g., the aluminum criteria that has been adopted as a rule. Rules provide certainty in the program and prevent unnecessary litigation.

Furthermore, the list of approximately 165 streams in the current rule has not been updated since 1985 and is clearly underrepresentative of the number of actual trout streams. Although the agency tries to rectify this situation by developing and using an alternative listing in the permitting and other processes, an accurate list should be made a part of the state water quality standards rule. Also the triennial review process outlined in the federal Clean Water Act was established to ensure that the review of available data and updating of the rule occurs. This Appendix has been unchanged for over 20 years and clearly requires updating.

COMMENT C. *DEP has failed to recognize the difference between native and stocked populations of trout in the listing process*

The commenter states that the DEP has failed to recognize the difference between native and stocked populations of trout in the listing process and therefore are applying the restrictive water quality effluent limitations that were intended for application on native naturally reproducing trout streams to all trout streams. The commenter also believes that the DEP and DNR should develop a classification system that acknowledges the differences among the trout populations found in WV. Ideally, such a classification system would differentiate streams that support native, naturally reproducing trout from streams that just support carryover trout. The commenter references and briefly describes the methods use in Pennsylvania, Kentucky, Georgia, and Wisconsin.

RESPONSE C. The DEP recognizes that States have some flexibility in the manner in which they protect their existing and designated uses, including various kinds of trout waters. In this State, 47CSR2 has included a "trout water" use category with several more stringent criteria since 1970. The particular definition of "trout waters" has remained the same since 1980, essentially including waters that sustain a year-round population of trout. The Environmental Quality Board, and now the DEP, consider the definition to include both naturally reproducing trout and trout having the ability to "carry over" from year-to-year. The standards in 47CSR2 provide the same degree of protection to all trout waters that fall within this definition. Trout waters that fall outside of the definition (those that are purely "put and take" trout streams) do not receive the higher level of protection and are only protected to the same degree as Category B1 warmwater streams. Based on consultation with the WV Department of Natural Resources (DNR), the DEP believes this approach to protecting trout waters is scientifically defensible.

Streams that are purely "put and take" streams where the trout are not expected to survive more than one season do not require more than the level of protection afforded to warmwater streams (although it should be noted that some states, like Pennsylvania, have provided these "put and take" trout streams an additional intermediate level of protection.) On the other hand, the higher degree of protection afforded by the B2 criteria is necessary to protect naturally reproducing streams and those where trout (that were originally stocked as fingerlings) are capable of living or "carrying over" for several years. Although some states have provided an even higher level of protection for naturally reproducing streams, DEP believes the B2 criteria are sufficient to protect both naturally reproducing and carry-over trout streams. A lower level of protection than the B2 criteria for trout waters that carry over, as the commenter suggests, would not provide sufficient protection for that use. Both carry-over and naturally reproducing trout need at least the level of protection afforded by the B2 criteria.

The commenter suggests that the DEP adopt a more complex classification system in order to protect the resource and points to other classification systems in use by other states. The DEP does not believe a more elaborate system is necessary. The commenter has confused these systems (most commonly established by State agencies in charge of natural resource management, such as the West Virginia DNR), with the water quality standards-setting process, most often assigned to State environmental agencies charged with implementing the federal Clean Water Act, such as the DEP. The fundamental purposes behind the two systems are quite different.

The purpose behind the water quality standards program is simple—to protect beneficial uses of State waters by setting in-stream criteria determined to be protective of those uses. Once a State determines the scope of the use it wants to protect (in this case naturally reproducing and carry-over trout), it then decides what criteria are necessary to protect that use (in this case the B2 criteria). The more refined classification systems used by the various natural resource agencies are established for an entirely different purpose. These systems are used by natural resource agencies as management tools for the enhancement of the resource for public recreation and enjoyment, such as sports fishing. In fact, our own State DNR has a detailed classification system consisting of five (5) different types of trout waters, set up for this very purpose. The DNR's trout classification system in no way takes the place of the DEP's water quality standards system, and any comparison between the two is an "apples and oranges" comparison. Unlike what the commenter suggests, it is the water quality standards programs of other states that should be part of this discussion, and the DEP will address these in the responses that immediately follow.

COMMENT D. *Tiered Classification System for Trout Stream in Other States:*

Pennsylvania:

Distinction between stocked and wild trout streams. Wild trout streams are defined as streams that have resident trout populations resulting from natural reproduction. Wild trout streams contain young-of-year trout at some time of the year and two or more age classes.

Wild trout streams are further classified into Class A, B, or C. Class A streams are wild trout streams that possess exceptionally productive wild trout populations and require no stocking to support a productive fishery. Class B streams possess healthy populations and good reproduction, but the streams may not be productive enough to support exceptional fisheries. Class C streams possess wild populations, but supplemental stocking is needed to support a successful fishery. Tributaries of wild trout streams are classified as wild.

RESPONSE D. The classes listed by the commenter are management classes used by the Pennsylvania Fish Commission to manage trout streams for recreational purposes; they are not water quality standards. A different department, the Pennsylvania Department of Environmental Protection, establishes water quality standards, and it has designated two beneficial uses that apply to trout. They are CWF ("cold water fishes") and TSF ("trout stocking"). The same criteria apply to both uses but the TSF only apply during the stocking period of February 15 through July 31, while CWF applies year-round. Pennsylvania offers the same level of protection for both "maintenance or propagation, or both, of fish species including the family Salmonidae." In this definition, year-round populations are protected with the same level of protection as natural reproduction, just as in West Virginia. Pennsylvania additionally offers seasonal protection for streams that are stocked in the cool weather months as "put and take" fisheries. Currently West Virginia does not offer "put and take" fisheries this higher degree of seasonal protection, so in this regard, Pennsylvania's standards are more stringent than West Virginia's.

COMMENT E. *Tiered Classification System for Trout Stream in Other States:*

Kentucky:

Streams are rated based on six parameters: 1) trout presence; 2) trout population structure (are there multiple age classes?); 3) water quality; 4) habitat quality; 5) fishing success (judged using angler surveys); and 6) aesthetics. Streams are rated as excellent, good, fair, and poor. The ratings are then transferred to four classes: Class I – exceptional trout streams that have wild brook trout populations; Class 2 – high quality trout streams that are managed as put-take-and-grow fisheries or have carryover beyond one year; Class III – general trout streams that are managed as put-and-take fisheries; and Class IV – marginal trout streams that have a fair rating and managed as put-and-take fisheries.

RESPONSE E. Again, the classes listed by the commenter are management classes that the Kentucky Department of Fish and Wildlife Resources uses to manage their trout streams for recreational purposes and resource enhancement. The Kentucky DEP Division of Water, a different agency, has established water quality standards consisting of two aquatic life designations, "warm water aquatic habitat" and "cold water aquatic habitat." Any stream that supports trout year-round would be classified as "cold water aquatic habitat" and given that level of protection. This is the same approach as in West Virginia.

COMMENT F. *Tiered Classification System for Trout Stream in Other States:*

Georgia:

Georgia distinguishes between primary and secondary trout streams. Primary trout streams support self-sustaining populations of rainbow, brown, or brook trout. Secondary trout streams are those with no evidence of natural reproduction, but which are capable of supporting trout throughout the year.

RESPONSE F. In this case, the commenter has made an appropriate comparison, citing Georgia's water quality standards program. The two trout water categories referred to by the commenter are part of Georgia's water quality standards. Unlike West Virginia, Georgia has used a more stringent approach by assigning a slightly higher level of protection to naturally reproducing trout streams than it does for streams that are capable of supporting year-round populations of trout. In doing so, however, Georgia has not decreased the level of protection for carry-over trout as the commenter suggests be done in West Virginia; it has only increased the level of protection for naturally reproducing trout. It should be noted that Virginia uses the same more stringent approach. While these other States do afford a higher level of protection to naturally reproducing trout populations, the WVDEP believes it is striking an appropriate balance in protecting its trout waters at the B2 criteria level. Until it finds compelling scientific reasons to change its approach, the DEP believes the current approach to trout waters should remain as is.

COMMETN G. *Tiered Classification System for Trout Stream in Other States:*

Wisconsin:

Initial stream classification into Cold and Warm water communities. Trout streams are equated with Coldwater streams. These streams are then broken into three classes. Class 1 trout streams are high quality trout waters that have sufficient natural reproduction to sustain populations of wild trout, at or near carrying capacity. Class 2 trout streams have some natural reproduction, but not enough to utilize all available food and space, and may require some stocking to maintain a desirable sport fishery. Class 3 trout streams have no natural

reproduction, require stocking each year to support a fishery, and have little or no annual carryover of stocked trout.

RESPONSE G. As with most of the states referenced by the commenter, the three classes listed for Wisconsin are management classes used by the Wisconsin Department of Natural Resources. Wisconsin's water quality standards include a use category for "cold water communities" that covers that State's trout waters. All waters falling in this category are then protected at the same level of protection, just as in West Virginia. Wisconsin uses no further tier or classification systems when it comes to setting a standard for the protection of trout waters.

COMMENT H. *Current Definition of a Trout Stream in WV*

WV trout streams are defined as streams or stream segments that sustain year-round trout populations. This definition excludes streams that must be stocked annually to maintain a population. This definition does not distinguish among trout streams of varying quality.

RESPONSE H. The commenter has incorrectly stated the definition of trout waters as it appears in the rule. In the above responses, the DEP has provided ample justification for the current definition of "trout waters" in the rule and the approach to setting criteria to protect this designated use. Please see Response to Comments XI. C through G above.

COMMENT I. *A Proposed Classification Scheme for WV Trout Streams*

The commenter proposes a classification system for trout based on four variables, cold vs. warmwater, wild vs. stocked, stocked: put-and-take vs. put-take-and-grow and wild: class 1-IV. The four classes of wild trout range from wild streams with high reproduction and productivity to wild streams which require high levels of stocking to maintain a productive fishery.

RESPONSE I. The classification scheme proposed by the commenter is similar to the management approaches used in the four states listed by the commenter in the preceding comments. As explained in the responses to those comments, these management classes are used for an entirely different purpose than for establishing water quality standards and are not helpful to this discussion. This likewise applies to the West Virginia DNR's trout stream classification system that has been in place since the mid-1970's. These resource management systems would only serve to make the water quality standard-setting process unnecessarily complex.

XII. COMMENTER: Bruce Edinger

COMMENT A. *Continue the protection of river environments*

The commenter supports the continued protection of river environments and therefore supports the proposed Requirements Governing Water Quality Standards, 47CSR2 which increases the number of streams protected under the trout stream B2 status.

RESPONSE A. The DEP acknowledges the support of the commenter for the proposed rule.

XIII. COMMENTER: West Virginia Rivers Coalition (WVRC) (Joe Peabody & Evan Hansen)

COMMENT A. *The revised list of trout waters.*

The WVRC commends the listing of an additional 337 streams as "Trout Waters" as defined by Section 2.19 of the proposed rule, 47 CSR 2. The listing of these streams provides exceptional benefits for the states and upholds the intent of the rule. The WVRC commends the WVDEP for its refusal to compromise on this proposed rule during the 2007 Legislative Session and strongly encourage the agency to continue to uphold these proposed designations. The WVRC also encourages the WVDEP to continue to recognize the WVDNR as the expert agency with regard to the assessment of trout populations and trout streams across the state.

RESPONSE A. The DEP acknowledges the comment and appreciates the commenters support.

COMMENT B. *Existing uses and trout waters.*

The WVRC states that Sections 4.1.a and 6.1.b of 47 CSR 2 require the protection of existing uses. "Existing uses" are "those uses actually attained in a water body on or after November 28, 1975." The proposed B2 list therefore correctly includes waters where sustained year-round trout populations, or trout reproduction, have been documented since November 28, 1975. We commend WVDEP for taking these required actions.

RESPONSE B. The DEP agrees that the addition of streams to the B2 list is consistent with the "Existing uses" definition in the rule and 40 CFR §131.3.

COMMENT C. *Tier 2.5 listings and B2 designation.*

The WVRC urges the clarification that the listing of streams for Tier 2.5 protections and designating streams as Category B2 "Trout Waters" are completely different processes, with different protections.

RESPONSE C. Listing streams for Tier 2.5 protections and designating streams as Category B2 "Trout Waters" are different processes with different requirements and are covered in separate rules. The "Trout Water" designation in the Water Quality Standards (WQS) rule is based on whether the water meets the definition of a "trout water" in section 2.19 of the proposed rule. "Trout waters are waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round trout populations." While many streams appear on both lists, the Tier 2.5 "presumptive" list is currently undergoing a separate public process which includes requirements not applicable to this process.

COMMENT D. *Nutrient Criteria for lakes and reservoirs.*

The WVRC as one of the members of the Nutrient Criteria Committee states that the consensus reached by the committee is represented in the rule language and urges DEP to preserve the nutrient language as well as support efforts to gain its approval through legislature.

RESPONSE D. The DEP agrees that the nutrient language in the rule represents the consensus of the committee and supports its approval.

COMMENT E. *Removal of site-specific criteria for several streams.*

The WVRC supports the removal of several site-specific exemptions from rule as listed below.

- *Section 7.2.d.6.1, which exempted Stony River from thermal criteria, which expired in 1998;*
- *Section 7.2.d.20.3, which set site-specific numeric temperature criteria for Simmons Creek, which also expired in 1998; and*
- *Section 7.2.d.14.1, which excluded Water Use Categories A and E certain tributaries of the Youghiogheny River, for which WVDEP was unable to find any documentation.*

RESPONSE E. The DEP agrees that these exemptions needed to be removed from the rule.

COMMENT F. *Removal of the Blackwater River from the B-2 trout water list.*

The current water quality standards classifies the entire length of the Blackwater River as a B-2 trout water. Section 7.2.d.9 applies to the Blackwater River below Davis, and the Blackwater above Davis is listed in Appendix A as a B-2 trout water. WVDEP proposes to delete both of these listings, and to replace them with a listing in Appendix A for the Blackwater River from the mouth of North Fork upstream. If approved, the entire length of the Blackwater River below the confluence with the North Fork would be removed from the B-2 list. In explaining this change, WVDEP's Briefing Document simply states: "In section 7.2.d.9, the Blackwater River is referred to as a trout stream, which is repetitive since it is listed on the trout list in Appendix A. Therefore, section 7.2.d.9 has been amended." This statement is false. The proposed change is not simply the removal of a repetitive reference; it is a delisting of miles of the Blackwater River. The entire Blackwater River should be kept on the B-2 list of trout waters at this time.

RESPONSE F. It was not the intent of the DEP to remove the downstream section of the Blackwater River below the confluence with the North Fork. The Briefing Document reflects DEP's intention, of removing the duplicate listing of the Blackwater River. The DEP corrected this oversight following the 2006 comment period. The DEP corrected the issue by removing the added wording in Appendix A which states "from the mouth of North Fork upstream." The listing in Appendix A of the proposed rule is "Blackwater River." The strike- through in section 7.2.d.9 will remain since it is inappropriate to have affirmative statements in this section. It is intended for exceptions.

COMMENT G. *Changes to many criteria for metals.*

The WVRC supports the updating of the formulas in Appendix E for five metals: cadmium, copper, nickel, silver, and zinc, in an effort to reflect those recommended by EPA in 2002.
The WVRC also suggest that the wording and formulas in Sections 8.9.2 and 8.9.3 for dissolved trivalent chromium be edited to be consistent with those used for cadmium, copper, lead, nickel, silver, and zinc.

RESPONSE G. The DEP agrees that the updated formulas reflect those recommended by EPA in 2002. Following the public comment period in 2006 the DEP acknowledged that the wording

in Appendix E, sections 8.9.2 and 8.9.3 for dissolved trivalent chromium should be edited to be consistent with that used for cadmium, copper, lead, nickel, silver, and zinc. This change has been reflected in the proposed rule.

COMMENT H. *Proposed use removal for Pats Branch*

Section 7.2.d.34.1 of the proposed rule constitutes a "Use Removal" under the provisions of the Clean Water Act, and WVRC is concern the agency has not submitted this decision to a formal "Use Attainability Analysis" and the appropriate public notice and comment process as required by the Clean Water Act. For example, we can find no official notice or advertisement of this proposed Use Removal as required by the WV Administrative Procedures Act, prior to the official publication of this proposed rule.

RESPONSE H. The DEP acknowledges WVRC's concerns but assures the commenter that it has followed all Use Removal requirements as outlined in the Clean Water Act as well as 47CSR2 and 46CSR6. As far as the public notice requirements related to this action, the DEP has followed the specific requirements in 46CSR6. Section 4.3 of that rule states that the DEP must propose a use reclassification as an amendment to the water quality standards rule, which is exactly what the agency has done. The rule also says the requirements of the State Administrative Procedures Act (State APA) and sections 2 and 3.3 apply. The agency has met the section 3.3 requirement with its publication of the information sheet as part of this rulemaking filing. The commenter may, however, be confused by the language in section 2.3. This language requires the agency to hold a public hearing *in addition to* following the minimum requirements of the State APA, which only requires public notice and the opportunity for written comment, not a hearing. Because the DEP is required by separate statute, W.Va. Code §22-1-3(e), to hold a public hearing on all legislative rules, the requirement in section 2.3 will always be satisfied when the agency publishes notice of a public comment period and a hearing in accordance with this section. The DEP does not believe the rule at section 2.3 requires that two public hearings be held, nor that two public comment periods be afforded.

XIV. COMMENTER: Larry Dadisman

COMMENT A. *The commenter supports the Water Quality Standards rule*

The commenter supports the Water Quality Standards rule (47CSR) which greatly expands the list of trout streams and points out the growing need for clean unpolluted drinking water. The commenter also points out that the cost of cleaning up a water source, once polluted, is much greater than the cost of protecting it.

RESPONSE A. The DEP agrees with the commenter and believes the proposed rule will be beneficial in protecting West Virginia's waters.

XV. COMMENTER: Mr. Sammy Gray (West Virginia American Water)

COMMENT A. *Appendix B. update*

WVAW recommends the updating/revision of the list of public water supplies in Appendix B. WVAW also provided 23 public water supplies on the list that they believe need addition, deletion, or operating company revisions on the list.

RESPONSE A. The DEP acknowledges that the public water supplies listing (Appendix B) in the rule needs to be reviewed and possibly updated. The DEP plans on undertaking this review during the next review of the rule.

XVI. COMMENTER: Mr. Larry Orr (chairman of the West Virginia Council of Trout Unlimited)

COMMENT A. *The definition of "trout waters" and the B2 trout list.*

The commenter recommends that the current definition of "trout waters" in the proposed rule must be retained as stated to protect West Virginia's streams.

RESPONSE A. The DEP agrees that the definition of "trout waters" in section 2.19 of the proposed rule should remain as stated in order to protect the use.

COMMENT B. *Working together*

The commenter believes that business and development can work together and can grow while still maintaining the quality of our waters and the recreational value.

RESPONSE B. The DEP acknowledges the comment and agrees that water quality can be maintained as well as growth and development. The proposed rule is designed to help accomplish this.

XVII. COMMENTER: Koppers Inc.

COMMENT A. *Mixing and Half-Mile Zones*

The commenter feels the prohibition on the overlap of mixing zones is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point. The commenter believes Section 5.2.h.5 should be deleted from the water quality standards rule. Additionally, the commenter believes a blanket prohibition on the overlap of mixing zones in which the same pollutant is not being discharged, is unnecessary to protect designated human health or aquatic life uses of water. Also, the commenter recommends that Category A designations should be reevaluated and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

RESPONSE A. The DEP acknowledges the comment, however the proposed rule filed on May 30, 2007 did not address making any changes to the mixing zones, half-mile zones, or Category A designation. Therefore it would be inappropriate for the agency to make any changes to the rule related to this issue at this point in time. In light of the commenter's interest, this subject may be considered at some point in the future.

COMMENT B. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE B. The DEP acknowledges the comment, however the proposed rule filed on May 30, 2007 did not address changing the design flow criteria. Therefore it would be inappropriate for the agency to make any changes to the rule related to this issue at this point in time. In light of the commenter's interest, this subject may be considered at some point in the future.

COMMENT C. *Polynuclear Aromatic Hydrocarbons(PAH)*

The commenter recommends establishing a group of seven B2 PAHs that have been identified by US EPA as probable human carcinogens, with a criterion of 26.6 ng/L. The commenter feels this is necessary due to the difficulty in analyzing to the level of 3.8 ng/L, for each individual PAH. This approach makes sense from an environmental standpoint because if the B2 PAH compounds would be controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the respective human health criteria for those compounds.

RESPONSE C. By listing the PAH compounds individually, WVDEP is able to provide appropriate specificity in the application of the individual PAH recommended criteria is being met and will ensure adequate water quality for the specified water use. The seven PAH compounds that the commenter refers to as the B2 PAHs, all have individual limits of 3.8 ng/L based on EPA's recommended level for a cancer risk of 10^6. By creating a total group with a limit of 26.6 ng/L, it would allow one compound to be present at a concentration seven times the recommended level to protect against a cancer risk of 10^6. The methodology developed for the analysis of these compounds is based on determining the concentrations of individual compounds. The analytical difficulties of detecting a concentration of 3.8 ng/L will be dealt with in the permitting process in the same manner currently used to deal with the total PAH limit of 2.8 ng/L.

XVIII. COMMENTER: Wheeling-Nisshin.

COMMENT A. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE A. See response to Comment XVII. B.

COMMENT B. *Mixing Zones*

The commenter feels the prohibition on the overlap of mixing zones is overly restrictive and the rule should be amended to allow overlap of mixing zones provided that it is protective of water quality standards and designated water quality uses.

RESPONSE B. See response to Comment XVII. A.

XIX. COMMENTER: Mountain State Carbon.

COMMENT A. *Mixing and Half-Mile Zones*

The commenter feels the prohibition on the overlap of mixing zones is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point. The commenter believes Section 5.2.h.5 should be deleted from the water quality standards rule. Additionally, the commenter believes a blanket prohibition on the overlap of mixing zones in which the same pollutant is not being discharged, is unnecessary to protect designated human health or aquatic life uses of water. Also, the commenter recommends that Category A designations should be reevaluated and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

RESPONSE A. See response to Comment XVII. A.

COMMENT B. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE B. See response to Comment XVII. B.

COMMENT C. *Polynuclear Aromatic Hydrocarbons (PAH)*

The commenter recommends establishing a group of seven B2 PAHs that have been identified by US EPA as probable human carcinogens, with a criterion of 26.6 ng/L. The commenter feels this is necessary due to the difficulty in analyzing to the level of 3.8 ng/L, for each individual PAH. This approach makes sense from an environmental standpoint because if the B2 PAH compounds would be controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the repective human health criteria for those compounds.

RESPONSE C. See response to Comment XVII. C.

COMMENT D. *Fecal Coliform*

The commenter recommends the proposed addition of a November through April fecal coliform limit of 200 colonies per 100 ml as a monthly geometric mean for the Ohio River Category A human health WQS.

RESPONSE D. The DEP has proposed to change the fecal limit for November through April on the Ohio River to make WV consistent with the Ohio River Valley Water Sanitation Commission (ORSANCO). The limit proposed in the rule is 2000 colonies per 100 ml as a monthly geometric mean for Category A human health. It appears the commenter has made a typographical error in stating the criterion.

XX. COMMENTER: Wheeling Corrugating Company (Bud E. Smith)

COMMENT A. *Mixing and Half-Mile Zones*

The commenter feels the prohibition on the overlap of mixing zones is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point. The commenter believes Section 5.2.h.5 should be deleted from the water quality standards rule. Additionally, the commenter believes a blanket prohibition on the overlap of mixing zones in which the same pollutant is not being discharged, is unnecessary to protect designated human health or aquatic life uses of water. Also, the commenter recommends that Category A designations should be reevaluated and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

RESPONSE A. See response to Comment XVII. A.

COMMENT B. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE B. See response to Comment XVII. B.

COMMENT C. *Polynuclear Aromatic Hydrocarbons Water Quality Standards*

The commenter recommends establishing a group of seven B2 PAHs that have been identified by US EPA as probable human carcinogens, with a criterion of 26.6 ng/L. The commenter feels this is necessary due to the difficulty in analyzing to the level of 3.8 ng/L, for each individual PAH. This approach makes sense from an environmental standpoint because if the B2 PAH compounds would be controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the repective human health criteria for those compounds.

RESPONSE C. See response to Comment XVII. C.

COMMENT D. *Fecal Coliform*

The commenter recommends the proposed addition of a November through April fecal coliform limit of 200 colonies per 100 ml as a monthly geometric mean for the Ohio River Category A human health WQS.

RESPONSE D. See response to Comment XIX. D.

COMMENT E. *General Comments*

West Virginia's borders are formed by rivers, such as the Potomac, Big Sandy and the Ohio River. When WV creates new regulations, such as these proposed changes, they may or may not be compatible with those imposed on the same river by the different states. It is our assessment that the proposed changes are more stringent than those of bordering states and the limits are not necessarily based on science. Any additional benefits from more stringent standards will be potentially negated by the impact on the business climate in these communities.

RESPONSE E. The DEP acknowledges the comment. The commenter has failed to identify any particular standards that are more stringent and has not provided any information that demonstrates the proposed criteria are inappropriate or not scientifically sound.

XXI. COMMENTER: Mittal.

COMMENT A. *Mixing and Half-Mile Zones*

The commenter feels the prohibition on the overlap of mixing zones is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point. The commenter believes Section 5.2.h.5 should be deleted from the water quality standards rule. Additionally, the commenter believes a blanket prohibition on the overlap of mixing zones in which the same pollutant is not being discharged, is unnecessary to protect designated human health or aquatic life uses of water. Also, the commenter recommends that Category A designations should be reevaluated and that Category A designations and standards should only be applied for discharges within one-half mile of a drinking water intake.

RESPONSE A. See response to Comment XVII. A.

COMMENT B. *One-Half Mile Variance Request*

The commenter requests the variance for the exception of the half-mile rule for total iron be made permanent for Ohio River main stem at Brown's Island, based on the demonstration that the Weirton Plant drinking water intake treatment plant produces finished water with iron concentrations typically non-detect.

RESPONSE B The DEP acknowledges the comment but reminds the commenter as indicated in Section 8.4 of the rule, variances from specific water quality criteria are temporary and shall be reviewed at least every three years. Upon expiration of the time period, the discharger must meet the standard or make a new demonstration of unattainability.

COMMENT C. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE C. See response to Comment XVII. B.

COMMENT D. *Harmon Creek Water Quality Variance*

The commenter requests that its petition and the expected review of variance request prior to July 1, 2009, be acknowledged in the final version of section 7.2.d.16.2..

RESPONSE D. DEP acknowledges it is currently reviewing the data and information received for a revision to the variance, but it would be inappropriate to mention that fact in the rule.

XXII. COMMENTER: Consol Energy

COMMENT A. *Survey data is insufficient to warrant the listing of the entire length of Dry Fork as trout waters.*

The commenter states that a single DNR fish survey conducted in 1979, revealing the presence of one 21-inch brown trout, is not sufficient evidence to list the entire stream as trout waters. In addition, a survey conducted in 2003 near the Jacobs Fork confluence (Dry Fork milepoint 29.5) did not reveal any trout, only a diverse warm water fishery. The commenter states that Dry Fork exhibits characteristics more like those of a B1 warm water fishery.

RESPONSE A. According to the DNR's protocol for classifying trout streams, if trout are found during the critical low flow, high temperature months of July, August, or September, then the stream may be classified as trout waters. This would indicate that the stream is capable of sustaining trout year round as outlined in the definition of trout waters in 47CSR2. If more recent surveys, such as the one conducted in 2003, do not turn up trout in a section of stream where they were once present, then it is quite possible that some type of stream degradation has occurred, which has caused a shift in the fish population. In that type of case, the stream should be targeted for restoration so that water quality may once again be adequate to support the designated coldwater use. In any event the trout water use would still apply because it is an "existing use" under the rule.

COMMENT B. *A temperature study conducted by Potesta and Associates, Inc. revealed that sections of Dry Fork are consistently too warm to support a viable trout population.*

The commenter states that a temperature study conducted by Potesta and Associates, Inc. in 2006 revealed that in many parts of the stream, the recommended hourly max and daily mean temperature criteria for coldwater fisheries was consistently violated, and that these results should be used to determine applicable aquatic life criteria for the stream.

RESPONSE B. While it is true that state water quality criteria specify hourly max and daily mean temperatures that should not be exceeded in trout waters, the fact that these criteria may be

exceeded on occasion does not necessarily preclude trout from being able to survive in the stream. This is especially true for brown trout, which are much more temperature tolerant than brook or rainbow trout. Surveys in Dry Fork have revealed that it primarily supports a brown trout fishery.

In order to determine whether a stream or portion of a stream can be classified as trout waters, it must be determined whether trout can survive in the stream year-round. Trout may be able to survive year round even if the water quality is less than ideal. Previous surveys clearly suggest that trout can survive year round in Dry Fork. If current stream temperatures routinely violate the trout stream criteria found in 47CSR2, then the stream should be targeted for restoration instead of being downgraded to warmwater.

XXIII. COMMENTER: American Electric Power

COMMENT A. *Nutrient Criterion*

The commenter feels the proposed total phosphorus criterion for warm water lakes is unnecessarily stringent based on a review of measured phosphorus levels in WV waters available on the USEPA's nutrient database. The commenter states that this data shows there is a high probability that the proposed phosphorus criteria of 50 µg/L could be exceeded in ambient waters where no point or obvious non-point source influence exists. Based on this, the commenter recommends the addition of "To the extent that it can be demonstrated by site-specific information, exceedances of the following criteria by natural causes is permitted." to the proposed nutrient criteria language

RESPONSE A. The proposed total phosphorus criterion for warm water lakes is based on an average of four or more samples collected during the period May 1 – October 31. This sample collection criteria is not the same criteria used in 1996 for the US EPA National Nutrient Database. Therefore the WVDEP feels it is inappropriate to compare the total phosphorus values reported by the database to the proposed criterion. Also upon review of the database, it was found only seven lakes showed an average total phosphorus level that was elevated. Of the seven, six lakes have been determined to be impaired for trophic state index and/or sedimentation and have approved TMDLs. The seventh lake, O'Brien Lake, had an incorrect data entry of 850 µg/L total phosphorus on September 10, 1996. The correct value should be 85 µg/L total phosphorus which would change the phosphorus average to 51.6 µg/L. According to our records, O'Brien Lake was not determined to be impaired due to insufficient data. Based on the data referenced above the proposed nutrient criteria seems to support the impaired status of the lakes.

COMMENT B. *Revised Aluminum Criteria*

The commenter supports the WVDEP's proposed change to replace the warmwater chronic aluminum aquatic life criterion (87 µg/L total aluminum) to 750 µg/L (total aluminum).

RESPONSE B. See response to Comment XI. A. Also please note that the aluminum aquatic life criteria in the water quality standards rule are dissolved aluminum not total aluminum, as noted by the commenter.

COMMENT C. *Aquatic Life Copper Criterion*

The commenter feels maintaining the hardness-based criterion calculation equation for copper is not scientifically defensible as the USEPA has issued new recommended aquatic life criteria for copper using the Biotic Ligand Model (BLM) approach. The commenter believes the BLM approach for deriving protective aquatic life criteria for copper has a superior scientific basis compared to the existing hardness-based criterion equations. The commenter urges WVDEP to adopt the BLM-based copper criteria for application in site-specific settings and insert a footnote noting site-specific criteria for copper may be developed using this approach.

RESPONSE C. The requirements for site-specific revisions to the water quality standards are outlined in the Procedural Rules Governing Site-Specific Revisions To Water Quality Standards, (46CSR6), which outlines the circumstances allowing site-specific critera. Section §46-6-7 indicate, that upon prior approval of the agency "any other method for developing a site-specific numeric criterion" may be used to establish alternate criteria. The BLM approach would certainly be considered appropriate in establishing a site-specific criterion for copper based on EPA's recommendations.

COMMENT D. *Methylmercury Water Quality Criteria*

The commenter points out the fact that there is not an EPA approved method in 40 CFR 136 for the analysis of methylmercury concentration in water, which is the criterion for the protection of aquatic life from acute exposure, in Appendix E of the rule. The commenter believes placing a total mercury-based WQBEL in a permit that is meant to protect against an exceedance of a methylmercury water quality criterion, assuming that the concentrations of both forms are the same, is not appropriate and unduly penalizes permittees. The commenter recommends the addition of a footnote to correct for the lack of a translator mechanism for total mercury and methylmercury.

RESPONSE D. The DEP acknowledges the comment, however the proposed rule filed on May 30, 2007 did not address changes to the mercury criteria. Therefore it would be inappropriate for the agency to make any changes to the rule related to this issue at this point in time. In light of the commenter's interest, this subject may be considered at some point in the future and subjected to public comment.

XXIV. COMMENTER: Independent Oil & Gas Association of West Virginia (IOGA)

COMMENT A. *Aluminum Criteria Changes*

The IOGA strongly supports the DEP's proposal to finalize aluminum criteria which has been adopted by emergency rule, based on EPA's statement that "the criteria are protective of the aquatic life regardless of whether they apply temporarily or permanently."

RESPONSE A. See Response to Comment XI. A above.

COMMENT B. *Additions to the Trout Waters List*

The IOGA believes that the DEP should consider an alternate approach to adding such a large number of streams to the "trout waters" list at one time. It is undeniable that adding over 300 streams at one time is an unwieldy process that has the potential to deny each stream the close scrutiny and examination that it deserves. IOGA is concerned that if a stream is erroneously included on the "trout waters" list based upon insufficient data, it will be very difficult to correct the mistake at a later date. By taking into consideration fewer streams at one time, the DEP will be able to better justify its decision on whether to add or remove a stream from the list and avoid errors. IOGA suggests a phased approach, which would add streams at reasonable pace. By doing so it would allow the DEP and DNR the opportunity to correct deficiencies in the underlying data that have been addressed by commenters in the Tier 2.5 Antidegradation Implementation rule-making process. IOGA also believes that holding hearings on the proposed additions of streams in the counties where these streams are located is essential to allowing full public participation in this process.

RESPONSE B. The DEP disagrees with the comment that an alternate approach should be used in adding trout waters to the B2 list. The addition of streams to the B2 list is based on the stream's meeting the definition of "trout waters" in 47CSR2. The data supporting the determination that a stream meets this definition has been reviewed by the DNR and the DEP. Both agencies contend that the streams listed as "trout waters" are capable of sustaining a year-round population of trout as defined in the proposed rule. To employ an alternate approach would cause the delayed inclusion and protection of these streams. The list of trout waters in Appendix A of 47CSR2 has not been updated for over 20 years and is greatly underrepresentative of the number of actual trout streams in West Virginia. The DNR has been doing stream surveys and evaluating trout streams during this 20-year period. The triennial review process outlined in the federal Clean Water Act was established to ensure that such review of available data and updating of the rule occurs. Also, the DEP is in fact taking the position that many more streams (than ones listed in the current rule) are trout waters, and it is better from a public policy standpoint to have an accurate listing in the rule for all to see. The suggestion that there are "deficiencies in the underlying data that have been addressed by commenters in the Tier 2.5 Antidegradation Implementation" is misleading and has been addressed in the response to comments for that rule. The process for inclusion in the Tier 2.5 list is different than the process for the "trout waters" list. The DEP believes the public participation it has conducted has been more than adequate to solicit input on this important issue. See Response to Comments XXV. I.

COMMENT C. Listing a stream is not necessary to protect the "trout waters" use.

The DEP has stated that it is not necessary that a stream be listed in Appendix A in order to receive the protections afforded by the rule for trout waters. IOGA concurs with this interpretation and urges the agency to defer the addition of any stream to the list at this time. Instead, the DEP should make these determinations on a case-by case basis at a time when some activity relative to the stream is under consideration. This approach would avoid the significant controversies that have accompanied the agency's attempts to list streams on a grand scale.

RESPONSE C. See Response to Comment XI. B above.

XXV. COMMENTER: West Virginia Chamber of Commerce

COMMENT A. *Aluminum Criteria*

The commenter supports the DEP's renewed proposal to finalize the aluminum criteria, and appreciates the DEP's filing of an emergency rule to retain the current interim aluminum criteria until, as proposed in this rule, it is adopted as the permanent criteria. This change is based on EPA's statement that "the criteria are protective of the aquatic life regardless of whether they apply temporarily or permanently."

RESPONSE A. See Response to Comment XI. A above.

Comments B through I below are based on comments submitted last year, dated July 17, 2006, by the Chamber and incorporated by reference in the Chamber's comments dated July 17, 2007.

COMMENT B. *Addition of 335 streams to Appendix A*

Appendix A of the proposed 47 CSR 2 contains the list of known "trout waters" within West Virginia. "Trout waters" are defined as "waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round trout populations." A year-round population of trout can be established when there is natural reproduction of trout observed in the stream or when multiple age classes of a trout species are observed in a stream at one time. The DEP's "Briefing Document" states that "natural reproduction is verified when multiple year classes, including young-of-the-year, are collected during population surveys." The data that DEP has offered in support of the inclusion of many streams does not establish that they support year-round populations based on the definition of year-round population.

RESPONSE B. The commenter has not fully represented the definition of a "year-round trout population" in the comment. In addition to the two reasons the commenter identifies, the Briefing Document also states, "In some cases, a stream is considered capable of sustaining a year-round trout population if only one year-class is collected during sampling, prior to that year's scheduled fingerling stocking. A stream may also be considered capable of sustaining a year-round trout population if one year-class is collected during the critical low water, high temperature months of July, August, or September." Based on the complete definition in the Briefing Document, the DNR data shows the presence of trout during the low water, high temperature months of the year. This summer period is considered the high stress period for trout. The water temperature is at its highest and typically the Dissolved Oxygen would be at its lowest, due to the temperature. If trout are surviving during this period of the year it is generally accepted that they will survive year-round.

COMMENT C. *The stream surveys relied upon by DEP do not provide sufficient information to support the inclusion of many streams.*

Both Conley Run(MT-77) and Poplar Creek(KE-76-0) provide a typical example of the type of information included in the stream survey data sheets that DEP is using to justify their addition to the "trout water" list. Conley Run survey was done July 28, 1987 and showed the presence of three brook trout that were seven to nine inches in size. The Poplar Creek survey was done July 24, 1985 and showed the presence of four brook trout. No mention was made in either survey of

natural reproduction or young of-the-year. In the absence of this information, the DEP has no basis for adding these streams to the list according to its own Briefing Document.

RESPONSE C. Based on the response to Comment XV. B above, when the complete definition of "year-round population" is used it is clear that both Conley Run and Poplar Creek show the presence of trout surviving during the critical low water, high temperature months. The DNR surveys clearly support the conclusion that these streams contain a year-round population and the listing of these streams as "trout water" is appropriate. The surveys do not need to show natural reproduction or young of the year to prove survival of a year-round population of trout.

COMMENT D. *In many instances the DNR data were not adequate to characterize the streams as trout waters.*

A question raised by the DEP's reliance on the DNR's stream surveys is whether these surveys accurately reflect either the past or current condition of the stream. This is partly because many streams were not surveyed on a regular basis. Many of the surveys reflect a snapshot in time and a more comprehensive assessment would be more accurate. In fact, the West Virginia stream Classification Form for Poplar Creek notes that the presence of brook trout in the stream was "probably a result of stocking by locals." If these streams are being stocked, it calls into question the DEP's inclusion of a stream on the presence of fingerlings only. This type of information does not justify a conclusion that Poplar Creek, or any other stream, supports a trout population on a year round basis.

RESPONSE D. The DEP disagrees with this comment. Regardless of the party that is stocking the stream, if the trout are surviving year-round as described in Response to Comments XV.B and C, they will survive the remainder of the year. Although some streams have only been surveyed one time, the survey typically characterizes the stream accurately. The stream biologists coordinating a survey, go to great lengths to survey a stream section or sections that are representative of the entire stream length in question. The accuracy of this data to DNR is very important so as not to waste resources managing a stream for a population that is not accurately represented. The survey results are also coupled with the expert opinion of the lead biologist on the survey and his knowledge of the area to make a determination as to whether a stream supports trout reproduction or a year-round population.

COMMENT E. *The "existing use" concept.*

The DEP takes the position that even though a stream does not currently meet the definition of "trout waters," it may still be considered as such if it did at any time on or after November 28, 1975 because of the "existing use" concept. This interpretation is backward. If the DEP cannot first show that the stream meets the "trout water" definition at the current time, it should not look back to information that shows the stream met the definition at some point after 1975.

RESPONSE E. DEP disagrees with the commenter's position. Water quality standards are required to protect existing and designated uses, and "existing uses" are defined as those attained on or after November 28, 1975. It is therefore most appropriate for the DEP and DNR to evaluate the data and documentation against this standard, not only considering whether a stream currently meets the definition of "trout waters," but also whether it has met the definition on or after the date in 1975. Contrary to the commenter's suggestion, the DEP is not using the

principle of "existing use" to obviate the need for adequate documentation. It simply means that any stream not currently meeting the definition but for which documentation shows that the definition was met on or after 1975, must be treated as a "trout water" and included on the list.

COMMENT F. *Additions to "trout water" list based on limited data.*

The DEP's justification of its decision to add streams to the "trout water" list based upon limited data is contrary to DEP's approach in other water quality programs. In particular, the agency's guidance for the antidegradation program requires a minimum of twelve samples be taken over a six month period to establish a baseline water quality and in the TMDL program, the agency suggests that twenty samples is an appropriate data set for saying that a stream is impaired. Just as with these two examples, the DEP should not use anything less than a comprehensive survey of fish species, made at different times of the year and multiple water quality sampling events.

RESPONSE F. The commenter claims the level of data for this determination should be equal to the data necessary for background water quality on permit applications. The DEP disagrees. The additional data necessary to establish background water quality [either TMDL or Anti-deg BWQ] is necessary to calculate specific discharge limits. While data may be sufficient to demonstrate "trout water" status, it may be insufficient to cover all the peak and low flow periods necessary to ensure that effluent discharges do not violate water quality standards.

COMMENT G. *Determining an existing use.*

The DEP is essentially applying a standard that any use, if observed on at least one occasion, means that the use has been actually attained. Neither the State nor the USEPA has attempted to define a standard of proof for establishing when an existing use is actually attained. This could cause confusion and unintended consequences. The EPA has provided recent guidance on ways to improve the effectiveness of doing use attainability analyses (UAAs), stating that UAAs are meant to assess what is attainable, not simply to document the current water quality condition and use (although documenting current conditions is often part of the analysis). The DEP should establish guidelines for determining when an existing use is actually attained and should use both an adequate number of data points and sound methodology in the way that samples are collected. This would remove the subjectivity that seems to pervade existing use determinations reflected in this proposal.

RESPONSE G. The commenter is suggesting that the manner in which DEP assesses this issue will necessarily have ramifications for all other instances when the DEP decides whether an existing use is currently being attained. This is not necessarily true. For the reasons explained elsewhere in this document, there is sound scientific reason that supports the agency's reliance upon what is sometimes only one survey to determine that a particular stream meets the definition of a "trout water." The agency recognizes that depending upon the context, this may not always be appropriate. For example, in determining whether the drinking water supply use currently exists or not, it may not be sufficient to rely upon one private citizen's statement that he or she has on one occasion drunk water out of a stream when hiking along that stream. The point is that it depends upon the particular existing use that is under discussion as to the nature and quantity of data that is needed to support the conclusion that the use is being attained.

The commenter's citation to the recent EPA guidance on UAAs is misplaced. The emphasis in EPA's recent guidance is on designated uses, not existing ones. The subject under discussion in this guidance is how to establish designated uses that are in fact attainable. A designated use may or may not be one that is currently being attained, that is an existing use, so the commenter's reference to this guidance is not particularly helpful.

Again to reiterate, the approach used by the DEP to decide whether a stream meets the definition of "trout water," represents a sound and objective manner of determining this issue.

COMMENT H. *Listing a stream is not necessary to protect the "trout waters" use.*

Adding these 335 streams to the "trout waters" list at one time is unnecessary because "trout waters" can be and are protected through other means. Section 6.3.b states that the list is a representative list, not a comprehensive list and the DEP treats waters meeting the definition as "trout waters" whether on the list or not.

RESPONSE H. See Response to Comments XI. B.

COMMENT I. *DEP should solicit additional input.*

DEP should solicit input from the public in the communities surrounding the streams proposed for inclusion on Appendix A for two reasons. First, there is a paucity of information for many of the streams and second, the listing will have a more direct effect on persons living in the area.

RESPONSE I. The DEP believes the public participation it has conducted has been more than adequate to solicit input on this important issue. Beginning in September of 2005, the agency held informational meetings for the public on the planned triennial review and specifically mentioned that the trout stream list would be updated by using DNR documentation. A 45 day public notice was held in 2006 and the public notice period just completed consisted of a 45-day notice and comment period, longer than the typical 30-day period usually afforded by the DEP.

Additionally, further public comment is not necessary because the issue at hand is quite simple, whether a stream sustains a year-round trout population. This is in contrast to the recent antidegradation issue that consisted of complex deliberations requiring the agency to strike a delicate balance among several factors-- all of great interest to the general public and regulated community. In that case, the legislative rule (60CSR5) specifically required the agency to solicit input at the local level.

COMMENT J. *Listing a stream on the trout list will have significant and lasting impact*

The decision to list a stream on the trout list will have significant and lasting impact. The effect of listing a stream is that more restrictive criteria will apply and any discharges will be severely limited.

RESPONSE J. The DEP disagrees with the commenter that by listing a stream on the trout list, more restrictive criteria will apply. The commenter stated in section D of their comment letter

dated July 17, 2006, and included by reference in this public comment period, that "streams that meet the definition set forth in Sec.2.20 of the rule are trout waters and can and will be protected as such, regardless of whether the stream appears on Appendix A." Based on the commenters statement, listing the stream on Appendix A will have no effect as to the criteria that apply on a qualifying stream. If a stream meets the definition, the criteria for trout apply and the comment that more stringent criteria will apply if listed in Appendix A is incorrect.

COMMENT K. *Expanding the trout list without requisite data*

Expanding the trout list was attempted in 2003 by the Environmental Quality Board (EQB) without supplying any supporting data from the DNR and was unsuccessful. The EQB also refused to delete from its proposed list, streams that the DNR identified as not meeting the definition of trout waters. The DEP has carried forward the EQB's effort to vastly expand the trout water list without sufficient data.

RESPONSE K. The DEP disagrees with the commenter. The DEP obtained large amounts of data from the DNR in the listing process and reviewed each survey supplied. The DEP supplied this data to the public through many FOIA requests and the DEP has proposed the removal of six waters from the proposed list.

COMMENT L. *Streams added on a case-by case basis*

The commenter recommends that if the DEP believes there are additional streams that should be added to the list of trout waters that it be done on a case-by-case basis with sufficient and current evidence to support the addition. Also the commenter believes the DEP should hold public hearings in the locale of the stream being added.

RESPONSE L. See response to Comments XI. B and XXV. l.

COMMENT M. *The commenter states that the current proposal regarding trout waters met with significant objections during the 2006 rulemaking comment period and legislative session, and ultimately was unsuccessful. The commenter believes that the DEP should provide a written statement explaining its basis for adding each stream and address the concerns raised by commenters in regards to the proposed expansion of the list.*

RESPONSE M. The DEP would like to point out that although there were objections to the trout water list expansion in 2006, there was also a tremendous amount of support for the list expansion. During both the 2006 and 2007 public hearings on the WQS rule, there was only one comment against the expansion of the trout list. In reference to providing a written statement explaining the DEP's basis for adding streams to the list and addressing concerns, it has been made clear in the briefing document as well as the response to comments that the reason for adding a stream to the trout list is based on the stream meeting the definition of a "trout water" as outlined in 47CSR2.

COMMENT N. *Cool Water Lakes*

The commenter is concerned that the list of cool water lakes listed in Appendix F of the rule is characterized as a representative list. The commenter believes that this approach is inconsistent with the Nutrient Criteria Committee's (NCC) intent and eliminates the certainty of having a list.

RESPONSE N. The list of "cool water lakes" in Appendix F is currently the most updated representation of the lakes in West Virginia that meet the definition of cool water lakes. Although the DEP does not anticipate this list changing significantly in the future, it is possible there are other lakes meeting the definition, warranting the "representative list" approach used for all the lists in the rule.

COMMENT O. *Proposed terminology of "water" vs. "water body"*

The commenter urges the DEP to review all of the references to "water" to insure that no unintended ambiguity results from the revisions. The commenter suggests that this issue can be resolved by using "a water." In addition the commenter suggests that the DEP should include a definition of "water" in the rule.

RESPONSE O. The DEP agrees that in one case, section 4.1.a, the term "the water" should be replaced with "a water" to make it consistent with the definition of "Existing uses" as defined in section 2.6 of the proposed rule. Adding the definition of "water" to the rule is unnecessary based on the initial paragraph, section §47-2-2. Definitions: "The following definitions in addition to those set forth in W. Va. Code §22-11-3, shall apply to these rules unless otherwise specified herein." The term "water" is clearly defined in W. Va. Code §22-11-3(23) and therefore does not need to be added to the rule.

COMMENT P. *Proposed deletion of "not to exceed" language*

The DEP has proposed deletion of all references to "not to exceed" in Appendix E of the rule. The commenter would like to better understand this proposed change and is concerned whether the implementation will differ from current practices.

RESPONSE P. The DEP explained in the Briefing Document that the term "not to exceed" in Table 1 of Appendix E, is being removed from numerous places where it conflicts with aquatic life footnotes 1 and 2. The phrase "Concentration not to be exceeded unless otherwise noted" is being added to footnotes 3 and 4 to assure that the intent of the human health criteria is not changed. This change will in no way cause the implementation practices to differ.

XXVI. COMMENTER: WEST VIRGINIA MANUFACTURERS ASSOCIATION (WVMA)

COMMENT A. *Definition of " cool water lakes".*

We applaud the members of the Nutrient Criteria Committee that reached consensus on proposed nutrient criteria for lakes. However, we would urge the DEP to clarify which of the two sets of nutrient criteria found in §8.3.b apply to state lakes. The rule should specify that the criteria apply in the hyperlimnion, and compliance samples should be taken in the non-flowing

lacustrine zone of the lake. These were the conditions and locations on which the nutrient criteria were predicated, and they should be acknowledged in the rule.

RESPONSE A. The DEP acknowledges the members of the Nutrient Criteria Committee for reaching a consensus. The cool water lake criteria apply to the lakes listed in Appendix F, which are the lakes currently being managed by DNR as cool water fisheries. Warm water criteria applies to all other lakes in the state with a residence time greater than 14 days. The proposed language in the rule is based on the consensus statement published by the members of the Nutrient Criteria Committee. Although this language did not address the details referenced in the comment, the DEP will address these points in future guidance.

COMMENTS B. *The WVMA is unaware of any technical demonstrations supporting the assertion that the water quality of each stream can sustain a "year-round trout population."*

RESPONSE B. While the agency could consider the water quality of a stream as one determinant of whether a stream can sustain trout year-round, the DNR's method is actually more conservative, relying primarily upon a stream survey that consists of counting the fish species that are present in the stream. The DEP may decide at some point in the future to consider water quality along with other factors, and whether these should be used to designate trout waters for *future use protection*. However, as far as existing use, the DEP must protect streams that, on or after 1975, sustain a year-round trout population, regardless of water quality.

COMMENT C. *The DEP was given the trout waters list by the DNR without any independent analysis.*

RESPONSE C. The DEP looked to the DNR for assistance as the State agency with recognized expertise in this area. However, before asking the DNR to examine the factual issues, the DEP worked very carefully with that agency to ensure it understood the exact definition of "trout waters" from the current legislative rule. (The DEP had first decided to continue using the same definition of trout waters that has existed in State law since 1980. The DNR was not unfamiliar with the definition.) DEP is confident that in working with DNR, the most accurate assessment of this issue will be made.

COMMENT D. *Insufficient data to list a stream as a "trout water."*

The DNR's survey sheets, apparently were not relied upon by the DEP in evaluating the DNR's list. These surveys provide limited data that should not serve as the basis for making such an important decision as a use determination. Some of the streams are listed as trout waters based on observations of trout in a stream (sometimes 20 to 30 years ago), often on just a single occasion. Some surveys do not report young-of-the-year, or any other basis for considering the stream a "trout water". Such data cannot support a finding that trout were present then, or are present now, on a year-round basis. There is a serious disconnect between DNR's listing approach and the definitions specified in the standards.

RESPONSE D. The DEP disagrees with this statement by the commenter. See Response to Comments XXV. B, C and D.

COMMENT E. *A systematic evaluation of stream reclassification is needed.*

A systematic evaluation of stream reclassification is needed to determine whether a water body is a legitimate trout stream. We recommend that, prior to listing a water in Appendix A, the DEP require a demonstration that the water will "sustain year-round trout populations" in accordance with the §2.19 definition of trout waters. Such a showing should include, at a minimum, multiple reports of seasonal water quantity and quality, as well as biological data that demonstrate that the instream water quality can sustain a "year-round trout population". This approach is consistent with the antidegradation implementation procedures, 60 C.S.R. 5, for nominating and designating Waters of Special Concern and Outstanding National Resource Waters, which require objective classifications based on sound science.

RESPONSE E. The DEP disagrees with this comment and believes the stream surveys demonstrate that the waters listed meet the definition of "trout waters". In reference to Tier 2.5 listing requirements, listing streams for Tier 2.5 protections and designating streams as Category B2 "Trout Waters" are different processes with different requirements and are covered in separate rules. The "Trout Water" designation in the Water Quality Standards (WQS) rule is based on whether the water meets the definition of a "trout water" in section 2.19 of the proposed rule. "Trout waters are waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout but which do not support year-round trout populations." While many streams appear on both lists, the Tier 2.5 "presumptive" list is currently undergoing a separate public process which includes requirements not applicable to this process.

COMMENT F. *The DEP should develop alternative trout water classifications.*

We urge DEP to recognize that not all trout waters are of the same quality, and some may not deserve the same level of protection as others. In order to reflect this reality the DEP should change the definition of 'trout waters and/or develop appropriate scientifically-based implementation procedures to recognize the following three trout water classifications: (1) waters that sustain stocked trout for a portion of the year, (2) waters that sustain stocked trout year-round and (3) the more ecologically and socially important "native" or "naturally reproducing" trout waters. The three classification should be given different criteria sufficient to protected the use. Both Pennsylvania and Virginia differentiate seasonally stocked trout waters from the higher classifications of Cold Water Fishes (Pennsylvania) and Wild Natural Trout Streams (Virginia) and apply the appropriate numeric criteria specific to protecting that use. For example, Pennsylvania has a use designation, TSF, which is specific to waters suitable for maintenance of stocked trout for the period from February 15 to July 31. Water quality criteria protective for the TSF use, in the case of temperature, are clearly different from criteria for the protection of year-round trout fisheries under the Cold Water Fishes (CWF) designated use. Virginia's classification system differentiates between waters suitable for maintenance of wild trout populations (Wild Natural Trout Water) and for the year-round hold-over of stocked trout (Stockable Trout Waters). The Virginia and Pennsylvania approaches enjoy large scale support.
We believe that adopting the DEP's proposed list of trout waters will result in the incorrect designation of many streams, which could yield serious socioeconomic impacts. In light of the above, we recommend that the DEP withdraw its current proposal to modify the Appendix A list. We also recommend that West Virginia develop a more comprehensive process for

determining whether the characteristics of water are adequate to support the B-2 trout waters use and that this process be used in developing subsequent listing proposals.

RESPONSE F. The DEP recognizes that States have some flexibility in the manner in which they protect their existing and designated uses, including various kinds of trout waters. In this State, 47CSR2 has included a "trout water" use category with several more stringent criteria since 1970. The particular definition of "trout waters" has remained the same since 1980, essentially including waters that sustain a year-round population of trout. The Environmental Quality Board, and now the DEP, consider the definition to include both naturally reproducing and trout having the ability to "carry over" from year-to-year. The standards in 47CSR2 provide the same degree of protection to all trout that fall within this definition. This means that in West Virginia, there are essentially two levels of protection for trout waters, the criteria that apply to Category B2, naturally reproducing and carry-over trout, and the criteria that apply to "put and take" trout streams, which are the same as the criteria for Category B1 warmwater streams.

The commenter mentions both Pennsylvania's and Virginia's methods of delineating trout waters as being well-supported. Pennsylvania offers the same level of protection for both "maintenance or propagation, or both, of fish species including the family Salmonidae." In this definition, year-round populations are protected with the same level of protection as natural reproduction, just as in West Virginia. Pennsylvania additionally offers seasonal protection for streams that are stocked in the cool weather months as "put and take" fisheries. Currently West Virginia does not offer "put and take" fisheries seasonal protection. Virginia affords "stockable trout waters" (meaning year-round or carry over) and "natural trout waters"(naturally reproducing) separate levels of protection. The dissolved oxygen (DO) and temperature limits for the stockable trout waters are a daily average of 6.0 mg/l DO and a temperature limit of 69.8 °F. West Virginia's limits are in no case less than 6.0mg/l DO and a summer temperature limit of 70 °F—similar to Virginia. The limits Virginia provides natural trout streams are even more stringent and afford more protection. Based on this review of Pennsylvania and Virginia's rules, it appears West Virginia's protection may not be as high for naturally reproducing trout streams or "put and take" trout streams.

In conclusion, Pennsylvania's and Virginia's approaches are generally more stringent than West Virginia's. However, the DEP believes it is striking an appropriate balance in protecting its trout waters, and until it finds compelling scientific reasons to change its approach, the DEP believes the current definition and criteria should remain as is. The DEP also points out that several other commenters supported the State retaining its current approach to "trout waters." Also see response to Comments XI. C. through I.

COMMENT G. *Aluminum Criterion*

We support the DEP's proposed modification of the chronic criterion for aluminum from 87 ug/l to 750 ug/l for all waters except trout waters. As the EPA has acknowledged, this change is consistent with the Clean Water Act and water quality standards program requirements in 40 C.F.R. Part 131. The DEP's action in adopting the EPA's conclusions and proposing to make the criterion change permanent is scientifically supportable and reasonable.

RESPONSE G. See Response to Comment XI. A.

COMMENT H. *Use Classifications*

The WVMA believes the DEP should use this triennial review of standards to clarify its policy for determining which water uses apply in State waters.

RESPONSE H. The DEP is well aware of the issue raised by the commenter in this regard. When the agency first assumed responsibility of the water quality standards effective July 1, 2005, it looked at the existing rule and began identifying areas that might need revision or fine-tuning. In the fall of 2005 the DEP solicited input on what issues were important to the public. The refinement of water uses, in particular the Category A drinking water supply use, was important to several entities. However, there were other issues that were more pressing for rule revision in the 2007 rulemaking cycle, and the agency informed the public in the spring of 2006 that it would not be able to consider changes to the Category A use at that time. The proposed rule that was filed for public comment on June 2, 2006, was not acted upon during the 2007 legislative session and has been resubmitted for the 2008 session. The proposed rule filed for public comment on June 1, 2007 did not contain any proposed revisions affecting the Category A issue. It would be inappropriate for the agency to make any changes to the rule related to this issue at this point in time. As the agency has informed the general public, the DEP intends to thoroughly study this issue and if appropriate, will then propose any corresponding revisions to the rule for consideration by the Legislature in upcoming sessions.

COMMENT I. *Elimination of Appendix D.*

Because the DEP considers Category C "Water Contact Recreation" as the default use that applies in all waters the commenter believes that Appendix D should be eliminated.

RESPONSE I. The DEP acknowledges the comment. However, this subject is not under consideration for change at this time. In light of the commenter's interest, it may be at some point in the future.

COMMENT J. *Overlap of mixing zones*

The commenter feels the prohibition on the overlap of mixing zones is not necessary to protect designated human health or aquatic life uses of water bodies and has the effect of truncating mixing zones based solely on the location of an upstream or downstream discharge point.

RESPONSE J. See response to Comment XVII. A.

COMMENT K. *Mixing zones granted for outlets in close proximity on a case-by-case basis*

The commenter believes a blanket prohibition on the overlap of mixing zones in which the same pollutant is not being discharged, is unnecessary to protect designated human health or aquatic life uses of water and should be granted on a case-by-case basis.

RESPONSE K. See response to Comment XVII. A.

COMMENT L. *Water Quality Design Flow*

The water quality standards regulation should be amended to require that WVDEP use the "harmonic mean flow" as the water quality design flow for those substances (pollutants) where the pollutant-specific EPA water quality guidance cites the "harmonic mean flow" as the appropriate water quality design flow to use.

RESPONSE L. See response to Comment XVII.B.

COMMENT M. *Polynuclear aromatics hydrocarbons (PAH's) should be permitted using HMF*

The commenter recommends establishing a group of seven B2 PAHs that have been identified by US EPA as probable human carcinogens, with a criterion of 26.6 ng/L. The commenter feels this is necessary due to the difficulty in analyzing to the level of 3.8 ng/L, for each individual PAH. This approach makes sense from an environmental standpoint because if the B2 PAH compounds would be controlled collectively to meet a WQBEL based on a concentration of 26.6 ng/L, the other PAH compounds would be controlled to similar levels which are well below the respective human health criteria for those compounds. The commenter also states that they should be permitted based on harmonic mean flow.

RESPONSE M. See response to Comments XVII B and C.

COMMENT N. *The DEP did not adequately consider economic impacts.*

RESPONSE N. The commenter has cited two particular statutory provisions that it believes require the DEP to consider the economic impact of the proposed revisions to the rule. The first is the requirement that all rules include a fiscal note "and a statement of the economic impact of the rule on the state *or* its residents." (Emphasis added). Notwithstanding whatever interpretation is given the cited language, the DEP does not have the ultimate authority to decide what information must be included in a fiscal note for rules. Rather, the Secretary of State's office and the Legislative Rulemaking Review Committee are responsible for designing the fiscal note form and specifying its contents. The Secretary of State and the legislative committee are using the same form as is used by the Legislature for the passage of legislation. The DEP has used the appropriate form and it does not include any requirement for assessing economic impact upon the regulated public or citizens of the State. It only requires the agency to provide an assessment of potential impacts upon State government.

With regard to the other statutory citation, W.Va. Code §22-11-2, the commenter has provided only a portion of the statutory language. The first paragraph of section 2 states: ". . .{T}he DEP is 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."

This "Statement of Policy" applies to the entire Water Pollution Control Act and requires the agency to generally consider all of the cited factors. To argue, however, that every particular water program must entail an economic impact analysis would not be sound. A comprehensive review of the water quality program shows that in certain rules and programs, economic issues are more important than in other programs and rules. For example, the antidegradation

implementation rule, 60CSR5, contains several specific references to economic impacts and requires the agency to consider these impacts when deciding which streams to include on the Tier 2.5 or Tier 3 lists. The water quality standards rule, however, does not address economic issues except when a discharger seeks a redesignation of a use or a variance to the applicable standard. The standard-setting process itself is a straightforward determination of the designated and existing uses of a stream and the water quality criteria necessary to protect those uses. Economics is not a direct consideration.

Although not required to consider such impacts, the agency does not anticipate the proposed trout water changes to have a significant impact upon the regulated public. Although it is adding 335 streams to the trout water list in Appendix A, the agency has in fact been treating these same streams (and others) as trout waters for many years, based upon consultation with DNR.

XXVII. COMMENTER: Janet Gagnon

COMMENT A. *West Virginians, represented by their government, rightly own the rivers and streams, and hold them in trust for themselves and the rest of the country (including tourists).*

RESPONSE A. The DEP acknowledges the comment and by using scientifically defensible criteria as well as criteria recommended by the EPA, the agency believes that the waters of the state are being protected for the public.

XXVIII. COMMENTER: Paula Finck

COMMENT A. *Keep our streams pristine*

The commenter asks that the DEP do all it can to keep out streams and fishing waters in pristine condition and not let them become polluted.

RESPONSE A. The DEP acknowledges the comment and agrees that the waters of West Virginia need to be protected.

XXIX. COMMENTER: Robert A. Mertz

COMMENT A. *The commenter states that water quality standards decisions should be based on science not economics.*

RESPONSE A. The DEP acknowledges the comment and agrees that the water quality standard outlined in 47CSR2 must be based on sound scientific rationale. The revisions which are being proposed by the DEP have a sound scientific basis.

XXX. COMMENTER: Donald C. Gasper

COMMENT A. *"Existing use" maintenance should not allow you to reduce standards*

The commenter states the existing use clause in the water quality standards should not allow for a reduction in standards for coal or other development, and that water is not owned by the

landowner, but by the public. He asks if landowners have the right to pollute, and inquires as to what the Clean Water Act says about the matter.

RESPONSE A. The State water quality standards (47CSR2) require that existing uses be protected. Any permits or BMPs required by the DEP must be designed so that existing uses are maintained and protected. The DEP is very careful in its permitting process to assure the protection of existing uses.

It is true that the waters of the state are public property and that no landowner has a right to pollute. However, landowners can develop their land as long as the proper permits are obtained and the proper BMP's are implemented. The permit process for point sources and the BMP process for non-point sources are designed to allow for economic development without jeopardizing stream uses.

COMMENT B. *Pollution is viewed as an unlawful taking of our common natural resource of clean water.*

The commenter states that pollution constitutes an unlawful taking of the public's resource of clean water, and feels that there is no taking of landowner rights by environmental regulation.

RESPONSE B. The DEP acknowledges the comment. One important concept to understand is that development by a landowner does not necessarily mean a stream is going to be polluted. Discharges and/or runoff into a stream is not considered pollution unless the water quality is degraded to the point where the stream's designated uses, and the criteria established to protect those uses, are compromised. It is definitely unlawful to "pollute" a stream in the above context. However, it is not unlawful to develop land or discharge wastewater that is properly treated.

COMMENT C. *It is suggested that reaches with only trout potential (not yet limed, etc.) are not protected.*

The commenter infers that stream reaches that have the potential to support trout but are otherwise polluted (e.g., acid streams) are not protected.

RESPONSE C. The DEP's current approach to including streams on the "trout water" list is to include those streams that now or since November 28, 1975 have sustained trout year-round. In order to protect streams that have the potential to sustain trout year-round in the future but have not sustained trout since November 28, 1975, the State would need to broaden its current approach to listing streams.

COMMENT D. *The definition of "trout water" remain unchanged.*

The commenter states that the current definition of trout waters should be maintained in the State water quality standards to protect both reproducing and non-reproducing populations of trout.

RESPONSE D. See response to Comment XVI. A.

COMMENT E. *The date Nov. 28, 1975 has nothing to do with the professional judgment whether trout are present year-round in a reach or not, or the potential of that reach. Much fishery data prior to 1975 is valid and useful in expert evaluations.*

The commenter states that the date Nov. 28, 1975 (which is part of the "existing use" definition in 47CSR2), has nothing to do with the determination whether trout are present year round in a reach, or the potential of that reach. The commenter also feels that fishery data collected prior to 1975 is valid and useful in expert evaluations.

RESPONSE E. The November 28, 1975 date mentioned in the "existing use" definition in 47CSR2 is the date that federal regulations were first promulgated in 40 CFR Part 130, specifically 130.17, to address water quality standards as required under section 303 of the federal Clean Water Act. Section 130.17 (c) stated "(3) At a minimum, the State shall maintain those water uses which are currently designated in water quality standards, *effective as of the date of these regulations. . .*"

In 1983, the next time the federal regulations were amended, section 130.17 was replaced by 40 CFR 131.3 and 131.12. The definition of "existing uses" was included in 131.3 (e). It is exactly like the definition the DEP currently uses in 47CSR2, except that "water body" was changed to "water". To sum it up, the State is bound by federal law to include the November 28, 1975 date in its definition of "existing uses".

While the DEP agrees with the commenter that pre-1975 data is useful in evaluating a stream's historical potential, such data cannot be used by its self to determine a stream's existing uses.

COMMENT F. *Potential trout streams should be added to the protective list*

The commenter states that limestone sand can neutralize and restore acid trout streams and that such potential streams should be added to the protective list. In addition, the commenter feels that trout streams restored through other means of water quality improvement should result in adding those streams to the protective list.

RESPONSE F. See response to Comment XXX. C.

COMMENT G. *Sections 4.1a and 6.16 of 47CSR2 require that existing uses be protected. Where did the idea that degradation could occur come from? Compromises have already been made. Are they legal?*

The commenter implies that 47CSR2 allows degradation of stream water quality. In addition, the commenter states that compromises have already been made, and questions whether or not they are legal.

RESPONSE G. The DEP agrees that it is a fact that existing uses must always be protected. However, this does not preclude economic development in a watershed or discharges into streams. Of course such development and/or discharges must comply with applicable BMPs and permit limitations. The BMPs and permit limitations are designed to protect both designated and existing uses. The use of a small amount of a stream's assimilative capacity may be permitted as long as the Water Quality Standards are met.

XXXI. COMMENTER: Brooks Run Mining Company

COMMENT A. *Jacobs Fork Data is over 20 years old. In addition, the data are incomplete and the quality of the data does not meet today's standards.*

The commenter states that in addition to the survey data for Jacobs Fork being over 20 years old, it is incomplete and does not meet today's standards. BRMC requests that the Agency provide some quality assurance standards in the data, which will be used for development of the trout stream list.

RESPONSE A. In determining whether a stream meets the definition of trout waters as outlined in 47CSR2, it must have been demonstrated that the stream was capable of supporting trout year-round since November 28, 1975. Surveys conducted by professional fisheries biologists for the DNR from 1983–1985 revealed the presence of a naturally reproducing population of rainbow trout, as well as a healthy population of brown trout, 38 trout were found in total. Thus, these surveys reveal that Jacobs Fork meets the definition of trout waters in 47CSR2. The fact that the data is 20 years old does not affect this determination.

The commenter indicates that the data is incomplete and does not meet today's standards. Although this may be the opinion of the commenter, the DNR has been conducting fish surveys since the early 1960's, and these surveys have been conducted by professional biologists using established protocols. While it is likely that protocols have changed over the years, the surveys conducted in the 1980's followed established quality assurance procedures acceptable to the DNR at that time. We disagree with the commenter that the data is incomplete and does not meet today's standards.

COMMENT B. *WV DNR Jacobs Fork data from 1983-1985 indicates a warm-water fishery. FOIA surveys and field notes indicate no reproducing or breeding population.*

The commenter states that survey data it obtained in a FOIA request indicated a warmwater fish community, that no brook trout were found, and the rainbow trout were stocked fish because of their large size.

RESPONSE B. The DEP disagrees that the stream is merely a warmwater fishery. It also disagrees that a reproducing population of trout is needed to be listed as a trout water. The fact that brook trout were not found is irrelevant to this issue. As stated in the briefing document "a stream may also be considered capable of sustaining a year-round trout population if one year-class is collected during the critical low water, high temperature months of July, August, or September." In the four stream surveys for Jacobs Fork done between 7/26/83 and 08/13/85, rainbow trout between 5 and 15 inches were noted and brown trout between 8 and 12 inches were noted. All surveys were done during the critical low water, high temperature months of July, August, or September, which indicates that the stream clearly supports year-round trout. During a survey conducted in August of 1985, the DNR noted that the stream contained a naturally reproducing population of rainbow trout. However, even given this fact, it is important to again note that reproduction is not necessary for a stream to meet the definition of trout waters. The survey information described above clearly establishes the fact a trout population was present at the time of the surveys.

COMMENT C. *Poor water quality and habitat.*

The commenter states that the WVSCI score for Jacobs Fork indicates that the water quality is poor which makes it inappropriate to protect as a "trout water". The commenter also states that Potesta and Associates, whom it hired to perform a water quality study, found that habitat and stream conditions did not indicate suitable habitat for a trout population.

RESPONSE C. The DEP disagrees with this comment and believes that because Jacobs Fork meets the definition of a year-round trout population, it should be afforded the same protection as any trout water regardless of the level of pollution. As stated in the Briefing Document "The list therefore includes waters where sustained year-round trout populations, or trout reproduction, has been documented since November 28, 1975, regardless of their current condition." Because a stream has been polluted at some point in time is not a valid reason not to protect the water. In fact, the water quality standards require the protection of existing and designated uses, as stated above, "regardless of their current condition." Since the commenter did not provide any information regarding the WVSCI score in the comments or the attachments, we are not certain of the documentation behind the claim. However, even if the WVSCI score did indicate poor water quality, it does not factor into the determination as to whether a stream can support trout year round.

COMMENT D. *Potesta trout surveys indicate the presence of no trout the entire length of Jacobs Fork.*

The commenter states that Potesta and Associates found no trout in a November 2005 survey of Jacobs Fork, when evidence of spawning activity should have been apparent.

RESPONSE D. The DEP wishes to point out as mentioned above, evidence of spawning activity is not required when making a determination whether a stream can support trout year round. Many trout streams in West Virginia are maintained or supplemented by fingerling stockings. If trout were not found in the stream in 2005, it could very well mean that the habitat has been degraded to the point that the trout populations have been adversely affected. However, just because habitat and/or water quality may have been degraded in more recent years, that is not justification to downgrade the stream to warmwater. See response to Comment XXXI. C.

COMMENT E. *Potesta temperature studies of Jacobs Fork indicate average summer peak temperatures in excess of trout survival threshold, thereby eliminating the possibility of sustained or reproducing trout population.*

The commenter states that temperature studies conducted by Potesta and Associates from July 18 to October 31, 2006 revealed that the daily mean and hourly maximum temperatures established in 47CSR2 for trout streams was exceeded a large percentage of the time.

RESPONSE E. The surveys conducted by the DNR from 1983-1985 revealed daily summer temperatures in the low to mid 60's Fahrenheit. The fact that temperatures collected by Potesta and Associates in 2005 were significantly higher than the temperatures from the 1980's is indicative of anthropogenic disturbance. Many factors can contribute to stream temperature impairment, including elimination of canopy, sedimentation, warmwater discharges, and increased runoff from disturbed land. Stream water quality criteria, including temperature, are in

place to protect the designated uses. The fact that some of these criteria are being violated indicates that the water quality is being degraded by any of a number of unknown factors. Rather than downgrade these impaired streams, the DEP, through its TMDL Program, is mandated to restore the water quality to a level that will support its designated uses. For Jacobs Fork, that would mean restoring the stream so that it can support a cold water fishery.

COMMENT F. *Brooks Run Mining Company investments and future development of over $50 million in McDowell County is in jeopardy.*

The commenter states that the Brooks Run Mining Company investments and future development of over $50 million in McDowell County is in jeopardy.

RESPONSE F. The DEP understands the importance of economic development to the local economy. However, the DEP also has a mandate to implement the state's water quality criteria and protect designated uses. The DEP acknowledges the concern of the commenter in reference to Water Quality Standards and wishes to point out that economic impact is not a valid reason for not listing a stream if it is determined that the stream meets the definition of the use category. If the planned development occurs, of the approximately 80 individual water quality standards in Appendix E, only ten of them have different criteria for "trout waters" vs. "warm water": dissolved aluminum, ammonia, dissolved hexavalent chromium, dissolved oxygen, iron, nitrite, silver, temperature, total residual chlorine and turbidity.

COMMENT G. *Anticipated loss of over 300 direct mining related jobs and an additional 1200 employment opportunities in support services. (4:1 ratio of direct to indirect employment statistics).*

The commenter states that the Brooks Run Mining Company anticipates loss of over 300 mining related jobs and an additional 1200 employment opportunities in support service.

RESPONSE G. See response XXXI.F.

COMMENT H. *The commenter, in a second submittal letter addressed to Lisa McClung and dated July 17, 2007, addressed all the issues that were brought up by the West Virginia Coal Association (WVCA) in their submittal.*

RESPONSE H. See Comments and Responses to the WVCA submittal, commenter XI. A-I.

XXXII. COMMENTER: James Boswell (Peabody Energy)

COMMENT A. *The proposed expansion of the trout stream list*

The commenter states that the proposed expansion of the trout stream list was done without consideration of the existing water quality of the proposed streams. The commenter further states that by using data that is old and incomplete, the agency has failed to consider whether streams are currently supporting trout at all or if the streams have stocked or naturally reproducing trout populations.

RESPONSE A. See response to Comments XXV. F, and XXXI. C.

COMMENT B. *The permitting ramifications of classifying a water segment as a trout stream are significant, with different water quality standards (uniformly more stringent) applying to trout streams. The commenter states that incorrectly classifying a water segment as a trout stream will have serious economic and environmental ramifications for landowners, mining operations and mineral reserve holders situated in proximity to such streams.*

RESPONSE B. See response to Comment XXV. J.

COMMENT C. *The commenter is concerned about the proposed classification of Hopkins Fork and Marsh fork as "trout streams" within the codified water quality standards rule. The commenter states that it believes the proposed listing of Hopkins Fork and Marsh Fork is incorrect, and that the ambient water quality in these streams and their tributaries shows exceedances of the water quality standards required for successful trout reproduction.*

RESPONSE C. The DNR data supplied in support of Hopkins Fork show both rainbow trout and brown trout were found during the survey done July 25, 1995. The presence of trout in the stream during the critical low water, high temperature months of July, August, or September indicates that Hopkins Fork is not only capable of sustaining a year-round trout population but in fact does. For this reason Hopkins Fork meets the definition of a trout stream and should remain on the Appendix A trout waters list. The DNR data supplied in support of Marsh fork show rainbow trout being collected on October 9th in both 1984 and 2001. The presence of trout in the stream at that time indicates that the trout were able to survive the low water, high temperature months of July, August, and September, and thus are capable of surviving in the stream year round. Exceedances of water quality standards have no bearing as to whether or not a stream may be classified as trout waters. In addition, natural reproduction is not necessary for classification as trout waters.

COMMENT D. *Listing a stream is not necessary to protect the "trout waters" use.*

The DEP has proposed to massively expand the list of streams codified within the water quality standards rule. Incorrectly classifying a stream as a trout water will have serious environmental and economic ramifications on mining operations and mineral reserve holders in close proximity to such streams. WVCA believes the agency already has the adequate tools needed to protect trout streams without codifying the list. During the NPDES permitting process the DEP will apply appropriate trout stream limits if it believes a stream is a trout water, regardless of whether it is listed in Appendix A. The difference is the permit applicant has the opportunity to dispute the trout stream designation if they believe it to be unfounded.

RESPONSE D. See response to Comments XI. B.

XXXIII. COMMENTER: Don Garvin (Legislative Coordinator for the West Virginia Environmental Council)

COMMENT A. *Proposed B2 Trout List*

The commenter agrees with the proposed B2 trout list and the definition of trout waters and is glad to see the DEP support the rule in the Legislature.

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

COMMENT B. *Changes to the Blackwater River*

The commenter feels the full length of the Blackwater River has not been retained as a trout water based on the changes made to the rule..

RESPONSE B. See response to Comment XIII. F.

COMMENT C. *Removal of Category A and D1 designations on Pats Branch*

The commenter questions whether DEP used the correct use attainability analysis procedure as required by the Clean Water Act.

RESPONSE C. See response to Comment XIII. H.

XXXIV. COMMENTER: Julian Martin (West Virginia Highlands Conservancy)

COMMENT A. *Water Quality Comments*

The commenter feels the state of WV should not place their environmental regulations below the worst regulations found in any state for the potential of economic gain.

RESPONSE A. The DEP acknowledges the comment and appreciates the support of the commenter.

XXXV. COMMENTER: Shawn Fetter.

COMMENT A. *Water Quality Comments*

The commenter feels that water quality has got to be important in this state and protecting trout streams is the right thing to do for water quality. The commenter also feels having clean streams is what is needed to attract tourism which is the industry WV should be trying to grow.

RESPONSE A. The DEP acknowledges the comment and agrees that water quality needs to be maintained for the health of all business.