



# 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 “6” is being removed and the dissolved aluminum for warmwater chronic criterion of 87xCF<sup>5</sup> is being replaced with 750xCF<sup>5</sup> 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, 2008 to allow Weirton Steel Corporation (now Mittal Corporation) to complete the requested biological assessment of the stream as well as submit additional information. Additional information has been requested in reference to updated socio-economic information and a biological assessment of the aquatic life, particularly the fish population, to assure the temperature variance will not impair an existing use. For this study to be valid it should be conducted during a period of stress, which for temperature would occur during the summer months (July or August). Extending the date to 2008 would allow this information to be gathered and keep the current limits in place until such a time that this data is available.

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.

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 meeting on May 31, 2006, the Environmental Protection Advisory Council discussed this rule. (See attached minutes for Council's discussion.)

APPENDIX B

**FISCAL NOTE FOR PROPOSED RULES**

Rule Title: Requirements Govering Water Quality Standards

Type of Rule:  Legislative  Interpretive  Procedural

Agency: West Virginia Department of Environmental Protection

Address: 601 57th Street, SE  
Charleston, WV 25304

Phone Number: (304) 926-0495 Email: lmclung@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 Governing Water Quality Standards

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. Costs of implementing the changes will be absorbed in the agency's current budget.

Date: May 18, 2006

Signature of Agency Head or Authorized Representative

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TITLE 47  
LEGISLATIVE RULES  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FILED

SERIES 2  
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

2006 MAY 31 P 2:03

OFFICE WEST VIRGINIA  
SECRETARY OF STATE

**§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, 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 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 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 of 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-~~  
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/l;  
and iron not to exceed 3.5 mg/l as a monthly  
average and 7 mg/l 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 2008, 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, 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/l and  
copper not to exceed 105 ug/l as a daily  
maximum nor 49 ug/l 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.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. (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.

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

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

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

<u>River Basin</u>	<u>County</u>	<u>Stream</u>
<u>Monongahela River</u>		
<u>MC-60-T-11</u>	<u>Randolph</u>	<u>Warner Run</u>
<u>MC-60-K-16</u>	<u>Randolph</u>	<u>West Fork of Glady - exclude lower 2 miles</u>
<u>MC-60-K-5</u>	<u>Randolph</u>	<u>Woodford Run</u>
<u>MCS</u>	<u>Randolph-Pocahontas</u>	<u>Shavers Fork (Above Little Black Fork)</u>
<u>MC-60-K-17-0.5A</u>	<u>Randolph</u>	<u>White Run of East Fork of Glady</u>
<u>MC-33-A-1-A</u>	<u>Tucker</u>	<u>Aarons Run of Pheasant Run</u>
<u>MC-60-L</u>	<u>Tucker</u>	<u>Big Run of Dry Fork</u>
<u>MC</u>	<u>"</u>	<u>Blackwater River (Above Davis)</u>
<u>MC-60-D</u>	<u>"Tucker</u>	<u>Blackwater River (Below Davis mouth of North Fork upstream)</u>
<u>MCS-7.5</u>	<u>Tucker</u>	<u>Canoe Run</u>
<u>MC-51</u>	<u>Tucker</u>	<u>Clover Run</u>
<u>MC-55</u>	<u>Tucker</u>	<u>Dry Run</u>
<u>MC-60-C</u>	<u>"Tucker</u>	<u>Elklick Run of Black Fork</u>
<u>MC-60-J</u>	<u>Tucker</u>	<u>Elklick Run of Dry Fork</u>
<u>MC-60-O-3</u>	<u>Tucker</u>	<u>Gandy Run of Red Creek</u>
<u>MC-54-D</u>	<u>Tucker</u>	<u>Hyle Run of Horseshoe Run</u>
<u>MC-51-B-5</u>	<u>Tucker</u>	<u>Indian Run</u>
<u>MC-54-I</u>	<u>Tucker</u>	<u>Leadmine Run of Horseshoe Run</u>
<u>MC-51-B</u>	<u>Tucker</u>	<u>Left Fork of Clover Run</u>
<u>MC-54-E</u>	<u>Tucker</u>	<u>Lick Drain</u>
<u>MC-54-G</u>	<u>Tucker</u>	<u>Lynn Run</u>
<u>MC-54-C</u>	<u>"Tucker</u>	<u>Maxwell Run of Horseshoe</u>
<u>MC-54-A</u>	<u>Tucker</u>	<u>Mike Run of Horseshoe</u>
<u>MC-56</u>	<u>Tucker</u>	<u>Mill Run of Cheat River</u>
<u>MC-60-I</u>	<u>Tucker</u>	<u>Mill Run of Dry Fork</u>
<u>MC-51-B-2</u>	<u>Tucker</u>	<u>Mill Run of Left Fork of Clover</u>
<u>MC-52</u>	<u>Tucker</u>	<u>Miner Run of Cheat</u>
<u>MC-60-O</u>	<u>"Tucker</u>	<u>Red Creek</u>
<u>MC-60-G</u>	<u>Tucker</u>	<u>Red Run</u>
<u>MC-46-B</u>	<u>Tucker</u>	<u>Right Fork of Bull Run</u>
<u>MC-51-A</u>	<u>Tucker</u>	<u>Right Fork of Clover Run</u>
<u>MC-60-D-10</u>	<u>Tucker</u>	<u>Sand Run</u>
<u>MC-56-B</u>	<u>"Tucker</u>	<u>Slip Hill Mill Branch</u>
<u>MC-60-D-3-(L1)</u>	<u>"Tucker</u>	<u>Thomas Park (Impoundment)</u>
<u>MC-54-H</u>	<u>Tucker</u>	<u>Thunderstruck Run of Horseshoe</u>
<u>MC-45</u>	<u>Tucker</u>	<u>Tobes Run</u>
<u>MC-60-K-0.5</u>	<u>Tucker</u>	<u>Two Spring Run of Glady Fork</u>
<u>MC-51-B-4</u>	<u>Tucker</u>	<u>Valley Fork</u>
<u>MC-57</u>	<u>Tucker</u>	<u>Wolf Run of Cheat River</u>
<u>MC-60-D-11</u>	<u>Tucker</u>	<u>Yoakum Run</u>
<u>MC-54</u>	<u>"Tucker-Preston</u>	<u>Horseshoe Run (Headwaters) to Leadmine</u>
<u>MCS-54</u>	<u>Pocahontas</u>	<u>Second Fork</u>
<u>MCS-53</u>	<u>Randolph</u>	<u>Beaver Creek</u>
<u>MCS-57</u>	<u>Randolph</u>	<u>Black Run</u>
<u>MCS-47</u>	<u>Randolph</u>	<u>Blister Run</u>
<u>MCS-14</u>	<u>Randolph</u>	<u>Clifton Run</u>
<u>MCS-50</u>	<u>Randolph</u>	<u>First Fork</u>
<u>MCS-48</u>	<u>Randolph</u>	<u>Fish Hatchery Run</u>
<u>MCS-33</u>	<u>Randolph</u>	<u>Fishing Hawk Creek</u>
<u>MCS-43</u>	<u>Randolph</u>	<u>Glade Run</u>
<u>MCS-16</u>	<u>Randolph</u>	<u>Johns Run</u>
<u>MCS-49</u>	<u>Randolph</u>	<u>Lambert Run</u>

<u>River Basin</u>	<u>County</u>	<u>Stream</u>
Monongahela River		
<u>MCS-13</u>	<u>Randolph</u>	<u>Little Black Fork</u>
<u>MCS-12</u>	<u>Randolph</u>	<u>Little Laurel Run</u>
<u>MCS-9</u>	<u>Randolph</u>	<u>Nail Run</u>
<u>MCS-15</u>	<u>Randolph</u>	<u>Rattlesnake Run</u>
<u>MCS-46</u>	<u>Randolph</u>	<u>Red Run of Shavers Fork</u>
<u>MCS-22-A</u>	<u>Randolph</u>	<u>Stalnaker Run</u>
<u>MCS-22</u>	<u>Randolph</u>	<u>Taylor Run</u>
<u>MCS-44</u>	<u>Randolph</u>	<u>Whitmeadow Run</u>
<u>MCS-40</u>	<u>Randolph</u>	<u>Yokum Run</u>
<u>MCS-4</u>	<u>Tucker</u>	<u>Jobs Run</u>
<u>MCS-5</u>	<u>Tucker</u>	<u>Laurel Run of Shavers Fork</u>
<u>MCS-3-A</u>	<u>Tucker</u>	<u>South Branch of Haddix Run</u>
<u>MCS-6-B</u>	<u>Tucker</u>	<u>Aarons Run</u>
<u>MCS-7</u>	<u>Tucker</u>	<u>Stonelick Run</u>
<u>MW</u>	<u>Harrison</u>	<u>Dog Run (Pond)</u>
<u>MW-38-(L1)</u>	<u>Lewis</u>	<u>Stonecoal Lake</u>
<u>MT-23-C</u>	<u>Barbour</u>	<u>Brushy Fork (Above Valley Furnace)</u>
<u>MT-23-F</u>	<u>"Barbour</u>	<u>Mill Run</u>
<u>MT-23-H</u>	<u>Barbour</u>	<u>Mill Run of Teter Creek</u>
<u>MT</u>	<u>"</u>	<u>Teter Creek Lake (Impoundment)</u>
<u>MT-38</u>	<u>Barbour</u>	<u>Zebbs Creek</u>
<u>MT-12-G-3</u>	<u>Preston</u>	<u>Boyds Run</u>
<u>MT-12-G</u>	<u>Preston</u>	<u>Fields Creek</u>
<u>MT-18-E-4-B</u>	<u>Preston</u>	<u>Frog Run</u>
<u>MT-12-D</u>	<u>Preston-Taylor-Monongalia</u>	<u>Laurel Run of Threeforks</u>
<u>MT-66-C</u>	<u>Randolph</u>	<u>Back Fork of Riffle Creek</u>
<u>MT-47</u>	<u>Randolph</u>	<u>Beaver Creek</u>
<u>MT-50-A</u>	<u>Randolph</u>	<u>Right Fork Files Creek</u>
<u>MT-68</u>	<u>Randolph</u>	<u>Becky Creek from secondary Rt 56 bridge upstream</u>
<u>MT-68-A</u>	<u>Randolph</u>	<u>Big Branch of Becky Creek</u>
<u>MT-81</u>	<u>"Randolph</u>	<u>Big Run of Tygart</u>
<u>MT-73</u>	<u>Randolph</u>	<u>Clay Run</u>
<u>MT-77</u>	<u>Randolph</u>	<u>Conley Run</u>
<u>MT-74</u>	<u>"Randolph</u>	<u>Elkwater Fork above Mowry Run</u>
<u>MT-50</u>	<u>Randolph</u>	<u>Files Creek (Rt. FK-MT-50-A) from compressor station upstream</u>
<u>MT-64-C</u>	<u>Randolph</u>	<u>Glade Run</u>
<u>MT-72</u>	<u>Randolph</u>	<u>Hamilton Run</u>
<u>MT-50-B</u>	<u>Randolph</u>	<u>Left Fork of Files Creek</u>
<u>MT-50-A-1</u>	<u>Randolph</u>	<u>Limekiln Run</u>
<u>MT-74-B</u>	<u>Randolph</u>	<u>Limekiln Run of Elkwater</u>
<u>MT-80</u>	<u>Randolph</u>	<u>Logan Run</u>
<u>MT-44</u>	<u>Randolph</u>	<u>Mathais Run</u>
<u>MT-66-B</u>	<u>Randolph</u>	<u>McGee Run</u>
<u>MT-64-E</u>	<u>Randolph</u>	<u>Meatbox Run</u>
<u>MT-33</u>	<u>Randolph</u>	<u>Middle Fork (Upper) above Cassity</u>
<u>MT-64</u>	<u>Randolph</u>	<u>Mill Creek upstream at end of Co. Rt. 46/4</u>
<u>MT-50-A-2</u>	<u>Randolph</u>	<u>Millstone Run Right Fork of Files Creek</u>
<u>MT-74-A</u>	<u>Randolph</u>	<u>Mowry Run</u>
<u>MT-64-F</u>	<u>Randolph</u>	<u>Potatohole Fork</u>
<u>MT-67</u>	<u>Randolph</u>	<u>Rafe Run</u>
<u>MT-78</u>	<u>Randolph</u>	<u>Ralston Run</u>

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

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

River BasinCountyStream

## Kanawha River

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

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

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

River Basin

County

Stream

Kanawha River

KNG-68-A-4  
KNG-59  
KNG-74  
KNG-43-(L1)  
KNG-79

Pocahontas  
Pocahontas  
Pocahontas  
Pocahontas  
"Pocahontas

Tacker Fork  
Thorny Creek  
Trout Run of Greenbrier  
Watoga Lake  
West Fork Greenbrier (Above the impoundment at the tannery)

OG-124  
OG-131  
OG-137  
OG-131-F  
OG-134  
OG-139  
OG-138

Wyoming  
Wyoming  
Wyoming  
Wyoming  
Wyoming  
Wyoming  
Wyoming

Pinnacle Creek creek  
Barker's Creek  
Devil's Fork  
Gooney Otter Creek  
Slab Fork  
Stonecoal Creek  
Winding Gulf

Tug Fork of Big Sandy River

BST-70  
BST-99  
BST-70-W

McDowell  
McDowell  
McDowell

Dry Fork (Above Canebrake) of Tug  
Elkhorn Creek  
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.

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>Shenandoah River</b>			
S	Jefferson	Charlestown Water	Shenandoah River
<b>Potomac River</b>			
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
<b>Monongahela River</b>			
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 District PSD	Cheat Lake-Lake Lynn
MC	"	Cooper's Rock State Park	Impoundment

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>Monongahela River</b>			
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	Deacons & 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 Compressor 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

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>Ohio River</b>			
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 "	Cabel	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
<b>Little Kanawha</b>			
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
<b>Kanawha River</b>			
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

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>Kanawha River</b>			
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
<b>Pocatalico River</b>			
KP	Kanawha	Sissonville PSD	Pocatalico River
KP	Roane	Walton PSD	Silcott Fork Dam
<b>Coal River</b>			
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
<b>Elk River</b>			
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	"	Prociuous 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
<b>Gauley River</b>			
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

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>New River</b>			
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
<b>Bluestone River</b>			
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
<b>Greenbrier River</b>			
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
<b>Guyandotte River</b>			
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

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
<b>Guyandotte River</b>			
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
<b>Big Sandy River</b>			
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.

<u>River Basin</u>	<u>County</u>	<u>Station Name</u>	<u>Operating Company</u>
<b>Monongahela River</b>			
M	Monongalia	Fort Martin Power Station	Monongahela Power
M	Marion	Rivesville Station	Monongahela Power
MC	Preston	Albright Station	Monongahela Power
<b>Potomac</b>	<b>Grant</b>	<b>Mt. Storm Power Station</b>	<b>Virginia Electric &amp; Power Company</b>
<b>Ohio River</b>			
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
K	Putnam	Mountaineer	Appalachian Power Co.
K	Kanawha	Winfield (Hydro)	Appalachian Power Co.
K	"	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.

<u>River Basin</u>	<u>Stream Code</u>	<u>Stream</u>	<u>County</u>
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

<u>River Basin</u>	<u>Stream Code</u>	<u>Stream</u>	<u>County</u>
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 O-21	Fourpole Creek Old Town Creek/ McClintic Ponds	Cabell Mason
	OMI	Middle Island Creek/ Crystal Lake	Doddridge
	OG OG	Guyandotte River Guyandotte River/ R. D. Bailey Lake	Cabell 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 KC-45-Q	Coal River Stephens Branch/ Lake Stephens	Kanawha 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 KNG-28-P	Anthony Creek Meadow Creek/ Lake Sherwood	Greenbrier Greenbrier
	KNB	Bluestone River/ Bluestone Lake	Summers
	KG	Gauley River	Webster

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

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APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION									
	AQUATIC LIFE					HUMAN HEALTH			ALL OTHER USES	
	B1, B4		B2		C <sup>3</sup>	A <sup>4</sup>				
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>						
8.1 Dissolved Aluminum (ug/l) Not-to-exceed <sup>(6)</sup> :	750xCF <sup>5</sup>	87 750xCF <sup>5</sup> (6)	750xCF <sup>5</sup>	87xCF <sup>5</sup> (6)						
8.2. Acute and chronic aquatic life criteria for ammonia shall be determined using the National Criterion for Ammonia in Fresh Water <sup>d</sup> 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 <sup>b</sup> (ug/l) Not-to-exceed:						50		50		100
8.4.1 Dissolved Trivalent Arsenic Not-to-exceed:	360 x CF <sup>5</sup>	190 x CF <sup>5</sup>	360 x CF <sup>5</sup>	190 x CF <sup>5</sup>						
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 <sub>3</sub> ) Soluble Cd 0 - 35 36 - 75 76 - 150 > 150										X

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APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>			
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>			
8.7.1 <del>Not to exceed 10 ug/l in the Ohio River (O Zone I) main stem (see section 7.1.d, herein)</del>						X	
8.7.3 The four-day average concentration of dissolved cadmium shall <del>not exceed the value</del> determined by the following equation: $Cd = e^{(0.7852[\ln(\text{hardness})]-2.490)} \times CF^5$ $Cd = e^{(0.7409[\ln(\text{hardness})]-4.719)} \times CF^5$	X		X				
8.7.4 The one-hour average concentration of dissolved cadmium shall <del>not exceed the value</del> determined by the following equation: $Cd = e^{(1.128[\ln(\text{hardness})]-3.829)} \times CF^5$ $Cd = e^{(1.0166[\ln(\text{hardness})]-3.924)} \times CF^5$	X		X				
8.8 Chloride (mg/l)	860	230	860	230	250	250	
8.9.1 Chromium, dissolved hexavalent (ug/l): <del>Not to exceed:</del>	16 x CF <sup>5</sup>	11 x CF <sup>5</sup>	16 x CF <sup>5</sup>	7.2 x CF <sup>5</sup>		50	
8.9.2 Chromium, trivalent (ug/l) The one-hour average concentration of dissolved trivalent chromium shall <del>not exceed the value</del> determined by the following equation: $\exp\{0.8190[\ln(\text{hardness})]+3.7256\} \times (CF^5)$	X		X				
8.9.3 The four-day average concentration of dissolved trivalent chromium shall <del>not exceed the value</del> determined by the following concentration: $\exp\{0.8190[\ln(\text{hardness})]+0.6848\} \times (CF^5)$		X		X			
8.10 Copper (ug/l) <del>Not to exceed:</del>						1000	

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APPENDIX E, TABLE 1

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>			
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>			
8.10.1 The four-day average concentration of dissolved copper shall not exceed the value determined by the following equation <sup>a</sup> : $Cu = e^{(0.8545[\ln(\text{hardness})] - 1.465)} \times CF^3$ $Cu = e^{(0.8545[\ln(\text{hardness})] - 1.702)} \times CF^5$		X		X			
8.10.2 The one-hour average concentration of dissolved copper shall not exceed the value determined by the following equation <sup>a</sup> : $Cu = e^{(0.9422[\ln(\text{hardness})] - 1.464)} \times CF^3$ $Cu = e^{(0.9422[\ln(\text{hardness})] - 1.700)} \times CF^5$	X		X				
8.11 Cyanide (ug/l) (As free cyanide HCN+CN <sup>-</sup> ) Not to exceed:	22	5.0	22	5.0	5.0	5.0	
8.12 Dissolved Oxygen <sup>c</sup> : not less than 5 mg/l at any time.	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						
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				

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PARAMETER	USE DESIGNATION								
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES			
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>	C <sup>3</sup>			A <sup>4</sup>	
						ACUTE <sup>1</sup>	CHRON <sup>2</sup>		ACUTE <sup>1</sup>
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		
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		
8.14 Fluoride (mg/l)      Net-to-exceed:								1.4	
8.14.1 Not to exceed 2.0 for category D1 uses.									X
8.15 Iron <sup>c</sup> (mg/l)      Net-to-exceed:									1.5
8.16 Lead (ug/l)      Net-to-exceed:									50
8.16.1 The four-day average concentration of dissolved lead shall not exceed the value determined by the following equation <sup>a</sup> : $Pb = e^{(1.273 \ln(\ln(\ln(\ln(\ln(4.705)) - 4.705)))} \times CF^5$								X	

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PARAMETER	USE DESIGNATION						
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>			
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>			
8.16.2 The one-hour average concentration of dissolved lead shall not exceed the value determined by the following equation <sup>a</sup> : $Pb = e^{(1.27)(\ln(\text{hardness})) - 1.46} \times CF^5$	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 <sup>a</sup> : $Ni = e^{(0.846)(\ln(\text{hardness})) + 1.649} \times CF^5$ $Ni = e^{(0.846)(\ln(\text{hardness})) + 0.0584} \times CF^5$		X		X			
8.19.2 The one-hour average concentration of dissolved nickel shall not exceed the value determined by the following equation <sup>a</sup> : $Ni = e^{(0.846)(\ln(\text{hardness})) + 2.564} \times CF^5$ $Ni = e^{(0.846)(\ln(\text{hardness})) + 2.255} \times CF^5$	X		X				
8.20 Nitrate (as Nitrate-N) (mg/l)						10	

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

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PARAMETER	USE DESIGNATION							
	AQUATIC LIFE				HUMAN HEALTH			
	B1, B4		B2		C <sup>3</sup>		A <sup>4</sup>	
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>				
Hexachlorobenzene <sup>b</sup> (ng/l)						0.77	0.72	
Carbon tetrachloride <sup>b</sup> (ug/l)						4.4	0.25	
Chloroform <sup>b</sup> (ug/l)						470	5.7	
Halomethanes (ug/l)						15.7	0.19	
1,2-dichloroethane <sup>b</sup> (ug/l)						99	0.035	
1,1,1-trichloroethane <sup>b</sup> (mg/l)							12	
1,1,2,2-tetrachloroethane (ug/l)						11	0.17	
1,1-dichloroethylene <sup>b</sup> (ug/l)						3.2	0.03	
Trichloroethylene <sup>b</sup> (ug/l)						81	2.7	
Tetrachloroethylene <sup>b</sup> (ug/l)						8.85	0.8	
Toluene <sup>b</sup> (mg/l)						200	6.8	
Polynuclear Aromatic Hydrocarbons (PAH) <sup>b</sup> (ug/l)						0.031	.0028	
Phthalate esters (ug/l)		3.0			3.0			
Vinyl chloride <sup>b</sup> (chloroethene) (ug/l)						525	2.0	
alpha-BHC (alpha-Hexachlorocyclohexane) <sup>b</sup> (ug/l)						0.013	.0039	
beta-BHC(beta-Hexachlorocyclohexane) <sup>b</sup> (ug/l)						0.046	0.014	
gamma-BHC (gamma-Hexachlorocyclohexane) <sup>b</sup> (ug/l)	2.0	0.08	2.0	0.08	0.063	0.019		
Chlorobenzene (mg/l)					21	0.68		

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PARAMETER	USE DESIGNATION										
	AQUATIC LIFE					HUMAN HEALTH					
	B1, B4		B2		CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	C <sup>3</sup>	A <sup>4</sup>	ALL OTHER USES
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>							
Ethylbenzene (mg/l)								29	3.1		
Heptachlor <sup>b</sup> (ng/l)	520	3.8		520		3.8		0.21	0.21		
2-methyl-4,6-Dinitrophenol (ug/l)								765	13.4		
Fluoranthene (ug/l)								370	300		
<del>8.22.1 8.23.1</del> 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.											
<del>8.23 8.24 pH</del> 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	
<del>8.24 8.25 Phenolic Materials</del>											
<del>8.24.1 8.25.1 Phenol (ug/l) Not to exceed:</del>								4,600,000	21,000		
<del>8.24.2 8.25.2 2-Chlorophenol (ug/l) Not to exceed:</del>								400	120		
<del>8.24.3 8.25.3 2,4-Dichlorophenol (ug/l) Not to exceed:</del>								790	93		
<del>8.24.4 8.25.4 2,4-Dimethylphenol (ug/l) Not to exceed:</del>								2300	540		

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PARAMETER	USE DESIGNATION							
	AQUATIC LIFE				HUMAN HEALTH			ALL OTHER USES
	B1, B4		B2		C <sup>3</sup>	A <sup>4</sup>		
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>				
8-24-5 8.25.5 2,4-Dinitrophenol (ug/l) Not to exceed:						14,000	70	
8-24-6 8.25.6 Pentachlorophenol <sup>b</sup> (ug/l)						8.2	0.28	
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: $\exp(1.005(\text{pH})-4.869)$	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: $\exp(1.005(\text{pH})-5.134)$		X			X			
8-24-7 8.25.7 2,4,6-Trichlorophenol <sup>b</sup> (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

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PARAMETER	USE DESIGNATION						
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>			
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>			
<p><del>8-25-1</del> <u>8.26.1</u> 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.</p>	X		X		X		
<p><del>8-26</del> <u>8.27</u> Selenium (ug/l) <del>Not to exceed:</del></p>	20	5	20	5	10		
<p><del>8-27</del> <u>8.28</u> Silver (ug/l)</p>				X			
<p><del>8-27-1</del> <u>8.28.1</u></p>							
Hardness							
Silver							
0-50							
51-100					X		
101-200							
>201							
1							
4							
12							
24							
30		X					
43							

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PARAMETER	USE DESIGNATION						
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>			
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>			
<p>8-27-2 8.28.2 The one-hour average concentration of dissolved silver shall not exceed the value determined by the following equation:</p> $A_g = e^{(1.72(\ln(\text{hardness})) - 6.59)} \times C F^5$ $A_g = e^{(1.72(\ln(\text{hardness})) - 6.59)} \times C F^5$	X		X				
<p>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 seasonal temperature fluctuations that existed before the addition of heat due to other natural causes should be maintained.</p>							
<p>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.</p>	X						

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PARAMETER	USE DESIGNATION														
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES								
	B1, B4		B2		C <sup>3</sup>	A <sup>4</sup>									
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>											
<p>8-29-2 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.</p>			X												
<p>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:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Daily Mean °F</th> <th>Hourly Max °F</th> </tr> </thead> <tbody> <tr> <td>Oct-Apr 50</td> <td>55</td> </tr> <tr> <td>Sep-May 58</td> <td>62</td> </tr> <tr> <td>Jun-Aug 66</td> <td>70</td> </tr> </tbody> </table>	Daily Mean °F	Hourly Max °F	Oct-Apr 50	55	Sep-May 58	62	Jun-Aug 66	70			X				
Daily Mean °F	Hourly Max °F														
Oct-Apr 50	55														
Sep-May 58	62														
Jun-Aug 66	70														

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PARAMETER	USE DESIGNATION																																																															
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES																																																										
	B1, B4	B2	C <sup>3</sup>	A <sup>4</sup>																																																												
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>	ACUTE <sup>1</sup>	CHRON <sup>2</sup>																																																												
<p><b>8-28-4 8.29.4</b> For Ohio River Main Stem (01) (see section 7.1.d, herein):</p> <table border="1"> <thead> <tr> <th>Dates</th> <th>Ave.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>Jan 1-31</td> <td>45°F</td> <td>50°F</td> </tr> <tr> <td>February</td> <td>45</td> <td>50</td> </tr> <tr> <td>March 1-15</td> <td>51</td> <td>56</td> </tr> <tr> <td>March 16-31</td> <td>54</td> <td>59</td> </tr> <tr> <td>April 1-15</td> <td>58</td> <td>64</td> </tr> <tr> <td>April 16-30</td> <td>64</td> <td>69</td> </tr> <tr> <td>May 1-15</td> <td>68</td> <td>73</td> </tr> <tr> <td>May 16-31</td> <td>75</td> <td>80</td> </tr> <tr> <td>June 1-15</td> <td>80</td> <td>85</td> </tr> <tr> <td>June 16-30</td> <td>83</td> <td>87</td> </tr> <tr> <td>July 1-31</td> <td>84</td> <td>89</td> </tr> <tr> <td>August 1-31</td> <td>84</td> <td>89</td> </tr> <tr> <td>Sept 1-15</td> <td>84</td> <td>87</td> </tr> <tr> <td>Sept 16-30</td> <td>82</td> <td>86</td> </tr> <tr> <td>Oct 1-15</td> <td>77</td> <td>82</td> </tr> <tr> <td>Oct 16-31</td> <td>72</td> <td>77</td> </tr> <tr> <td>Nov 1-30</td> <td>67</td> <td>72</td> </tr> <tr> <td>Dec 1-31</td> <td>52</td> <td>57</td> </tr> </tbody> </table>	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							
Dates	Ave.	Max.																																																														
Jan 1-31	45°F	50°F																																																														
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Nov 1-30	67	72																																																														
Dec 1-31	52	57																																																														
<b>8-29 8.30</b> Thallium (ug/l)					6.3	1.7																																																										
<b>8-30 8.31</b> Threshold odor <sup>c</sup> Not to exceed a threshold odor number of 8 at 104°F as a daily average.							X																																																									
<b>8-31 8.32</b> Total Residual Chlorine (ug/l - measured by amperometric or equivalent method) <del>Not to exceed:</del>	19						11																																																									



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PARAMETER	USE DESIGNATION					
	AQUATIC LIFE			HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	CHRON <sup>2</sup>	C <sup>3</sup>	A <sup>4</sup>	
	ACUTE <sup>1</sup>	CHRON <sup>2</sup>		ACUTE <sup>1</sup>	CHRON <sup>2</sup>	
<p>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<sup>a</sup>:</p> $Z_A = e^{(0.8473[\ln(\text{hardness})] + 0.7644)} \times CF^5$ $Z_L = e^{(0.8473[\ln(\text{hardness})] + 0.884)} \times CF^5$			X			
<p>8.33-1 8.34.1 The one-hour average concentration of dissolved zinc shall not exceed the value determined by the following equation<sup>a</sup>:</p> $Z_A = e^{(0.8473[\ln(\text{hardness})] + 0.8604)} \times CF^5$ $Z_L = e^{(0.8473[\ln(\text{hardness})] + 0.884)} \times CF^5$	X			X		

<sup>1</sup> One hour average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.

<sup>2</sup> Four-day average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>a</sup> Hardness as calcium carbonate (mg/l). The minimum hardness allowed for use in 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.

<sup>b</sup> Known or suspected carcinogen. Human health standards are for a risk level of 10<sup>-6</sup>.

<sup>c</sup> May not be applicable to wetlands (B4) - site-specific criteria are desirable.

<sup>d</sup> 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).

<sup>e</sup> ~~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**

<b>Metal</b>	<b>Acute</b>	<b>Chronic</b>
Aluminum	1.000	1.000
Arsenic (III)	1.000	1.000
Cadmium	$1.136672 - [(\ln \text{ hardness})(0.041838)]$	$1.101672 - [(\ln \text{ hardness})(0.041838)]$
Chromium (III)	0.316	0.860
Chromium(VI)	0.982	0.962
Copper	0.960	0.960
Lead	$1.46203 - [(\ln \text{ hardness})(0.145712)]$	$1.46203 - [(\ln \text{ hardness})(0.145712)]$
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.

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

West Virginia Department of Environmental Protection

**ADVISORY COUNCIL MEETING MINUTES**

Wednesday - May 31, 2006

1:00 p.m. – 3:00 p.m.

601 57<sup>th</sup> Street, SE, Charleston, WV

West Virginia Room – 3<sup>rd</sup> Floor

**ATTENDEES:**

**Advisory Council Members:**

Larry Harris

Jackie Hallinan

Rick Roberts

Bill Raney (via conference call)

Karen Price

**DEP:**

Stephanie R. Timmermeyer, Cabinet Secretary

Randy Huffman, Deputy Cabinet Secretary/Director – Division of Mining & Reclamation

Heather A. Connolly, General Counsel

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

Mike Zeto, WVDEP

Charlie Sturey, WVDEP

Lalena Price, Acting Chief Communication Officer – WVDEP – Public Information Office

James Martin, Chief, WVDEP - Office of Oil & Gas

Jim Mason – WVDEP

Bill Brannon – WVDEP

Carroll Cather – WVDEP

Terrie Sangid – WVDEP

Scott Mandirola – WVDEP

Cliff Whyte – WVDEP

John Morgan – WVDEP

Gary Rogers – WVDEP

Mike Dorsey – WVDEP

Patrick Campbell – WVDEP

Ken Politan – WVDEP

Pam Nixon – WVDEP

**VISITORS:**

Don Garvin – WVEC  
Allan S. Tweddle – WVEC  
Adam Webster – WVRC  
Tim Mallan – Appalachian Power  
Steve Keen – Bright Enterprises  
Charlie Burd – IOGA – WV  
Tom Boggs – WV Chamber

Stephanie R. Timmermeyer, Cabinet Secretary - West Virginia Department of Environmental Protection called the meeting to order at 1:00 p.m. Secretary Timmermeyer apologized for short time period with some of the rules getting out to Council.

Proposed rules for the 2007 legislative session are as follows:

**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 of State waters, Tiers 1,2,2.5 and 3. Each tier provides a graduated level of protection used during the NPDES permit issuance process.

**COMMENTS**

Secretary Timmermeyer - Procedural History – 444 Streams to 303 - 3.7% of total WV stream miles.

5.6.d. Are these absolute values (§5.6.d 1-4 of rule)?

*Yes*

Will there be another comment period after filing with Secretary of State's Office?

*Yes*

Is this the final list?

*Yes*

So §6.2 is gone?

*Yes*

Legislature has to approve the Tier 2.5 list according to the law passed last session.

How do we appeal a stream's inclusion on Tier 2.5 list?

*9.6 – Not appealable to the board, delisting a stream would require a change by the legislature through a rule change.*

Since rulemaking authority has been taken from EQB how do you appeal?

*This is like any other rule, EQB has no appellate jurisdiction.*

When does it go into effect?

*If the Legislature passes the list, we send it to EPA for approval, then it would be effective for reissuance, modifications, and 1<sup>st</sup> time issuances.*

## **47CSR2 – Requirements Governing Water Quality Standards**

### **SUMMARY**

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.

### **COMMENTS**

Secretary Timmermeyer – Overview of nutrients criteria, EPA approved old (46CSR1) Aluminum Standard. Also includes updated list of trout waters.

How were trout streams added?

*We relied on DNR's data to come up with the list.*

Was it a scientific study or did it include streams where trout are stocked?

*The stream must be able to allow trout to survive over time. This does sometimes include stocked streams.*

Has problem with some streams listed, believes they are not reproducing streams, simply stocked, wants to see method of gathering data for list

*The list is not final, DEP will continue to regulate facilities on such streams. DEP will add and subtract streams as data becomes available.*

*6 streams are being taken off in this rule because they cannot support trout over time.*

How recent are DNR's survey's?

*The surveys range from 1975 to present.*

*We have to maintain waters that "previously sustained trout."*

Where is Watershed at in definition?

*When permits are issued they are looked at on a case by case basis to assess impact on downstream waters within a watershed (downstream usage protection.)*

*There is no definition of "water body" in State Code, only "Waters."*

### **33CSR9 - Standards for Beneficial Use of Filtrate From Water Treatment Plants**

#### **SUMMARY**

This legislative rule establishes a mechanism and requirements for the certification, 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.

#### **COMMENTS**

Can we give an example?

*Such filtrate could have been considered Hazardous Waste in the past, this rule allows for certain applications.*

### **47CSR5A – Rules for 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**

Does this apply to any other industry?

*No, it is only coal related.*

Wants to know if other industry has similar regs?

Seems contrary to what we submit to Army Corp. We want consistency across all forums. Is this different?

*No, it is information contained in other forms.*

4.2.f.a WV. Jobs creation

*Coal companies are already submitting this information to Coal Development. We use this information so we need to see it too.*

Is it on a timeframe? – Can coal meet with DEP?

Secretary Timmermeyer suggested we have another Advisory Council Meeting to give the council additional time to review certain rules.

Bill Raney agrees with Secretary Timmermeyer for the need for another meeting to address some of the rules.

The next Advisory Council Meeting will be scheduled before June 20, 2006.

## **58CSR5 – Recycling Assistance Grant Program**

### **SUMMARY**

Updates and streamlines recycling grant requirements. Establishes rule definitions. Consolidates the type of grants available. Simplifies the grant eligibility criteria. Clarifies uses of grant funding. Clarifies and restructures general conditions and requirements for an applicant and then for a grant recipient. Increases the maximum grant funding levels. Clarifies grant proposal content and submission requirements. Establishes agency review criteria and revises Recycling Assistance Fund Grant Review Committee.

### **COMMENT**

Someone worked really hard on putting this together - Really thinks they did a great job.

*The changes are a result of suggestions from grant recipients and the recycling community in general.*

#### **45CSR6 – Control of Air Pollution from Combustion of Refuse**

##### **SUMMARY**

This rule establishes emission standards for particulate matter and requirements for activities involving incineration of refuse which are not subject to, or are exempted from regulation under various federal counterpart regulations for specific combustion source categories. This rule also prohibits (with limited exception) open burning and sets forth the registration, permitting, reporting, testing, emergency, natural disaster and exemption provisions for activities involving the combustion of refuse and land clearing debris.

##### **COMMENT**

Rule is just reorganizing and streamlining.

Wholesale look at air rules. Four decades old rule. Needed to take a look at its federal counterparts. We separated them (fed) into Rule 18. Rule 6 covers state regs. Streamlined. Did not change any limits. Left open burning and DOH jobs the same.

Both rules compared old “prevent and control” new “control” why drop the term “prevent” from the rule?

*We don't prevent air pollution we control it. There is no other specific reason, DEP just cleaned up the title.*

*The federal government doesn't use the term “prevent” and we are trying to mirror their rules for consistency.*

Does it involve timbering operations?

*No.*

#### **60CSR3 – Voluntary Remediation and Redevelopment Rule**

##### **SUMMARY**

The Voluntary Remediation Program proposed rule amendments focus on two primary areas: 1. Incorporating the Uniform Environmental Covenant Act provisions, and 2. Updating the DeMinimis Standard to incorporate recent changes in toxicological profiles posted by EPA for several constituents.

## **COMMENT**

We're adopting Uniform Environmental Covenant Act. We'll have to adopt as they change. Same for DeMinimus Standards (developed by consultant in excel). We've updated the tox profiles.

No questions from Council.

## **45CSR25 – Control of Air Pollution from Hazardous Waste Treatment Storage and Disposal Facilities.**

### **SUMMARY**

This rule establishes and adopts emission standards for the treatment, storage and disposal of hazardous waste promulgated by the United States Environmental Protection Agency (U.S. EPA) pursuant to the Resource Conservation and Recovery Act, as amended (RCRA). This rule codifies general procedures and criteria to implement emission standards set forth in 40 CFR Parts 260, 261, 262, 264, 265, 266, 270 and 279, as listed in Table 25-A of the rule. The rule also adopts associated appendices, reference methods, performance specifications and other test methods which are appended to these standards. Any person who constructs, reconstructs, modifies or operates any hazardous waste treatment, storage, or disposal facility must comply with the West Virginia Hazardous Waste Management System, the codified federal emission standards, and this rule.

45CSR25 establishes a program of regulation over the treatment, storage, and disposal of hazardous wastes in order to achieve and maintain such levels of air quality as will protect the public health and safety and the environment from the effects of improper, inadequate, or unsound treatment, storage, or disposal of hazardous wastes.

This revised rule incorporates by reference the following provisions of 40 CFR Parts 260, 261, 264, 265, 266 and 270 promulgated as of June 1, 2006: National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II), Resource Conservation and Recovery Act Burden Reduction Initiative, and Waste Management System; Testing and Monitoring Activities, Methods Innovation Rule and SW-846 Final Update IIIB.

## **COMMENT**

Revisions to this rule are necessary to maintain consistency with current federal regulations.

Only federal changes this year except for one definition on pathological incinerators.

No further questions.

## **199CSR1 – Surface Mining Blasting Rule**

### **SUMMARY**

These changes are proposed for clarification of definitions, jurisdiction for underground shaft and slope development, and training/educational requirements for pre-blast surveyors and certified blasters. None of which should have any fixcal impact on the state or public above those currently experiencing. Some additional training will be required by those doing pre-blast surveys, but that training will be offered for free by Explosives and Blasting.

## COMMENT

Randy Huffman hit on highlight changes and cleanup for this rule:

- 3.2.c. 1000 ft requirement for seismograph
- 3.4. defines where DEP gives up regulatory authority as 40ft.
- 3.9 Pre blast surveyors training requirements.

Is this new or modified requirement?

*Modified – Now requiring additional criteria. DEP/OEB is the approving authority. We offer procedural training only at DEP 4.1.b. Case by case certification for qualifying experience for initial certification.*

Would that include the convicted felon requirements?

*The convicted felon exclusion remains. Felons can't get a fire marshal's license, or a license from ATF.*

Any provision for appeals on the convicted felon prohibition?

*Not at this tme.*

4.5.d – Show cause why you should be allowed in West Virginia when suspended or revoked in other states.

4.9. – Allows blasting inspector to issue suspension order on site if unsafe conditions exist. 24 hour appeal process. Concerned about air blast and fly rock incidents.

Grammatical errors must be changed before we go out to public notice.

Concerns: New definition for “Other structures” and “habitable dwelling”  
Shaft and slope (40 ft)

*Other structures or “Protective structure” can house people – habitable dwelling one that can house people (snowbird example)- “shaft and slope” DEP worked with miner's health and safety to develop the distance criteria.*

We're (WVCA) probably fine with them.

Does OSM require it?

*No. Geology and blast record 3.5 Safety concerns pre-blast surveyors, they don't have to be geologists, but they do need to know what they are blasting.*

## **HOLD OVER FOR NEXT MEETING.**

### **38CSR2 – Surface Mining Reclamation Rule**

#### **SUMMARY**

38- 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- 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. 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. Changes in §38-14.15.c.2, 14.15.d.1 and 14.15.d.3 are clarifying contemporaneous reclamation rules on excess spoil disposal. The changes in §38- 5.6 and 14.15 removes phase-in compliance schedules and the schedule in 14.15 has long past and the one in 5.6 is due to expire on June 19, 2006. §38-2-25 Coal Slurry Lines is new language and the term slurry as used in this subsection means any mixture of water and solids that are pumped to a disposal area. The purpose of this change is to minimize the potential and the impacts of slurry line spills by providing for secondary containment, monitoring etc.

#### **COMMENT**

Creates standards and requirements (§38-2-25) is a new section.

Public review period 3.2.g. – currently the public has no opportunity to comment on a completed application so this rule adds a 15 day comment period in certain circumstances.

Why delete the term “databases” specifically

*Some of those databases don't exist. We have our own database now.*

Has the current notification timeframe changed?

*No, it is the same as using the existing spill line.*

What about mining related spills?

*Inspectors call spill line within 24 hour period. Companies should call immediately upon discovering a spill.*

Is there anyway to sample water for slurry spills?

*Currently DEP Inspectors take stream water samples and that data is on file.*

Is there anything dangerous in the slurry to the public?

*Not usually. We can get you data on existing samples.*

Dialysis system are bothered by trace stuff in the water.

*Coal fines are usually what kill fish, not the trace chemicals.*

## **HOLD OVER FOR NEXT AC MEETING**

### **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.

#### **COMMENT**

Eliminates need to do a NPDES modification permit in certain instances when adding area to an existing permitted area. Reduce paperwork and manpower.

Secretary can override rule when circumstances dictate. Also, there is a provision for advanced approval of a transfer permit in certain circumstances. Consistent with SMCRA.

Why would a permit area be expanded if not to extract minerals?

*Haul roads, storage, etc.*

Does this do away with any existing public comment period?

*No. These small changes wouldn't require a hearing.*

## **HOLD FOR NEXT MEETING.**

### **35CSR3 – Coalbed Methane Wells Rule –**

## **HOLD FOR NEXT MEETING**

## **33CSR20 – Hazardous Waste Management**

### **HOLD FOR NEXT MEETING**

## **45CSR8 – Ambient Air Quality Standards**

### **SUMMARY**

The purpose of this rule is to establish ambient air quality standards for sulfur oxides, particulate matter, carbon monoxide, ozone, nitrogen dioxide and lead, equivalent to those national primary and secondary National Ambient Air Quality Standards (NAAQS) established by the U.S. EPA.

National primary ambient air quality standards define levels of air quality which the Administrator of the U.S. EPA judges are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality which the Administrator of the U.S. EPA judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Such standards are subject to revision, and additional primary and secondary standards may be promulgated as the Administrator of the U.S. EPA deems necessary to protect the public health and welfare.

The Division of Air Quality (DAQ) is streamlining the regulatory structure by consolidating all of the NAAQS into one rule. Consequently, this rule will repeal and replace 45CSR9 - "Ambient Air Quality Standards for Carbon Monoxide and Ozone" which was filed on April 16, 2002 and became effective on July 1, 2002, and 45CSR12 - "Ambient Air Quality Standard for Nitrogen Dioxide" which was filed May 19, 2000, and became effective June 1, 2000.

### **COMMENT**

This puts all NAAQS in one rule, acts to consolidate and streamline the rule.

Why do away with 2.2?

*It's now in 3.1 and adopts federal standards.*

Particulates are in this rule. Dr. Popper's (WVU) research shows that particulates damage kid's lungs developmentally and these standards are based on adults. Asthma on the increase and this might exacerbate our kids health.

*The federal EPA is currently reviewing fine particulate matter and we will change our standards accordingly based on their rule changes.*

## **45CSR16 – Standards of Performance for New Stationary Sources**

### **SUMMARY**

This rule establishes and adopts national standards of performance for new stationary sources and other regulatory requirements promulgated by the United States Environmental Protection Agency (U.S. EPA) pursuant to section 111(b) of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement standards of performance for new stationary sources set forth in 40 CFR Part 60. The rule also adopts associated appendices, reference methods, performance specifications and other test methods which are appended to such standards. Any person who constructs, modifies, reconstructs or operates an affected facility after the effective date of any NSPS under 40 CFR Part 60 must comply with the applicable NSPS and this rule.

This revised rule incorporates by reference the following new or revised NSPS standards promulgated as of June 1, 2006: Standards of Performance for: New and Existing Stationary Sources - Electric Utility Steam Generating Units; Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978, Industrial- Commercial- Institutional Steam Generating Units, Small Industrial- Commercial- Institutional Steam Generating Units; Stationary Gas Turbines.

#### **COMMENT**

Standard Update of fed requirements.

No Questions.

#### **45CSR34 – Emission Standards for Hazardous Air Pollutants**

#### **SUMMARY**

This rule establishes and adopts national emission standards for hazardous air pollutants (NESHAP) and other regulatory requirements promulgated by the United States Environmental Protection Agency (U.S. EPA) pursuant to section 112 of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit, or have the potential to emit, one or more of the hazardous air pollutants set forth in section 112(b) of the CAA, or one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a). The rule incorporates by reference the NESHAP standards of 40 CFR Parts 61, 63 and 40 CFR Part 65 (Consolidated Federal Air Rule), to the extent referenced in 40 CFR Parts 61 and 63, promulgated as of June 1, 2006. The rule also adopts associated appendices, reference methods, performance specifications and other test methods which are appended to these standards and contained in 40 CFR Parts 61 and 63. Any person who constructs, reconstructs, modifies or operates any source subject to the provisions of 40 CFR Parts 61 or 63 must comply with the applicable NESHAPS and this rule.

This rule will repeal and replace 45CSR15 “Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 61” filed April 28, 2006 and effective June 1, 2006, as 45CSR34 will now include all federal NESHAPS under 40 CFR Parts 61 and 63.

The revised rule incorporates by reference the following new or revised NESHAP standards promulgated as of June 1, 2006: Miscellaneous Organic Chemical Manufacturing, Waste Management System; Testing and Monitoring Activities, Methods Innovation Rule and SW-846 Final Update IIIB, Cellulose Products Manufacturing, Primary Aluminum Reduction Plants, Cross-Media Electronic Reporting, Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II), Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j), Primary Copper Smelting, Coke Ovens: Pushing, Quenching, and Battery Stacks, Cellulose Products Manufacturing, Miscellaneous Organic Chemical Manufacturing, Secondary Aluminum Production, Brick and Structural Clay Products Manufacturing, Hazardous Waste Combustors, Exemption of Certain Area Sources From Title V Operating Permit Programs, List of Hazardous Air Pollutants, Petition Process, Lesser Quantity Designations, Source Category List, Miscellaneous Coating Manufacturing, Industrial, Commercial, and Institutional Boilers and Process Heaters: Reconsideration, Surface Coating of Metal Cans, Refractory Products Manufacturing, Plywood and Composite Wood Products; List of Hazardous Air Pollutants, Lesser Quantity Designations, Source Category List, Miscellaneous Organic Chemical Manufacturing, Hazardous Waste Combustors, Hydrochloric Acid Production, Industrial Process Cooling Towers, Magnetic Tape Manufacturing Operations, Ethylene Oxide Emissions Standards for Sterilization Facilities, Refractory Products Manufacturing and General Provisions.

#### **COMMENT**

Standard update of fed requirements combining 45CSR\_\_\_ and 45CSR16 into this rule. Will replace Rule 15.

No Questions.

#### **45CSR39 – Control of Annual Nitrogen Oxides Emissions**

#### **SUMMARY**

This rule establishes general provisions and the designated representative, permitting, allowance, monitoring, and opt-in provisions for the state CAIR NO<sub>x</sub> Annual Trading Program pursuant to the federal Clean Air Interstate Rule (CAIR) under Section 110 of the Clean Air Act (CAA), 40 CFR Part 96, Subparts AA through II, and 40 CFR §51.123 for state implementation plans as a means of mitigating interstate transport of fine particulates and nitrogen oxides (NO<sub>x</sub>).

This rule partially fulfills the State's obligations in response to the United States Environmental Protection Agency's (U.S. EPA) final rule, *Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO<sub>x</sub> SIP Call* (12 May 2005, at FR 25162). The federal rule requires that large emitters of NO<sub>x</sub> reduce annual emissions through the constraint of set budgets. U.S. EPA is specifying that annual NO<sub>x</sub> emission reductions be implemented in two phases. The first phase of NO<sub>x</sub> reductions starts in 2009; the second phase starts in 2015, and continues thereafter. The NO<sub>x</sub> emission reduction requirements are based on controls that are

known to be highly cost effective for electric generating units. Flexibility is built in through market-based “cap and trade” provisions which allow sources to buy or sell NO<sub>x</sub> emission allowances from or to other program participants. Reducing upwind NO<sub>x</sub> emissions will assist downwind PM<sub>2.5</sub> and 8-hour ozone nonattainment areas in achieving the National Ambient Air Quality Standards (NAAQS).

45CSR39 applies to large fossil fuel-fired electric generating units that have greater than 25 MW<sub>e</sub> generating capacity. The CAIR NO<sub>x</sub> Ozone Season Trading Program requirements are set forth in 45CSR40.

## COMMENT

Standard update of Fed requirements.

CAIR rules

Picking up EPA rules

Are all the cross-outs just picking up federal standards?

*Yes.*

No other questions.

## 45CSR40 – Control of Ozone Season Nitrogen Oxides Emissions

### SUMMARY

This rule establishes the general provisions and the designated representative, permitting, allowance, monitoring, and opt-in provisions for the state CAIR NO<sub>x</sub> Ozone Season Trading Program pursuant to the federal Clean Air Interstate Rule (CAIR) under Section 110 of the Clean Air Act (CAA), 40 CFR Part 96, Subparts AAAA through IIII, and 40 CFR §51.123 for state implementation plans as a means of mitigating interstate transport of ozone and nitrogen oxides (NO<sub>x</sub>).

This rule partially fulfills the State’s obligations in response to the United States Environmental Protection Agency’s (U.S. EPA) final rule, *Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO<sub>x</sub> SIP Call* (12 May 2005, at FR 25162). The federal rule requires that large emitters of NO<sub>x</sub> reduce ozone season emissions through the constraint of set budgets. U.S. EPA is specifying that ozone season NO<sub>x</sub> emission reductions be implemented in two phases. The first phase of ozone season NO<sub>x</sub> reductions starts in 2009; the second phase starts in 2015, and continues thereafter. The NO<sub>x</sub> emission reduction requirements are based on controls that are known to be highly cost effective for electric generating units and large industrial boilers. Flexibility is built in through market-based “cap and trade” provisions which allow sources to buy or sell NO<sub>x</sub> emission allowances from or to other program participants. Reducing upwind ozone season NO<sub>x</sub> emissions will assist downwind 8-hour ozone nonattainment areas in achieving the National Ambient Air Quality Standards (NAAQS).

Because CAIR subsumes the ozone season NO<sub>x</sub> SIP Call trading program, existing NO<sub>x</sub> SIP Call rules 45CSR1 and 45CSR26 and their ozone season NO<sub>x</sub> reduction provisions must be “sunsetting” by January 1, 2009. Therefore, 45CSR40 contains a repeal clause which

effectively “sunset” these rules, meeting the approvability requirement for implementing CAIR.

45CSR40 applies to large fossil fuel-fired electric generating units that have greater than 25 MW<sub>e</sub> generating capacity and large fossil fuel-fired industrial boilers with a heat input greater than 250 mmBtu/hr. This rule also applies to affected cement kilns and internal combustion engines, by retaining the NO<sub>x</sub> SIP Call ozone season NO<sub>x</sub> emission reduction requirements for these sources from 45CSR1. These existing requirements do not provide for inclusion in any cap and trade program for cement kilns and internal combustion engines. The CAIR NO<sub>x</sub> Annual Trading Program requirements are set forth in 45CSR39.

#### **COMMENT**

These changes have they resulted in any change in stringency?

*No we are simply streamlining the CAIR rules*

We haven't lost any ground?

*No.*

#### **45CSR1 – Control of Annual Sulfur Dioxide Emissions**

##### **SUMMARY**

This rule establishes general provisions and the designated representative, permitting, allowance, monitoring, and opt-in provisions for the state CAIR SO<sub>2</sub> Trading Program pursuant to the federal Clean Air Interstate Rule (CAIR) under Section 110 of the Clean Air Act (CAA), 40 CFR Part 96, Subparts AAA through III, and 40 CFR §51.124 for state implementation plans as a means of mitigating interstate transport of fine particulates and sulfur dioxide (SO<sub>2</sub>).

This rule partially fulfills the State's obligations in response to the United States Environmental Protection Agency's (U.S. EPA) final rule, *Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO<sub>x</sub> SIP Call* (12 May 2005, at FR 25162). The federal rule requires that large emitters of SO<sub>2</sub> reduce annual emissions based upon the implementation of retirement ratios for SO<sub>2</sub> allowances allocated under the Acid Rain Program. U.S. EPA is specifying that annual SO<sub>2</sub> emission reductions be implemented in two phases. The first phase of SO<sub>2</sub> reductions starts in 2010 and requires retiring SO<sub>2</sub> allowances at a 2:1 ratio; the second phase starts in 2015 and requires retiring SO<sub>2</sub> allowances at a 2.86:1 ratio, and continues thereafter. The SO<sub>2</sub> emissions reductions requirements are based on

controls that are known to be highly cost effective for electric generating units. Flexibility is built in through market-based "cap and trade" provisions which allow sources to buy or sell SO<sub>2</sub> emission allowances from or to other program participants. Reducing upwind SO<sub>2</sub> emissions will assist downwind PM<sub>2.5</sub> and 8-hour ozone nonattainment areas in achieving the National Ambient Air Quality Standards (NAAQS). 45CSR41 applies to large fossil fuel-fired electric generating units that have greater than 25 MW<sub>e</sub> generating capacity.

#### **COMMENT**

No questions.

#### **OTHER BUSINESS**

Appreciation to Trish White for her work on these rules.

Larry Harris wanted to know about Pocohantas Water Treatment Plant Status? Randy Huffman located Cliff Whyte from DWWM to give him the information.

Trish White will e-mail everyone with next meeting date....

Larry Harris moves we adjourn – Bill Raney seconds.