



STATE OF WEST VIRGINIA
STATE WATER RESOURCES BOARD

1206 Greenbrier Street
Charleston, West Virginia 25311
(304) 348-4002

JOHN C. AILES
P.O. Box 1036
Romney, West Virginia
DR. DAVID E. SAMUEL
Box 16 Rt. 6
Morgantown, West Virginia
ROBERT B. SCOTT
601 David Avenue
Elkins, West Virginia
DR. ALLEN HAMNER
3 Lincoln Way
Buckhannon, West Virginia
WILLIAM PLASS
21 Grandview Drive
Princeton, West Virginia

STAFF
FRANCES E. HUNTER
Executive Secretary
PAUL L. HILL, JR., PH.D.
Technical Assistant
ROBERT K. PARSONS
ASSISTANT ATTORNEY GENERAL
Legal Advisor
OFFICE LOCATION
1260 Greenbrier Street

NOTICE OF AGENCY APPROVAL

LEGISLATIVE RULES: Series I, Water Quality Standards, Series II, National Pollutant Discharge Elimination System Rules (NPDES), Series III, Special Rules and Series IX, Underground Injection Control Rules (UIC).

The attached legislative rules constitutes the official rules approved by the State Water Resources Board

on 22nd day of July, 1985 and filed pursuant to law with the West Virginia Secretary of State and the Legislative Rule-Making Review Committee.

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1985 OCT 17 PM 2:05

SECRETARY OF STATE

John C. Ailes



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STATE WATER RESOURCES BOARD

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The Honorable Ken Hechler
Secretary of State
State Capitol Bldg. 1, Room 157K
Charleston, West Virginia 25305

Dear Mr. Secretary:

Filed herewith please find one copy each of the State Water Resources Board's Series I, II, III and IX approved Legislative Rules. Enclosed are copies of the fiscal note, notice of the Board's approval of the rules and notice of submission of the rules to the Legislative Rule Making Review Committee.

Also attached are the names of persons attending the public hearing and a transcript of the comments received. The Board received over 39 comments on the proposed changes and duly considered each comment before arriving at the approved rule. Included at the front of each Series is a brief abstract of the reason for the revisions. In addition specific comments received and detailed rationale for the approved rules are available for review at the Board's Office at 1260 Greenbrier Street, Charleston, W. Va.

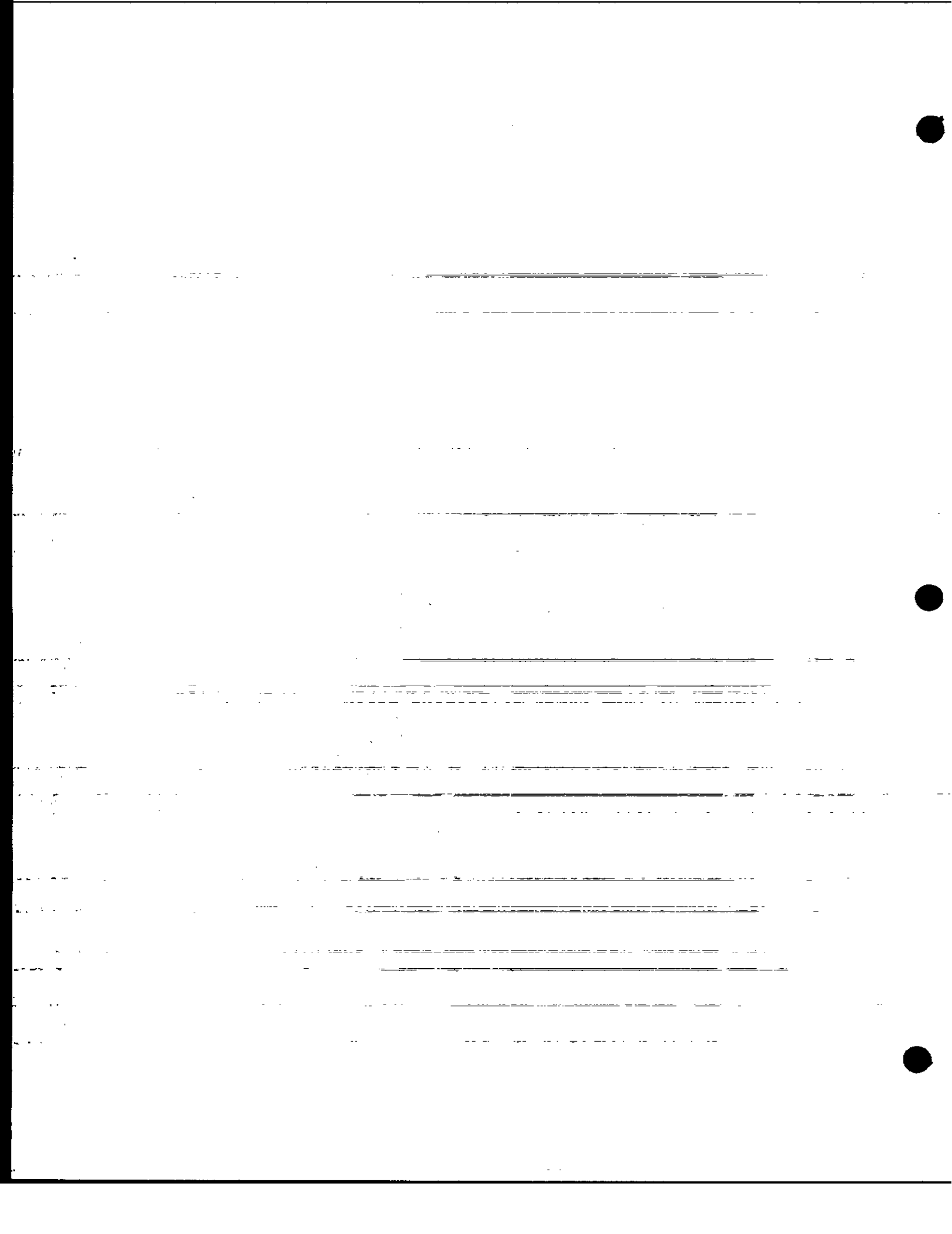
Very truly yours,

John C. Ailes
John C. Ailes, Chairman
State Water Resources Board

enclosures

JCA/rph

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FISCAL NOTE FOR PROPOSED RULES

Rule Title: Series I, Requirements for Water Quality Standards; Series II, National Pollutant Discharge Elimination System (NPDES) Rules; Series III, Special Rules; and Series IX, Rules for the West Virginia Underground Injection Control Program (UIC)

Type of Rule: X Legislative Interpretive Procedural

Agency State Water Resources Board Address 1205 Greenbrier Street (mailing)
1260 Greenbrier Street (office
Charleston, WV 25311 location)

1. Effect of Proposed Rule	ANNUAL		FISCAL YEAR		
	Increase	Decrease	Current	Next	Thereafter
Estimated Total Cost	\$	\$	\$	\$	\$
Personal Services	N/A				
Current Expense	N/A				
Repairs and Alterations	N/A				
Equipment	N/A				
Other	N/A				

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Explanation of above estimates.

These revisions should have no additional fiscal impact on the public or the State.

3. Objectives of these rules: The Federal Clean Water Act requires that the State hold public hearings for the purpose of reviewing the applicable water quality standards (Series I) and the State National Pollutant Discharge Elimination System (Series II - NPDES) and, as appropriate modifying and adopting standards and revisions. The purpose of this review was to include certain revisions to water quality criteria directed by EPA, to update both Series I and Series II which will improve pollution discharge permitting process so as to bring the State into compliance with major federal regulation revisions effective in September 1984 and to put the Board's legislative rules into the format required by the Secretary of State's rules. In addition, minor revisions were made in Series III and IX to update them and to clarify the intent of the Board.

4. Explanation of Overall Economic Impact of Proposed Rule.

A. Economic Impact on State Government.

None.

B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups of citizens.

Will stream-line and clarify water pollution permit procedures; thus reducing costs.

Economic Impact on Citizens/Public at Large.

None.

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STATE OF TEXAS
SECRETARY OF AGRICULTURE

Date October 17, 1985

Signature of Agency Head or Authorized Representative

John C. Ailes

DATE: October 17, 1985

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TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: John C. Ailes, Chairman - State Water Resources Board

LEGISLATIVE RULE TITLE:

1. Authorizing statute(s) citation W. V. Code 20-5-1
et seq. and W. V. Code 20-5A-1 et seq.

2. a. Date filed in State Register with Notice of Hearing:
May 17, 1985

- b. What other notice, including advertising, did you give of the hearing?
 1. Press release to newspapers of intent to revise rules 1-8-85.
 2. A copy of the proposed revisions were mailed to 680 persons.
 3. Published public notice in newspapers of hearing and comment period (20 May 85).

- c. Date of Hearing(s): June 25, 1985 at National
Guard Armory

- d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached x No comments received _____

- e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)
October 17, 1985

- f. Name and phone number of agency person to contact for additional information:
Dr. Paul Hill
Robert K. Parsons, Esq.
304-348-4002/4036

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SECRETARY OF STATE



ADMINISTRATIVE-REGULATIONS
WEST VIRGINIA LEGISLATIVE RULES

STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A

Series I
(1983)
1985

Mailing Address: State Water Resources Board
1205 Greenbrier Street
Charleston, W. Va. 25311

Office Location: 1260 Greenbrier Street
Charleston, W. Va. 25311

Phone: (304) 348-4002

LEGISLATIVE RULES
WEST VIRGINIA ADMINISTRATIVE REGULATIONS
STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A
Series I
(1983)
1985

SUBJECT

TITLE: Requirements Governing Water Quality Standards

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ADMINISTRATIVE REGULATIONS
WEST VIRGINIA LEGISLATIVE RULES
STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A

Series I
1983
1985

Title

Subject: Requirements Governing Water Quality Standards

The State Water Resources Board and the Chief, Division of Water Resources, West Virginia Department of Natural Resources, under Chapter 20, Article 5, and Article 5A, Code of West Virginia, have been vested with the power and authority to determine whether any person, firm, municipality or corporation is polluting any of the waters of the State of West Virginia and to prevent, control, eliminate or reduce such pollution. In making such determination, due consideration shall be given to the public policy of the State of West Virginia, as expressed in the Code (Chapter 20-5A-1).

The Board is also charged with responsibility for promulgating rules and ~~regulations~~ establishing water quality standards and effluent limitations as applicable for the protection of the waters of the State.

These ~~regulations~~ rules establish general water use categories and water quality criteria applicable to the waters of the State. Water quality criteria project concentrations of water constituents which, if not exceeded, will protect the waters of the State for specific uses. These water quality criteria may form the basis for determining effluent limitations.

The water quality criteria contained herein are not to be interpreted as representing all constituents which affect water quality.

WRB
Leg. Rule, 20-5 & 20-5A
Series I

REASONS FOR REVISIONS

The approved revisions to Series I, Water Quality Standards are generally limited to Sections 4, 6, 7 and 8 and incorporate the new section numbering system required by the Secretary of State's procedures.

The anti-degradation language found in Section 4 was changed to reflect the latest changes in federal regulations as of September 1984.

In Section 6, the water use categories were expanded to include a more detailed breakdown of the categories rather than the general broad categories found in the old section. This will clarify specific use categories and assist both the permittee and permit writer in defining the applicable use categories.

Section 7 was extensively rewritten; however substantively there were very few changes. The new language clarifies when water quality standards apply and provides a more detailed identification system for rivers and streams, which will streamline the permitting process yet still adequately protect the State waters. Also, certain site specific water quality revisions are included by major river basins. Some of these revisions have been authorized by the Legislature and are merely being incorporated in this revision and five are included as approved amendments, i.e. see Greenbrier River, Ohio River (2), New River and Potomac River. In addition the public water supply category definition has been expanded for clarification.

Section 8 has a completely new format to conform with the new water use categories and stream designations. The substantive parts of the section have minor changes to resolve EPA's objections in certain areas of water quality criteria.

Also, an attempt was made to update Series I to include all federal regulation changes pertaining to water quality standards since the last revision to the Board's regulations in 1983. The Board received 39 comments on the proposed changes for this Series and duly considered each comment before arriving at the approved revision.

The specific comments received and rationale for the approved rules are available for review in the Board's Office at 1260 Greenbrier Street, Charleston, W. Va.

ADMINISTRATIVE REGULATIONS
WEST VIRGINIA LEGISLATIVE RULE
STATE WATER RESOURCES BOARD
Chapter 20-5 and 20-5A
Series I
1985

Subject Title: Requirements Governing Water Quality Standards

Section 1. General

1.1 Scope - These regulations 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, 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 20-5A-1.)

1.2 Authority - W. Va. Code 20-5A-3. These regulations are promulgated under authority of West Virginia Code (Chapter 20, Article 5A, Section 3).

1.3 Filing Date - These regulations were filed in the office of the Secretary of State on March 7, 1984, by the Executive Secretary of the State Water Resources Board.

1.4 Effective Date - These regulations become effective April 15, 1984.

1.5 Repeal of Former Rule - This legislative rule repeals West Virginia Administrative Regulations, State Water Resources Board, Chapter 20-5 and 5A, Series I (1983), "Requirements Governing Water Quality Standards", filed April 11, 1984. These regulations are certified authentic by the Executive Secretary of the State Water Resources Board.

Section 2. Definitions

The following definitions in addition to those set forth in Chapter 20, Article 5A, Section 2, shall apply to these rules regulations 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 State Health Department to assure that the Water is safe for human consumption.

2.2 "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 The "Federal Act" means the Clean Water Act (also known as the Federal Water Pollution Control Act) Public Law 92-500, as amended by Public Law 95-217, 33 U.S.C. 1251, et seq.

2.4 "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. Included are those streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.

2.5 "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.

2.6 "National resource waters" are those whose unique character, ecological or recreational value or pristine nature constitutes a valuable national or State resource. (See Section 7.3.)

2.7 "Natural" or "naturally occurring" values or "natural temperature" shall mean for all of the waters of the State:

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

2.7.b Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance by any person.

2.8 "Non-point source" shall mean any source other than a point source from which pollutants may reach the waters of the State.

2.9 "Persistent" shall mean a pollutant and its transformation products which under natural conditions degrades slowly in an aquatic environment.

2.10 "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.

2.11 "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.

2.12 The "State Act" or "State Law" shall mean the West Virginia Water Pollution Control Act, West Virginia Code 20-5A-1, et seq.

2.13 "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, October 26, 1984, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

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

2.15 "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 level, or narrative statement, representing a quality of water that supports a designated use or uses.

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

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

Section 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 State Water Resources Board 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 Concentrations of materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life;

3.2.f Distinctively 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 alters the chemical, physical or biological integrity of the waters of the State.

Section 4. Anti-degradation Policy.

4.1 It is the policy of the State of West Virginia that ~~existing-designated~~ instream water uses shall be maintained and protected as follows:

4.1.a ~~(a)-In-all-cases,-e~~ Existing beneficial instream water uses and the level of water quality necessary to protect the existing uses must shall be maintained and protected. ~~Any-action-that-would-interfere-with-or-become-injurious-to existing-uses-cannot-be-undertaken.~~ Waste assimilation and transport are not recognized as beneficial 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. Sub-categories of a use may be adopted and appropriate criteria set to reflect varying needs of such sub-categories of uses, for example to differentiate between trout water and other waters.

4.1.b At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under Sections 301(b) and 306 of the Federal Clean Water 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 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. ~~Less-restrictive-uses-than-those-contained-in existing-stream-standards-may-be-established, however, only where it can be demonstrated that~~ A designated use which is not an existing use may be removed, or sub-categories of a use may be established, if it can be demonstrated that attaining the designated use is not feasible because:

~~(1)---The-existing-designated-use-is-not attainable-because-of-natural-conditions;~~

~~------(2)---The-existing-designated-use-is-not attainable-because-of-irretrievable-person-induced-conditions;-or~~

4.1.b.1 Application of effluent limitations for existing sources more stringent than those required pursuant to Section 301(b) ~~(2)-(A)-and-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

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

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

4.1.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

4.1.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 to its original

condition or to operate such modification in a way that would result in the attainment of the use; or

4.1.b.6 Physical conditions related to the natural features of the water body, 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.

4.1.c (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.

4.1.d (d) In establishing a less restrictive use, or sub-category of use or criteria, the Board shall follow the requirements for revision of water quality standards as required by Chapter 20-5A-3(a) of the State Act 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 Board's administrative procedural regulations for applying for less restrictive uses or criteria shall be followed.

4.1.e (e) With the exception of the provisions of Section 7.1.A 7-01(e) of this series, the waters of the State must be maintained at their existing quality unless it is determined after 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.

4.1.f (f) The Board and the Chief 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 for non point source control.

4.1.g (g) In all cases, waters which constitute an outstanding national resource as designated in Section 7.4.2, shall be maintained and protected and improved where necessary.

4.1.h (h) 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 regulations.

Section 5. Mixing Zones

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

5.2 (a) The following criteria shall be applied to the establishment of mixing zones:

5.2.a (i) Mixing zones shall:

5.2.a.1 (i) Be kept as small as practical in area and length;

5.2.a.2 (ii) Not be used for, or considered as, a substitute for waste treatment;

5.2.a.3 (iii) Provide for as rapid a mixing as practical;

5.2.a.4 (iv) Not prevent the free passage of aquatic species or include spawning or nursery areas;

5.2.a.5 (v) Not overlap a public water supply intake;

5.2.a.6 (vi) Not cause or contribute to any of the conditions prohibited in Section 3; and

5.2.a.7 (vii) Not interfere with any designated water use category.

5.3 (2) The boundaries of the mixing zone shall reflect:

5.3.a (a) Receiving water body characteristics such as:

5.3.a.1 (i) Water quality,

5.3.a.2 (ii) Local meteorology,

5.3.a.3 (iii) Flow regime (including low-flow records),

5.3.a.4 (iv) Magnitude of water exchange at point of discharge,

5.3.a.5 (v) Stratification phenomena,

5.3.a.6 (vi) Waste capacity of the receiving system including retention time,

5.3.a.7 (vii) Turbulence and speed of flow,

5.3.a.8 ~~(viii)~~ Morphology of the receiving system as related to plume behavior, and biological phenomena;

5.3.a.9 ~~(ix)~~ Designated water use categories; and

5.3.b ~~(3)~~ Discharge characteristics such as:

5.3.b.1 ~~(i)~~ Flow regime,

5.3.b.2 ~~(ii)~~ Volume,

5.3.b.3 ~~(iii)~~ Design,

5.3.b.4 ~~(iv)~~ Location,

5.3.b.5 ~~(v)~~ Rate of mixing and dilution, and

5.3.b.6 Plume behavior and mass-emission rates of constituents including knowledge of their persistence, toxicity, and chemical or physical behavior with time.

5.4 ~~(b)~~ Where the 7-day, 10-year return frequency is 5 cfs or less, no mixing zone may be established.

5.5 ~~(e)~~ In order to facilitate a determination or assessment of a mixing zone pursuant to this section, the Chief may require a permit applicant or permittee to submit such information as deemed necessary.

Section 6. Water Use Categories

6.1 These rules regulations establish general Water Use Categories and water quality standards for the waters of the State. Incidental utilization for whatever purpose may or may not constitute a justification for assignment of a Water Use Category to a particular stream segment.

6.2 Category A - Water Supply, Public - This category is used to describe waters which, after conventional treatment are used for human consumption. This category includes:

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; and

6.2.d All other surface water intakes where the water is used for human consumption, and

6.2.e Shall apply to the stream segment extending upstream from the intake for a distance as defined in Section 7.1.b.2 of this series.

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 a fish population composed overwhelmingly of warm water species. (These are primarily sport fisheries and may be stocked with trout seasonally.)

6.3.b Category B2 - Trout Waters - See Section 2 and Appendix A for a representative list.

6.3.c. Category B3 - Small Non Fishable Streams. Streams or stream segments which because of their size or flow patterns do not offer sport fishing; they generally contain only minnows, darters, etc.

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.

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 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 or more users for industrial cooling.

See pages 8-10.

Section-6--Water-Use-Categories-

-----These regulations establish general water use categories and water quality standards for the waters of the State.

Category-A--Water-Contact-Recreation:- See page 9 Category C.

This category includes swimming, fishing, water skiing, and certain types of pleasure boating such as sailing in very small craft and small outboard motor boats.

Category-B1--Water-Supply, Public:- See page 8-9 Category A.

This category is used to describe all waters used by the public for drinking purposes and applies to water before it is treated. It does not include water for cooling.

Category-B2--Water-Supply, Industrial:- See page 9-10 Category E.

This category is used to describe all waters used for industrial supplies. It does not include water for cooling.

Category B3. -- Water Supply, Agricultural: See page 9 Category D.

This category includes all water used for agriculture, including irrigation as well as livestock watering. It is understood that these waters would also be suitable for wildlife watering.

See page 9 Category B.

Category C1. -- Propagation and Maintenance of Fish and Other Aquatic Life:--

This category includes all waters not designated as trout waters.--

Category C2. -- Trout Waters: See page 3, 2.14 and Appendix A.

See Section 2 and Section 7.71.--

Category D. -- Water Transport, Cooling and Power: See pages 9 & 10 Category E.

This category includes cooling water, power production, commercial and pleasure vessel activity, except those small craft included in Category A. -- Cooling water is that water used for industrial cooling. -- Power production in this definition is hydro-power. --

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 or more industrial users; It does not include water for cooling.

Section 7. WEST VIRGINIA WATERS

7.1 (a) Applicability of Water Quality Standards. The following shall apply at all times unless a specific exceptions is granted in this section:

~~(i) All water use categories described in Section 6 except Category C2 - Trout Waters and B1 - Water Supply Public. When stream, tributaries or stream segments are classified for more than one water use category, they shall be protected by water quality standards for the use category requiring the most stringent criteria.~~

7.1.a 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 7-consecutive-day drought flow with a 10-year return frequency (7Q10). NOTE: Exceptions do not apply to Trout Waters.

7.1.a.1 Exceptions: Water quality standards shall not apply: (See Section 7.2 for site specific exceptions.)

7.1.a.1.i When the flow is less than 7Q10;

7.1.a.1.ii In wet weather streams, or intermittent streams, when they are dry or have no measurable flow, provided that the designated uses of downstream waters are not adversely affected;

7.1.a.1.iii In any mixing zones which are established pursuant to Section 5 of these rules;

7.1.a.1.iv Where lesser quality is due to natural conditions. In such cases the naturally occurring values shall be the applicable criteria.

7.1.b Water Use Categories as described in Section 6.

7.1.b.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

Section 7--West Virginia Waters- See pages 10-16.

7.01--Applicability of Water Quality Standards See page 10.

(a)--The following shall apply to all West Virginia waters unless specific exceptions are granted in this section:--

(1)--All water use categories described in Section 6 except Category--
G2--Trout Waters and B1--Water Supply Public--When stream, tributaries--
or stream segments are classified for more than one water use category,--
they shall be protected by water quality standards for the use category--
requiring the most stringent criteria.--

(2)--Water quality standards described in Section 8.

(b)--With the exception noted in this section, water quality standards--
shall apply at all times when flows are equal to or greater than the--
minimum mean 7 consecutive day drought flow with a 10-year return frequency.

(c)--Water quality standards shall not apply:--

(1)--In wet weather streams, provided that the designated uses of--
downstream waters are not adversely affected,--

(2)--This subsection does not apply to trout waters,--

(d)--Water quality standards shall not apply in any mixing zones--
which are established pursuant to Section 5.--

(e)--Water quality criteria shall apply except where lesser quality--
is due to natural conditions,--The naturally occurring values shall be--
considered to be the applicable criteria.--

be protected by criteria for the use category requiring the most stringent protection.

7.1.b.2 Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of (5) miles 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. Provided, however, that within a zone extending one half (1/2) mile above the intake, the Chief, Division of Water Resources, Department of Natural Resources, may establish for any discharge, effluent limitations for the protection of human health that require additional removal of those pollutants. (If a watershed is not significantly larger than either of the two (2) zones above the intake the water supply section may include the entire upstream watershed to its headwaters.)

7.2 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).

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

7.2.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:

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

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

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

7.2.b.4 PNB - North Branch. All tributaries to the North Branch arising in West Virginia.

7.2.b.4.i Exceptions: to 7.2.b:

7.2.b.4.i.A Except for the unnamed tributary of the South Branch of Buzzard Run above and below Prather Pond shall not have Water Use Category A; therefore may contain chlorides not to exceed 250 mg/l and fluoride not to exceed 2.0 mg/l.

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--(f) All streams and their tributaries in West Virginia shall be individually identified in the "Key to West Virginia Watersheds and Major Tributaries" (1956) as published by the Corporation Commission of West Virginia. The water use category for each segment will be assigned as data relative to existing water quality objectives.

--MAJOR RIVER BASINS AND THEIR ALPHANUMERIC SYSTEM--

--7.11 Potomac River Basin -- P, PG, PNB, PSB and S--

--All streams and their tributaries in West Virginia, draining to the North Branch of the Potomac River, including the South Branch of the Potomac River. All streams and their tributaries in West Virginia draining to the Potomac River from its headwaters at the junction of the North and South Branches of the Potomac to the State line at Harpers Ferry, West Virginia, including the Shenandoah River.

--Exception:--

--Except for the unnamed tributary of the South Branch of Buzzard Run below Prather Pond shall not have the use of B1, therefore may contain chlorides not to exceed 250 mg/l.

7.2.b.4.i.B Except for Turkey Run a small tributary of Opequon Creek (P-4) of the Potomac River shall not have Water Use Category A; and therefore may contain fluoride not to exceed 8 mg/l, ammonia not to exceed 4 mg/l, chlorides not to exceed 530 mg/l, cyanide (as free cyanide HCN + CN) not to exceed 50 ug/l and hexavalent chromium (total) not to exceed 100 ug/l.

7.2.b.4.ii Exception: to 7.2.b.4. Except that the Stony River downstream from the limit of the thermal mixing zone (as established by 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 to exceed 73°F at any time during the months of December through April.

7.2.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:

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

7.2.c.1.i MCB - Blackwater River and all its tributaries.

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

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

7.2.c.3.i MTB - Buckhannon River and all its tributaries.

7.2.c.3.ii MTM - Middle Fork River and all its tributaries.

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

7.2.c.5 Exception: to 7.2.c: Except that 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.

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-7.61-- Monongahela River Basin -- M, MC, MCS, MW,
-MT, MTB, MY, and MTM--

-The Monongahela River and all its tributaries--

Exceptions:

-(a)--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. No exception in the flow for
-tributary streams.--

-(b)--Water Use Categories B2, B3, and D are excluded
-from the tributaries of the Youghiogheny River in West Virginia
-which flow into Maryland.--

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SEE APPENDIX A

7.71--Trout Waters--

The primary purpose of this section is to identify--
--certain important trout waters.-- Therefore, this list of trout--
--waters includes, but is not limited to the following streams,
--stream sections, lakes, reservoirs and ponds.--

<u>--Stream--</u>	<u>--County--</u>
--Abes Run--	--Pocahontas--
--Anglins Creek--	--Nicholas--
--Anthony Creek (above Big Draft)--	--Greenbrier--
--Back Fork Elk River--	--Webster--
--Beaver Creek--	--Pocahontas--
--Big Bullskin Run--	--Jefferson--
--Big Clear Creek--	--Greenbrier--
--Big Run--	--Pendleton--
--Big Run--	--Randolph--
--Blackwater River (above Davis)--	--Tucker--
--Blaney hollow--	--Monongalia--
--Brushy Fork 9 (above Valley Furnace)--	--Barbour--
--Buckhammon River (above Beans Mill)--	--Upshur--
--Buffalo Creek--	--Preston--
--Camp Brancyr--	--Hardy--
--Camp Creek--	--Mercer--
--Camp Five Run--	--Randolph--

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<u>-Stream-</u>	<u>-County-</u>
-Cattail-Run-	--Jefferson--
-Cherry-River-	--Nicholas--
-Clover-Run-	--Tucker-
-Cold-Stream-	--Hampshire--
-Cranberry-River-	--Peachontas, Webster-- -Nicholas-
-Culverson-Creek-	--Greenbrier--
-Deer-Creek--	--Nicholas--
-Deer-Creek--	--Peachontas--
-Desert-Fork-	--Webster-
-Dillons-Run---	--Hampshire--
-Dry-Fork-(above-Canebrake)-	--McDowell--
-Dry-Fork-(above-Otter-Creek)--	--Randolph, Tucker--
-Dumpling-Run--	--Hardy--
-Dunlop-Creek-(downstream-from- -Harvey-Sewage-Treatment-- -Plant)	--Fayette-
-East-Fork-Glady-Fork-(above-C-&-P- -Compressor-Station)-	--Randolph--
-East-Fork, Greenbrier-River-	--Peachontas-
-East-River-(above-Kellysville)	--Mercer-
-Edwards-Run-and-Pond--	--Hampshire-
-Elklick-Run--	--Tucker--

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<u>Stream</u>	<u>County</u>
--Elk River--(above Webster Springs)	--Pocahontas, Webster, --Randolph
--Elkwater Fork--	---Randolph--
--Elsey Run--	---Preston--
--Evitts Run--(above Rt. 340)--	---Jefferson--
--Fall Run--	--Webster
--Five Mile Run--	--Pocahontas--
--Flowing Springs Run--(above Halltown)	--Jefferson--
--Gandy Creek--(above Whitmer)--	--Randolph--
--Gauley River--(above Moust Coal Tipple)	--Randolph, Webster
--Glade Creek	--Fayette--
--Glade Creek--	--Raleigh--
--Glade Fork--	--Randolph--
--Greenbrier River--(above Hosterman)--	--Pocahontas--
--Harlan Run--	--Berkeley--
--Hills Creek--	--Pocahontas
--Horseshoe Run--	--Tucker--
--Knapps Creek--	--Pocahontas
--Laurel Creek--(above Cotton Hill)--	--Fayette--
--Laurel Creek--	--Greenbrier, Nicholas--
--Laurel Creek--	--Monroe--
--Laurel Fork--	--Pendleton--
--Laurel Fork--	--Randolph

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<u>-Stream-</u>	<u>-----County--</u>
--Laurel-Fork--	-----Webster---
--Laurel-Run--	--Greenbrier--
--Laurel-Run-	-----Pocahontas---
--Laurel-Run--	--Preston-
--Left-Fork-Right-Fork-Buckhannon-River-	--Upshur--
--Left-Fork-Holly-River-	--Webster--
--Left-Fork-Buckhannon-River-	--Randolph,Upshur-
--Left-Fork-Right-Fork-Little-Kanawha- -River-	--Upshur--
--Little-Clear-Creek-&-Laurel-Run- Tributary--	--Greenbrier--
--Little-Fork--	--Pendleton--
--Little-Kanawha-River-(above-Wildcat)-	--Upshur,-Lewis--
--Little-River-(East-Fork)--	--Pocahontas---
--Little-River-(West-Fork)--	--Pocahontas---
--Long-Marsh-Run-	--Jefferson--
--Lost-River--	--Hardy--
--Lower-Cove-Run--	--Hardy--
--Marsh-Fork-(above-Sundial)-	--Raleigh--
--Mash-Fork--	--Mercer
--Maxwell-Run-	--Tucker--
--Meadow-Branch--	--Morgan--
--Meadow-Creek--	--Greenbrier--
--Meadow-Creek-	--Summers--
--Middle-Creek-(above-Route-30-Bridge)-	--Berkeley-

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--Stream--	--County--
Middle Fork River (above Cassity)	--Randolph
Mill Creek (above Markwood)	--Mineral
Mill Creek	--Fayette
Mill Creek	--Berkeley
Mill Creek	--Hampshire
Mill Creek (above Mill Creek)	--Randolph
Mill Run	--Barbour
Mill Run	--Berkeley
Mill Run	--Hampshire
Milligan Creek	--Greenbrier
Moore's Run	--Hardy
Morgan Run	--Monongalia
Mullenax Run	--Pocahontas
New Creek	--Mineral
North River (above Rio)	--Hardy
North Fork Anthony Creek	--Greenbrier
North Fork Cherry River	--Greenbrier, Nicholas
North Fork Deer Creek (above Route	
 --28/5)--	--Pocahontas
North Fork Lunice Creek	--Grant
North Fork Patterson Creek	--Grant
North Fork South Branch	--Pendleton, Grant
Opequon Creek	--Berkeley, Jefferson

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--Stream---	--County--
--Wiggon-Creek-	--Merced---
--Winch-Creek-	--Raleigh-
--Winchester-Creek-	--Wyoming--
--Wood-Creek-	--Ficker-
--Wright-Creek--	--Preston--
--Wich-Creek--	--Monroe---
--Right-Fork-Buckhannon-River--	--Upshur, Randolph--
--Right-Fork-Little-Kanawha-River--	--Webster, Upshur--
--Right-Fork-Middle-Fork-River--Upshur--	
--Roaring-Creek-(above-Little-Lick-- --Branch)--	--Preston-
--Rocky-Marsh-Run-	--Jefferson--
--Salt-Creek-Creek--	--Preston---
--Second-Creek-(Rt. 219-Bridge-to- --Nickel's-Mill)--	--Greenbrier, Monroe-
--Seneca-Creek-	--Pendleton---
--Shavers-Fork-(above-Little-Black-Fork)	--Pocahontas, Randolph-
--Stirling-Creek--	--Pocahontas-
--Ship-Hill-Mill-Run-	--Ficker-
--South-Branch-(above-North-Fork)	--Pendleton-
--South-Fork-Cherry-River--	--Greenbrier, Nicholas-
--South-Fork-Cranberry-River--	--Pocahontas-
--South-Fork-Luncheon-Creek--	--Grant--
--South-Fork-Porter-Creek--	--Monroe--
--South-Mill-Creek-(above-Hick)--	--Grant---

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--Stream--	--County--
--Spring-Creek--	--Greenbrier--
--Spring-Run-	--Grant-
--Stoney-Creek---	--Pocahontas--
--Sugar-Creek--	--Webster--
--Summersville-Lake-(Tailwaters)--	
--(above-Collison-Creek)--	--Nicholas-
--Sutton-Lake-(Tailwaters)-(above--	
--Route-38/5-Bridge)	--Braxton-
--Swago-Creek--	--Pocahontas-
--Tea-Creek--	--Pocahontas-
--Three-Spring-Run-	--Randolph-
--Tihance-Creek--	--Berkeley--
--Town-Run--	--Jefferson--
--Trout-Run--	--Hardy-
--Turkey-Creek--	--Monroe-
--Tuscararo-Creek-(above-Martinsburg)	--Berkeley-
--Tygart-River-(above-Huttonsville)	--Randolph--
--Tygart-Tailwaters-(above-Route-119--	
--Bridge)-	--Taylor--
--Waites-Run--	--Hardy--
--West-Fork-Greenbrier-River-	--Pocahontas-
--Whiteday-Creek-(above-Smithtown)	--Marion;Monongalia--
--Williams-River-(above-Dyer)-	--Pocahontas;Webster
--Wolf-Creek--	--Fayette--
--Wolf-Creek--	--Preston--
--Wolfpen-Creek--	--Fayette--

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<u>-Lakes and Ponds-</u>	<u>--County--</u>
<u>Buffalo Fork</u>	<u>--Pocahontas--</u>
<u>Coopers Rock</u>	<u>--Monongalia--</u>
<u>Dog Run</u>	<u>--Harrison--</u>
<u>Edwards Run</u>	<u>--Hampshire--</u>
<u>Fort Ashby</u>	<u>--Mineral--</u>
<u>French Creek</u>	<u>--Upshur--</u>
<u>Hawse Run</u>	<u>--Pendleton--</u>
<u>New Creek Dam 14</u>	<u>--Grant--</u>
<u>Seneca</u>	<u>--Pocahontas--</u>
<u>Spruce Knob</u>	<u>--Randolph--</u>
<u>Stephens</u>	<u>--Raleigh--</u>
<u>Stonecoal</u>	<u>--Lewis--</u>
<u>Summersville Reservoir</u>	<u>--Nicholas--</u>
<u>Summit</u>	<u>--Greenbrier--</u>
<u>Sutton Reservoir</u>	<u>--Braxton--</u>
<u>Teter Creek</u>	<u>--Barbour--</u>
<u>Thomas Park</u>	<u>--Tucker--</u>
<u>Trout Pond</u>	<u>--Hardy--</u>
<u>Warden</u>	<u>--Hardy</u>

7.2.c.5.i Exception; to 7.2.c.4: Water Use Categories D, and E are excluded from the tributaries of the Youghiogheny River in West Virginia which flow into Maryland.

7.2.d O - Ohio River Basin. The Ohio River and all its tributaries to the West Virginia-Ohio-Pennsylvania State lines excluding the following major tributaries which are designated as follows:

7.2.d.1 O1 - 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.

7.2.d.2 O2 - Ohio River - tributaries. All tributaries of the Ohio River excluding the following major tributaries:

7.2.d.2.i Exceptions: to 7.2.d.2:

7.2.d.2.i.A Except the stretch of Conners Run (O-77-A) (a tributary of Fish Creek), shall not have the Water Use Category A; therefore may contain arsenic not to exceed 200 ug/l and selenium not to exceed 62 ug/l.

7.2.d.2.i.B Except for that segment of Harmon Creek (O-97) from its confluence with the Ohio River to a point 2.2 miles upstream shall not have the Water Use Category A designation. Therefore, at any time the temperature shall not exceed 100° F, total iron shall not exceed 4.0 mg/l and total fluoride shall not exceed 2.0 mg/l, each as thirty (30) day average values to be determined from four (4) weekly samples.

7.2.d.2.i.C Except in the stretch of Cow Creek (O-55) from its mouth to a point approximately 2,300 feet upstream, the Water Use Category A shall not apply.

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

7.2.e.1 LKH - Hughes River and all its tributaries.

7.2.f 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.

7.2.f.1 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

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7.51 -- Ohio River Basin -- Main Stem -- 0

The main stem of the Ohio River from the
Ohio-Pennsylvania-West Virginia State line to the
Ohio-Kentucky-West Virginia State line.

Exceptions:

No exceptions specified.

7.52 -- Ohio River Basin -- Tributaries -- KY, KY, KY,
KW, KS and OH

All tributaries to the Ohio River, excluding the Big
Sandy, Guyandotte and Kanawha Rivers.

Exceptions:

(a) -- Except the stretch of Conners Run (0-77-A) (a
tributary of Fish Creek), from its mouth to the discharge from
Conners Run impoundment, shall not have the use of B1, therefore
may contain arsenic not to exceed 200 ug/l and selenium not to
exceed 62 ug/l.

(b) -- Except the stretch of Harmon Creek (a tributary of
the Ohio River) from its mouth to a point 2.2 miles upstream shall
be exempt from the specific criteria limitation for temperature.

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Series-F---

-7.41--Big-Sandy-and-Guyandotte-River-Basins--BS7--
-BS7-067-06M-and-06C--

-All-streams-and-tributaries-of-the-following-rivers-are--
-included:-the-Big-Sandy-River-and-all-of-its-tributaries-arising--
-in-West-Virginia-from-its-mouth-at-Kenova,-West-Virginia-to-the--
-confluence-of-the-Levisa-Fork,-Tug-Fork,-and-all-its-tributaries--
-arising-in-West-Virginia-from-its-confluence-with-Levisa-Fork-to--
-its-headwaters;-all-tributary-streams-to-the-Tug-Fork-crossing-the--
-State-boundary-from-Virginia-to-West-Virginia;-and-the-Guyandotte--
-River-and-all-its-tributaries-from-its-mouth-at-Huntington,-West--
-Virginia-to-its-headwaters,--

-Exceptions:-

-no-exceptions-specified,--

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-7.31--Bluestone-River, Bluestone-Lake, East-River,
-New-River, Gauley-River and Greenbrier-River--
-Basins--KNB, KN, KN-60, KNC, KG, KCC and KGW--

-Both the Bluestone and Greenbrier Rivers and all their
-tributaries from the Virginia-West Virginia State line to their
-individual confluence with the New River, the East River and all
-its tributaries arising in Virginia flowing into West Virginia and
-returning to Virginia, and portions thereof within the boundary of
-the State of West Virginia, the New River, including all
-tributaries in addition to those already mentioned from the
-Virginia-West Virginia State line to its confluence with the
-Gauley River, the Gauley River and all its tributaries including
-the Cranberry and Williams Rivers from their source to the
-confluence with the New River.

--Exceptions:--

-Water use Categories B2 and D are deleted in Bluestone
-Lake and temperature rise shall be limited to no more than 3 F
-above natural not to exceed 8 F at any time during the months of
-May through November and not to exceed 7 F at any time during
-December through April in Bluestone Lake.--

excluding the following major tributaries which are designated as follows:

7.2.f.2 KP - Pocatalico River and all its tributaries.

7.2.f.3 KC - Coal River and all its tributaries.

7.2.f.4 KE - Elk River and all its tributaries.

7.2.f.5.i Exceptions; to 7.2.f:

7.2.f.5.i.A For the Kanawha River main stem, Zone 1, Water Use Category A shall not apply; and

7.2.f.5.i.B The minimum flow shall be 1,960 cfs at the Charleston gauge.

7.2.f.5.ii Exceptions; to 7.2.f.1:

7.2.f.5.ii.A For the main stem of the Kanawha River only, the minimum flow shall be 1,896 cfs at mile point 72.

7.2.f.5.ii.B Except the stretch between the mouth of Little Scary Creek (K-31) and the Little Scary impoundment shall not have Water Use Category A; therefore may contain arsenic not to exceed 200 ug/l and selenium not to exceed 62 ug/l.

7.2.f.6 KG - Gauley River. The Gauley River and all its tributaries excluding the following major tributaries which are designated as follows:

7.2.f.6.i KGM - Meadow River and all its tributaries.

7.2.f.6.ii KG34 - Cherry River and all its tributaries.

7.2.f.6.iii KGCR - Cranberry River and all its tributaries.

7.2.f.6.iv KGW - Williams River and all its tributaries.

7.2.f.7 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:

7.2.f.7.i KNG - Greenbrier River and all its tributaries.

7.2.f.7.ii KNB - Bluestone River and all its tributaries.

7.2.f.7.iii KNE - East River and all its tributaries.

7.2.f.7.iv KN-60 - Bluestone Lake.

7.2.f.8 Exception: to 7.2.f: Except the stretch of Laurel Creek (KN-5) (a tributary of the New River) from the confluence of Dempsey Branch and Laurel Creek to a point 1.7 miles below, where the specific criterion for iron shall be 3.0 mg/l total iron, and from that point to the confluence of Laurel Creek and the New River, the specific criterion for iron shall be 1.0 mg/l total iron.

7.2.f.9 Exception: to 7.2.f.7.i: Water Use Category A shall not apply to that segment of the East Fork of the Greenbrier River from the reservoir located at the tannery to the confluence with the West Fork. That segment of the East Fork therefore may contain chlorides not to exceed 1,500 mg/l maximum daily.

7.2.f.10 Exception: to 7.2.f.7.iv: Category E Water Uses are deleted in Bluestone Lake and temperature rise shall be limited to no more than 3° F above natural 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 in Bluestone Lake.

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

7.2.g.i OGM - Mud River and all its tributaries.

7.2.h 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:

7.2.h.i BST - Tug Fork and all its tributaries.

7.3 Special Waters of the State

7.3.a 7-72 High Quality Waters. High quality waters shall include but are not limited to:

7.3.a.1 (a) All streams designated by the West Virginia Legislature under the West Virginia Natural Streams Preservation Act, West Virginia Code 25-5B-1, et seq.

7.3.a.2 (b) West Virginia High Quality Streams Fourth Edition, prepared by the Wildlife Resources Division, Department of Natural Resources (1979).

WRB

Adm. Regs. ---20-5-8-20-5A---

Series I---

7.21--Kanawha River Basin:--Zone One--K, KP, KC and KE--

--All of the Kanawha River tributaries from its mouth at Point Pleasant to Gauley Bridge and the main stem of the Kanawha River from the junction of the Gauley and New Rivers at Gauley Bridge to mile point 72 near Diamond, West Virginia.--

Exceptions:--

(a)--For the main stem of the Kanawha River only, the minimum flow shall be 1,896 cfs at mile point 72, and

--(b)--Except the stretch between the mouth of Little Scary Creek (K31) and the Little Scary impoundment shall not have the use of B1, therefore may contain arsenic not to exceed 200 ug/l and selenium not to exceed 62 ug/l.--

7.22--Kanawha River Basin:--Zone Two--K--

--The main stem of the Kanawha River from mile point 0, where it joins the Ohio River, to mile point 72 near Diamond, West Virginia.--

Exceptions:--

(a)--Water Use Category B1 shall not apply, and

(b)--The minimum flow shall be 1,960 cfs at the Charleston gauge.--

WRB

-Adm. Reg. -20-5-a-20-5A--
-Series-I-

-7.31- -Bluestone-River, Bluestone-Lake, East-River,-
-New-River, Gauley-River and Greenbrier-River--
-Basins-- -KRB, -KN, -KN-60, -KNG, -KG, -KGE and -KOW--

-Both the Bluestone and Greenbrier Rivers and all their
-tributaries from the Virginia-West-Virginia State line to their
-individual confluence with the New River, the East River and all
-its tributaries arising in Virginia flowing into West Virginia and
-returning to Virginia, and portions thereof within the boundary of
-the State of West Virginia, the New River, including all
-tributaries in addition to those already mentioned from the
-Virginia-West-Virginia State line to its confluence with the
-Gauley River, the Gauley River and all its tributaries including
-the Cranberry and Williams Rivers from their source to the
-confluence with the New River.

--Exceptions:--

-Water use Categories B2 and D are deleted in Bluestone
-lake and temperature rise shall be limited to no more than 3 F--
-above natural not to exceed 8 F at any time during the months of
-May through November and not to exceed 7 F at any time during
-December through April in Bluestone lake.--

WRB

-Adm. Reg. --20-5-8-20-5A--

Series--F---

-7.41--Big-Sandy-and-Guyandotte-River-Basins--BS,-
-BSF,-06,-06M-and-06E--

-All-streams-and-tributaries-of-the-following-rivers-are--
-included:--the-Big-Sandy-River-and-all-of-its-tributaries-arising--
-in-West-Virginia-from-its-mouth-at-kenova,West-Virginia-to-the--
-confluence-of-the-Lexisa-Fork,Tug-Fork,and-all-its-tributaries--
-arising-in-West-Virginia-from-its-confluence-with-Lexisa-Fork-to--
-its-headwaters;all-tributary-streams-to-the-Tug-Fork-crossing-the--
-State-boundary-from-Virginia-to-West-Virginia;and-the-Guyandotte--
-River-and-all-its-tributaries-from-its-mouth-at-Huntington,West--
-Virginia-to-its-headwaters.--

-Exceptions:--

-no-exceptions-specified.--

WRB

-Adm. Reg. --20-5-2-20-5A--
Series I

-7.51--Ohio River Basin--Main Stem--O--

-The main stem of the Ohio River from the
---Ohio-Pennsylvania-West Virginia State line to the--
-Ohio-Kentucky-West Virginia State line--

-Exceptions:-

-No exceptions specified--

-7.52--Ohio River Basin--Tributaries--BK7-BKH7--
-LKW7-LKS and-OMi--

-All tributaries to the Ohio River, excluding the Big
-Sandy, Guyandotte and Kanawha Rivers--

-Exceptions:-

-(a)--Except the stretch of Conners Run (O-77-A)--(a-
-tributary of Fish Creek)--from its mouth to the discharge from
-Conners Run impoundment--shall not have the use of B1, therefore--
-may contain arsenic not to exceed 200 ug/l and selenium not to
-exceed 62 ug/l--

-(b)--Except the stretch of Harmon Creek (a tributary of
-the Ohio River)--from its mouth to a point 2.2 miles upstream shall--
-be exempt from the specific criteria limitation for temperature--

WQS
Leg. Rule, 20-5 & 20-5A
Series I, Sec. 7.3.b

7.3.b 7-73 National Resource Waters. National Resource Waters shall include but are not limited to the following waters of the State:

7.3.b.1 (a) All Federally designated rivers under the "Wild and Scenic Rivers Act", Public Law 95-542, as amended, 16 U.S.C. 1271, et seq.

7.3.b.2 (b) All naturally reproducing trout streams.

7.3.b.3 (c) All streams and other bodies of water in State and National Forests and Recreation Areas.

7.3.c (d) National Rivers. "National Parks and Recreation Act of 1978." Public Law 95-625, as amended, 16 U.S.C. 1, et seq.

Section 8. Charts of Specific Water Quality Criteria

Specific state (i.e. total, total recoverable, valent, 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, October 26, 1984.

An "X" or numerical value in the use columns of this section shall represent the applicable criteria.

Charts and use of this section shall be applied in accordance with major stream and use applications, Sections 6 and 7.

Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS				
		Watershed B1.3	Troutwater B2	Recreation C	Public A	All Other
8.1 ALUMINUM: Not to exceed 0.5 mg/l.	mg/l		0.5			
8.2 AMMONIA: The concentration of un-ionized ammonia (NH ₃) shall not exceed 50 ug/l. Un-ionized ammonia shall be determined from values of total ammonia-N, pH and temperature according to the following equation: Un-ionized ammonia = 1.2 (total ammonia-N / 10 ^(pk_a - pH)) where pk _a = 0.0902 + 2730 / (273.2 + T) and T = temperature in degrees C.	ug/l	50			50	
8.2.1 The concentration of un-ionized ammonia shall not exceed 20 ug/l.	ug/l		20			
8.3 ARSENIC: Not to exceed 50 ug/l.	ug/l				50	
8.3.1 Not to exceed 100 ug/l (Category D Uses).	ug/l					100
8.3.2 Not to exceed 400 ug/l trivalent arsenic.	ug/l	440	440	440		
8.4 BARIUM: Not to exceed 1.0 mg/l.	mg/l				1	
8.5 CADMIUM: Hardness mg/l as CaCO ₃ Soluble Cadmium (ug/l) 0-35 1 36-75 2						

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria

Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
ALUMINUM: Not to exceed 0.5 mg/l									X
AMMONIA: The concentration of un-ionized ammonia (NH ₃) shall not exceed 50 ug/l. Un-ionized ammonia shall be determined from values of total ammonia-N, pH and temperature according to the following equation: Un-ionized ammonia = 1.2 (total ammonia-N / [1 + 10 ^(pk_a-pH)] where pk _a = 0.092 + 2730/(273.2 + T) and T = Temperature in degrees C	X	X	X	X	X	X	X	X	
The concentration of un-ionized ammonia (NH ₃) shall not exceed 20 ug/l									X
ARSENIC: Not to exceed 50 ug/l	X	X	X	X	X	X	X	X	X

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.32	7.31	7.41	7.51	7.52	7.61	7.71
BARIUM:									
Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X
Water Use Category B1 & C2:									
CADMIUM:									
Hardness mg/l as CaCO ₃									
0-35									
36-75									
76-150									
>151									
Soluble Cadmium (ug/l)									
1									
2									
5									
10									
Not to exceed 10 ug/l	X	X	X	X	X		X	X	
Not to exceed 0.4 ug/l where hardness is less than 75 mg/l as CaCO ₃ and 1.2 ug/l in water where hardness is greater than 75 mg/l as CaCO ₃									X

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
Total Recoverable - see 40 CFR 136 -
except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA		WV WATERS (See Section 7)								
		7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
Water Use Category C1:										
CADMIUM:										
Hardness mg/l as CaCO ₃	Total Recoverable Cadmium (ug/l)									
0-25	3									
26-50	6									
51-75	8									
76-100	11									
101-150	17									
151-200	23									
201-300	36									
301-400	49	X	X	X	X	X	X	X	X	
CHLORIDE:										
Not to exceed 100 mg/l		X	X	X	X			X	X	X
.....										
Not to exceed 150 mg/l				X						
.....										
Not to exceed 250 mg/l							X			
.....										

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA		WV WATERS (See Section 7)									
		7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71	
Water Use Category B1:											
COPPER:											
<u>Hardness</u> mg/l as CaCO ₃	<u>Copper Criterion</u> ug/l as Total Copper										
0-50	5										
51-80	10										
81-120	15										
121-160	20										
161-200	25										
201-260	50										
261-280	60										
281-300	75										
301-320	85										
321-340	115										
>341	145	X	X	X	X	X	X	X	X	X	X
.....											
Water Use Category C1:											
COPPER:											
<u>Hardness</u> mg/l as CaCO ₃	<u>Total Copper</u> (ug/l)										
50	10										
100	20										
200	40										
300	60										
400	80										
500	100										
600	120										
700	140	X	X	X	X	X	X	X	X	X	X
.....											
Water Use Category C2:											
<u>Hardness</u> mg/l as CaCO ₃	<u>Total Copper</u> (ug/l)										
50	6										
100	11										
200	20										
300	29										
400	38										
500	46										
600	55										
700	63										X

Section 8

SPECIFIC WATER QUALITY CRITERIA

USE DESIGNATIONS

PARAMETER	UNITS	USE DESIGNATIONS				
		Warmwater B1.3	Troutwater B2	Recreation C	Public A	All Other
8.7.1 COPPER (Con't)						
400	38					
500	46					
600	55					
700	63	ug/l	X	X		
8.8 CYANIDE:						
(As Free cyanide HCN + CN ⁻): Not to exceed 5 ug/l.		ug/l	5	5	5	5
8.9 DISSOLVED OXYGEN:						
Not less than 5.0 mg/l at any time.		mg/l	X		X	X
8.9.1						
Not less than 4.0 mg/l at any time in the Kanawha River main stem, Zone 1.		mg/l	X			
8.9.2						
Concentration shall average 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. Ohio River main stem.		mg/l	X			
8.9.3						
Not less than 7.0 mg/l in spawning areas and in no case less than 6.0 mg/l at any time.		mg/l		X		
8.10 FECAL COLIFORM:						
Maximum allowable level of fecal coliform content for Primary 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 exceed 400/100 ml in more than ten percent of all samples taken during the month.		counts			X	

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
CYANIDE (As Free Cyanide HCN + CN ⁻): Not to exceed 5 ug/l	X	X	X	X	X	X	X	X	X
DISSOLVED OXYGEN: Not less than 5.0 mg/l at any time	X	X		X	X		X	X	
..... Not less than 4.0 mg/l at any time			X						
..... Concentration shall average 5.0 mg/l per calendar day and shall not be less than 4.0 mg/l at any time or place outside the mixing zone						X			
..... Not less than 7.0 mg/l in spawning area and in no case less than 6.0 mg/l at any time									X

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
FECAL COLIFORM CONTENT: (Either MPN or MF count) shall not exceed 200 per 100 ml as a 30-day geometric mean based on not less than five (5) samples during any 30-day period nor exceed 400 per 100 ml in more than ten percent (10%) of all samples during any 30-day period	X	X	X	X	X	X	X	X	X
..... FLUORIDE: Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X
..... Water Use Category B1: HEXAVALENT CHROMIUM (Total): Not to exceed 50 ug/l	X	X	X	X	X	X	X	X	X
..... Water Use Category C1: HEXAVALENT CHROMIUM (Total): Not to exceed 50 ug/l	X	X	X	X	X	X	X	X	
..... Water Use Category C2: HEXAVALENT CHROMIUM (Total): Not to exceed 7.2 ug/l									X

Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS				
		Warmwater B-1,3	Trouwater B-2	Recreation C	Public A	All Other Uses
8.10.1 FECAL COLIFORM (Cont'd) For the Ohio River main stem (O-1). For 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.	counts			X		
8.11 FLUORIDE: Not to exceed 1.4 mg/l.	mg/l				1.4	
8.11.1 Not to exceed 2.0 mg/l for D Uses.	mg/l					2.0
8.12 HEXAVALENT CHROMIUM: Not to exceed 50 ug/l.	ug/l				50	
8.12.1 Not to exceed 10 ug/l.	ug/l	10				
8.12.2 Not to exceed 7.2 ug/l.	ug/l		7.2			
8.13 IRON: Not to exceed 1.5 mg/l. Effluent limitations which may result in a concentration of up to 3.5 mg/l total iron in	mg/l	1.5				1.5

SECTION 8
CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
Total Recoverable - see 40 CFR 136 -
except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV MATERS (See Section 7)																										
	7.1	7.2	7.22	7.3	7.4	7.5	7.52	7.6	7.7																		
<p>IRON (Total):</p> <p>Not to exceed 1.5 mg/l</p> <p>Effluent limitations which may result in a concentration up to 3.5 mg/l total iron in the stream are allowable upon a demonstration to the chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either: (1) the stream is supporting designated uses while containing total iron concentrations higher than the applicable criteria or (2) the stream does not have an aquatic life use to protect. Notwithstanding Series I, Section 4 of the Board's regulations, this demonstration shall be the only demonstration required before the Chief and the Board with respect to water quality related effluent limitations.</p>	X	X	X	X	X	X	X	X	X																		
<p>Not to exceed 0.5 mg/l</p>									X																		
<p>Water Use Category E1.</p> <p>LEAD:</p> <table border="0"> <tr> <td><u>Hardness</u> mg/l as CaCO₃</td> <td><u>Lead Criterion</u> ug/l Total Lead</td> </tr> <tr> <td>0-100</td> <td>25</td> </tr> <tr> <td>>101</td> <td>50</td> </tr> </table>	<u>Hardness</u> mg/l as CaCO ₃	<u>Lead Criterion</u> ug/l Total Lead	0-100	25	>101	50	X	X	X	X	X	X	X	X	X												
<u>Hardness</u> mg/l as CaCO ₃	<u>Lead Criterion</u> ug/l Total Lead																										
0-100	25																										
>101	50																										
<p>Water Use Category C1:</p> <p>LEAD:</p> <table border="0"> <tr> <td><u>Hardness</u> mg/l as CaCO₃</td> <td><u>Lead Criterion</u> ug/l Total Lead</td> </tr> <tr> <td>0-100</td> <td>25</td> </tr> <tr> <td>>101</td> <td>50</td> </tr> </table>	<u>Hardness</u> mg/l as CaCO ₃	<u>Lead Criterion</u> ug/l Total Lead	0-100	25	>101	50	X	X	X	X	X	X	X	X	X												
<u>Hardness</u> mg/l as CaCO ₃	<u>Lead Criterion</u> ug/l Total Lead																										
0-100	25																										
>101	50																										
<p>Water Use Category C2:</p> <table border="0"> <tr> <td><u>Hardness</u> mg/l as CaCO₃</td> <td><u>Total Lead</u> (ug/l)</td> </tr> <tr> <td>50</td> <td>1.0</td> </tr> <tr> <td>100</td> <td>3.8</td> </tr> <tr> <td>200</td> <td>20</td> </tr> <tr> <td>300</td> <td>50</td> </tr> <tr> <td>400</td> <td>100</td> </tr> <tr> <td>500</td> <td>168</td> </tr> <tr> <td>600</td> <td>258</td> </tr> <tr> <td>700</td> <td>372</td> </tr> </table>	<u>Hardness</u> mg/l as CaCO ₃	<u>Total Lead</u> (ug/l)	50	1.0	100	3.8	200	20	300	50	400	100	500	168	600	258	700	372									X
<u>Hardness</u> mg/l as CaCO ₃	<u>Total Lead</u> (ug/l)																										
50	1.0																										
100	3.8																										
200	20																										
300	50																										
400	100																										
500	168																										
600	258																										
700	372																										

SECTION 3

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
MANGANESE:									
Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X
Effluent limitations which may result in a concentration up to 2.0 mg/l manganese in the stream are allowable upon a demonstration to the chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either: (1) the stream is supporting designated uses while containing manganese concentrations higher than the applicable criteria, or (2) the stream does not have an aquatic life use to protect. Notwithstanding Series I, Section 4 of the Board's regulations, this demonstration shall be the only demonstration required before the Chief and the Board with respect to water quality related effluent limitations. This exception does not apply to trout waters.									
.....									
MERCURY (Total):									
The total organism body burden of any aquatic species shall not exceed 0.5 microgram/gram as total mercury	X	X	X	X	X	X	X	X	X
.....									
The total mercury concentration (unfiltered) in any water sample shall not exceed 0.2 ug/l	X	X	X	X	X	X	X	X	X
.....									
NICKEL:									
Not to exceed 50 ug/l									X
.....									
NITRATE (as Nitrate - N):									
Not to exceed 10 mg/l	X	X	X	X	X	X	X	X	X
.....									
NITRITE (As Nitrite - N):									
Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X
.....									
Not to exceed 60 ug/l									X

Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS																								
		Warmwater B-1.3	Troutwater B-2	Recreation-C	Public A	All Other																				
8.13 IRON (Cont'd) in the stream are allowable upon a demonstration to the Chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either; (1) that the stream is supporting designated uses while containing total iron concentrations higher than the applicable criteria or (2) the stream does not have an aquatic life use to protect. Notwithstanding Series I, Section 4 of the Board's rules, this demonstration shall be the only demonstration required before the Chief and the Board with respect to water quality related effluent limitations. This exception does not apply to Trout Waters.	mg/l	X																								
8.13.2 Not to exceed 0.5 mg/l	mg/l		0.5																							
8.14 LEAD: Not to exceed 50 ug/l.	ug/l				50																					
8.14.1 <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Hardness</td> <td style="width: 50%;">Lead</td> </tr> <tr> <td>mg/l as CaCO₃</td> <td>ug/l</td> </tr> <tr> <td>50</td> <td>1.0</td> </tr> <tr> <td>100</td> <td>3.8</td> </tr> <tr> <td>200</td> <td>20</td> </tr> <tr> <td>300</td> <td>50</td> </tr> <tr> <td>400</td> <td>100</td> </tr> <tr> <td>500</td> <td>168</td> </tr> <tr> <td>600</td> <td>258</td> </tr> <tr> <td>700</td> <td>371</td> </tr> </table>	Hardness	Lead	mg/l as CaCO ₃	ug/l	50	1.0	100	3.8	200	20	300	50	400	100	500	168	600	258	700	371	ug/l	X	X			
Hardness	Lead																									
mg/l as CaCO ₃	ug/l																									
50	1.0																									
100	3.8																									
200	20																									
300	50																									
400	100																									
500	168																									
600	258																									
700	371																									
8.15 MANGANESE: Not to exceed 1.0 mg/l.	mg/l	1.0	1.0		1.0																					

Section 8

SPECIFIC WATER QUALITY CRITERIA

USE DESIGNATIONS

PARAMETER	UNITS	USE DESIGNATIONS				
		Watershed B 1.3	Troutwater B2	Recreation C	Public A	All Other
8.15.1 MANGANESE (Cont'd) Effluent limitations which may result in a concentration up to 2.0 mg/l manganese in the stream are allowable upon a demonstration to the Chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either: (1) the stream is supporting designated uses while containing manganese concentrations higher than the applicable criteria, or (2) the stream does not have an aquatic life use to protect. Notwithstanding Series I, Section 4 of the Board's rules, this demonstration shall be the only demonstration required before the Chief and the Board with respect to water quality related effluent limitations. This exception does not apply to trout waters.	mg/l	X	---	---	---	---
8.16 MERCURY: (total) The total organism body burden of any aquatic species shall not exceed 0.5 ug/g as total mercury.	ug/g	0.5	0.5	---	---	---
8.16.1 Total mercury concentration in any unfiltered water sample shall not exceed 0.2 ug/l	ug/l	0.2	0.2	0.2	0.2	---
8.17 NICKEL: Not to exceed 50 ug/l.	ug/l	---	50	---	---	---
8.18 NITRATE: (as Nitrate - N) Not to exceed 10 mg/l.	mg/l	---	---	---	10	---
8.19 NITRITE: (as Nitrite - N) Not to exceed 1.0 mg/l.	mg/l	1.0	---	---	---	---

Section 8

SPECIFIC WATER QUALITY CRITERIA

USE DESIGNATIONS					
Watershed B1.3	Troutwater B2	Restoration C	Public A	All Other	

PARAMETER	UNITS	Watershed B1.3	Troutwater B2	Restoration C	Public A	All Other																																																								
8.19.1 NITRITE (as Nitrite.- N) Cont'd																																																														
Not to exceed 60 ug/l	ug/l	---	60	---	---	---																																																								
8.20 ORGANICS:																																																														
<table border="0"> <thead> <tr> <th></th> <th>Criteria ug/l</th> <th>Body Burden ug/g</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Chlordane</td> <td>.0043</td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DDT</td> <td>.001</td> <td>0.1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Aldrin-Dieldrin</td> <td>.0019</td> <td>0.3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Endrin</td> <td>.0023</td> <td>0.3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Toxaphene</td> <td>.005</td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PBC</td> <td>.001</td> <td>2.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Methoxychlor</td> <td>.03</td> <td>---</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Criteria ug/l	Body Burden ug/g					Chlordane	.0043	1.0					DDT	.001	0.1					Aldrin-Dieldrin	.0019	0.3					Endrin	.0023	0.3					Toxaphene	.005	1.0					PBC	.001	2.0					Methoxychlor	.03	---										
	Criteria ug/l	Body Burden ug/g																																																												
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PBC	.001	2.0																																																												
Methoxychlor	.03	---																																																												
<p>The organic chemicals listed above shall not exceed the specified water quality criteria. When the specified criteria is less than the practical laboratory quantification level in-stream values will be calculated from discharge concentrations and flow rates and from fish body burden.</p>	ug/g ug/l	X	X	X	X	X																																																								
8.21 pH:																																																														
No values below 6.0 nor above 9.0. Higher values due to photosynthetic activity may be tolerated.	unit	X	X	X	X	X																																																								
8.22 PHENOLIC MATERIALS:																																																														
Not to exceed 5 ug/l.	ug/l	5	5	---	5	---																																																								
8.23 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.	pCi/l	X	X	X	X	X																																																								

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
PHENOLIC MATERIALS: Not to exceed 5 ug/l	X	X	X	X	X	X	X	X	X
RADIOACTIVITY: Gross Beta activity not to exceed 1,000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l	X	X	X	X	X		X	X	X
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 5 pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved gross particle activity does not exceed 5 pCi/l; the concentration of tritium shall not exceed 20,000 pCi/l; the concentration of total strontium-90 shall not exceed 8 pCi/l							X		

Section 8

SPECIFIC WATER QUALITY CRITERIA

USE DESIGNATIONS

PARAMETER	UNITS	USE DESIGNATIONS																																								
		Warmwater B1.3	Trotwater B2	Recreation C	Public A	All Other																																				
8.23.1 RADIOACTIVITY (Cont'd) 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 5 pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved particle activity does not exceed 5 pCi/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.	pCi/l	X	X	X	X	X																																				
8.24 SELENIUM: Not to exceed 10 ug/l.	ug/l				10																																					
8.24.1 Not to exceed 35 ug/l Selenite.	ug/l	35	35																																							
8.25 SILVER: <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"><u>Hardness</u></td> <td style="text-align: center;"><u>Silver ug/l</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>0-50</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>51-100</td> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>101-200</td> <td>12</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>greater than 201</td> <td>24</td> <td></td> <td>X</td> <td></td> <td>X</td> </tr> </table>	<u>Hardness</u>	<u>Silver ug/l</u>					0-50	1					51-100	4					101-200	12					greater than 201	24		X		X	ug/l		X		X							
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8.25.1 <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">0-50</td> <td style="text-align: center;">1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">51-100</td> <td style="text-align: center;">4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">101-200</td> <td style="text-align: center;">12</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">201-400</td> <td style="text-align: center;">24</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">401-500</td> <td style="text-align: center;">30</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">501-600</td> <td style="text-align: center;">43</td> <td>X</td> <td></td> <td></td> <td></td> </tr> </table>	0-50	1					51-100	4					101-200	12					201-400	24					401-500	30					501-600	43	X				ug/l	X				
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SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
Total Recoverable - see 40 CFR 136 -
except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
SELENIUM:									
Not to exceed 10 ug/l	X	X	X	X	X	X	X	X	X
Water Use Category B1 & C2:									
SILVER:									
<u>Hardness</u> mg/l as CaCO ₃									
<u>Silver Criterion</u> ug/l Total Silver									
0-50									
51-100									
101-200									
>201									
	X	X	X	X	X	X	X	X	X
.....									
Water Use Category C1:									
<u>Water Hardness</u> mg/l as CaCO ₃									
<u>Total Recoverable Silver</u> ug/l									
0-50									
51-100									
101-200									
201-300									
301-400									
401-500									
501-600									
	X	X	X	X	X	X	X	X	

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
Total Recoverable - see 40 CFR 136 -
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SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
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	X	X			X		X	X	
.....									
Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 90°F in any case			X						
.....									
Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 81°F at any time during the months of May through November and not to exceed 73°F at any time during December through April				X					

Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS				
		Warmwater B1,3	Troutwater B2	Recreation C	Public A	All Other Uses
<p>8.26 TEMPERATURE:</p> <p>Temperature rise shall be limited to no more than 5° F above natural temperature, not to exceed 87° F at any time during months of May through November and not to exceed 73° F at any time during the months of December through April. During any month of the year, heat should not be added to a stream in excess of the amount that will raise the temperature of the water more than 5° F above natural temperature. In lakes and reservoirs, the temperature of the epilimnion should not be raised more than 3° F by the addition of heat of artificial origin. The normal daily and seasonable temperature fluctuations that existed before the addition of heat due to other than natural causes should be maintained.</p>	° F	X				
<p>8.26.1 For the Kanawha River Main Stem (K-1).</p> <p>Temperature rise shall be limited to no more than 5° F above natural temperature, not to exceed 90° F in any case.</p>		X				
<p>8.26.2 For the Bluestone R. (KNB), Bluestone Lake (KN-60), East River (KNE), New River (KN), Gauley R. (KG), and Greenbrier River (KNG).</p> <p>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>8.26.3</p> <p>No heated effluents will be discharged in the vicinity of spawning areas. The maximum temperatures for cold waters are expressed in</p>						

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)																																
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71																								
<p>TEMPERATURE (continued)</p> <p>Temperature rise shall be limited to no more than 5°F above natural temperature. Allowable maximums are:</p> <table border="0"> <tr> <td>Jan.</td> <td>50</td> <td>July</td> <td>89</td> </tr> <tr> <td>Feb.</td> <td>50</td> <td>Aug.</td> <td>89</td> </tr> <tr> <td>March</td> <td>60</td> <td>Sept.</td> <td>87</td> </tr> <tr> <td>April</td> <td>70</td> <td>Oct.</td> <td>78</td> </tr> <tr> <td>May</td> <td>80</td> <td>Nov.</td> <td>70</td> </tr> <tr> <td>June</td> <td>87</td> <td>Dec.</td> <td>57</td> </tr> </table> <p>Water temperature shall not exceed the maximum limits in the above table during more than 1% of the hours in the 12 month period ending with any month; at no time shall the water temperature at such location exceed the maximum limits in the table by more than 3°F</p> <p>.....</p> <p>No heated effluents will be discharged in the vicinity of spawning areas. 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</p>	Jan.	50	July	89	Feb.	50	Aug.	89	March	60	Sept.	87	April	70	Oct.	78	May	80	Nov.	70	June	87	Dec.	57						X			
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SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria

Total Recoverable - see ~~CFR~~ L36 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)																							
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71															
TEMPERATURE (continued) than 3°F by the addition of heat of artificial origin. The normal daily and seasonable temperature fluctuations that existed before the addition of heat due to other than natural causes should be maintained. The maximum temperatures for cold waters are expressed in the following table: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Daily Mean °F</th> <th>Hourly Maximum °F</th> </tr> </thead> <tbody> <tr> <td>Oct. - April</td> <td>50</td> <td>55</td> </tr> <tr> <td>Sept. - May</td> <td>58</td> <td>62</td> </tr> <tr> <td>Transition Period</td> <td></td> <td></td> </tr> <tr> <td>June - August</td> <td>66</td> <td>70</td> </tr> </tbody> </table>		Daily Mean °F	Hourly Maximum °F	Oct. - April	50	55	Sept. - May	58	62	Transition Period			June - August	66	70									X
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THRESHOLD ODOR: Not to exceed a threshold odor number of 8 at 104°F as a daily average	X	X	X	X	X	X	X	X	X															
TOTAL RESIDUAL CHLORINE: Not to exceed 10 ug/ as measured by the amperometric or equivalent method	X	X	X	X	X	X	X	X																
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Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS																																																																																																						
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8.27 THRESHOLD ODOR:																																																																																																								
Not to exceed a threshold odor number of 8 at 104 ^o F as a daily average.	t.o.n.	X	X	X	X																																																																																																			
8.28 TOTAL RESIDUAL CHLORINE:																																																																																																								
Not to exceed 10 ug/l as measured by the amperometric or equivalent method.	ug/l	10		10	10																																																																																																			

Section 8

SPECIFIC WATER QUALITY CRITERIA

USE DESIGNATIONS

PARAMETER	UNITS	USE DESIGNATIONS				
		Warmwater B1,3	Troutwater B2	Recreation C	Public A	All Other
8.28.1 TOTAL RESIDUAL CHLORINE (Cont'd) No chlorinated discharge allowed.	—		X			
.....						
8.28.2 The following chart may be used to derive the criteria instead of the above fixed (10 ug/l) figure:						
<p style="text-align: center;">MATTICE AND ZITTEL SCALE</p>						
8.29 TURBIDITY: No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU's or less, or have more than a 10 percent increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTU's. This limitation shall apply to all earth disturbance activities and shall be determined						

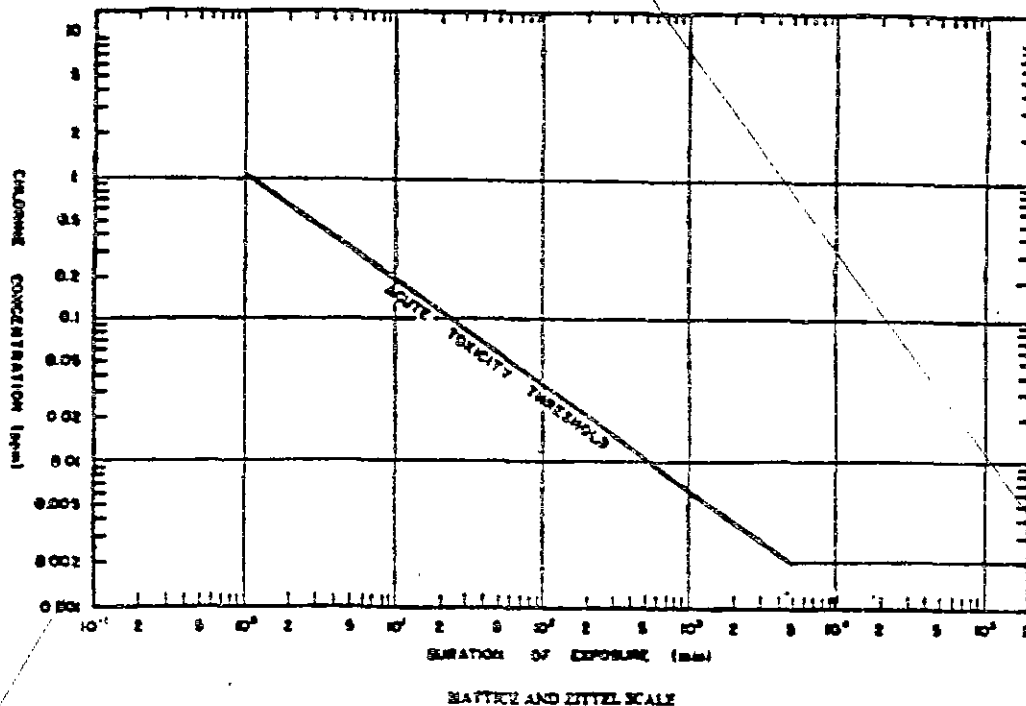
SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
TOTAL RESIDUAL CHLORINE (continued):									
.....									

The following chart may be used to derive the criteria instead of the above fixed criteria:



Section 8

SPECIFIC WATER QUALITY CRITERIA

PARAMETER	UNITS	USE DESIGNATIONS																																																																																	
		Warmwater B 1,3	Troutwater B 2	Recreation C	Public A	All Other Use																																																																													
8.29 TURBIDITY (Cont'd) by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbance activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase.	NTU's	X	X	X	X																																																																														
8.29.1 This rule shall not apply to those activities at which Best Management Practices in accordance with the State's adopted 208 Water Quality Management Plan are being utilized, maintained and completed on a site specific basis as determined by the appropriate 208 cooperative or an approved Federal or State Surface Mining Permit is in effect. This exemption shall not apply to Trout Waters.	NTU's	X	---	X	X																																																																														
8.30 ZINC <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><u>Hardness</u></td> <td style="width: 50%;"><u>Zinc</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mg/l as CaCO₃</td> <td>ug/l</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>0-150</td> <td>50</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>151-300</td> <td>100</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>301-400</td> <td>300</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>greater than 401</td> <td>600</td> <td></td> <td></td> <td>X</td> <td></td> </tr> </table>	<u>Hardness</u>	<u>Zinc</u>					mg/l as CaCO ₃	ug/l					0-150	50					151-300	100					301-400	300					greater than 401	600			X		ug/l	---	---	---	X																																										
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341-400	370																																																																																		
greater than 401	600	X	---	---	---																																																																														
8.30.2 Not to exceed 47 ug/l.	ug/l	---	X	---	---																																																																														

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

NOTES: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)								
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
<p>TURBIDITY:</p> <p>No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU over background turbidity when the background is 50 NTU or less, or have more than a 10 percent increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTU.</p> <p>This limitation shall apply to all earth disturbance activities and shall be determined by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbance activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase</p> <p>.....</p> <p>This regulation shall not apply to those activities at which Best Management Practices in accordance with the State's adopted 208 Water Quality Management Plan are being utilized, maintained and completed on a site</p>									X

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA	WV WATERS (See Section 7)									
	7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71	
TURBIDITY (continued)										
specific basis as determined by the appropriate 208 cooperative or an approved Federal or State Surface Mining Permit is in effect. This exemption shall not apply to tribut waters.	x	x	x	x	x	x	x	x	x	
.....										
Water Use Category B1.										
ZINC:										
Hardness mg/l as CaCO ₃										
0-150										
151-300										
301-400										
>401	x	x	x	x	x	x	x	x	x	x
Zinc Criterion ug/l Total Zinc										
50										
100										
300										
600										
.....										

SECTION 8

CHARTS OF SPECIFIC WATER QUALITY STANDARDS

Notes: X Denotes Applicable Criteria
 Total Recoverable - see 40 CFR 136 -
 except Hexavalent Chromium, Mercury & Iron

SPECIFIC CRITERIA		MV WATERS (See Section 7)								
		7.11	7.21	7.22	7.31	7.41	7.51	7.52	7.61	7.71
Water Use Category C1.										
ZINC:										
<u>Hardness</u>	<u>Zinc Criterion</u>									
<u>mg/l as CaCO₃</u>	<u>ug/l Total Zinc</u>									
0-50	40									
51-80	75									
81-120	90									
121-160	110									
161-200	130									
201-240	150									
241-280	175									
281-300	220									
301-320	270									
321-340	320									
341-400	370									
>401	600	x	x	x	x	x	x	x	x	
.....										
<u>Zinc</u>										
Water Use Category C2:										
	<u>Total Zinc - ug/l</u>									
For All Streams	47									x

Section 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 as Category B and B2, such discharge may be regulated by the Chief where necessary to protect State water through establishment of a safe concentration value as follows:

9.1 (a) 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 or more representative important species of aquatic life designated on a case-by-case basis by the Chief and conducted in a water environment which is equal to or closely approximates that of the natural quality of the receiving waters.

9.2 (b) 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 Chief 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 (b)(1) 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 (2) 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 (c) 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 (a) 9.1 of this section shall perform such testing as approved by the Chief and shall submit all of the following in writing to the Chief:

9.3.a (1) A plan proposing the bioassay testing to be performed.

9.3.b (2) Such periodic progress reports of the testing as may be required by the Chief.

9.3.c (3) A report of the completed results of such testing including, but not limited to all data obtained during the

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course of testing, and all calculations made in the recording, collection, interpretation, and evaluation of such data.

9.4 (d) Bioassay testing shall be conducted in accordance with the methodologies outlined in the following documents: EPA Ecological Research Series Publication, EPA-660/3/75/009; Methods of Acute Toxicity Tests With Fish, Macroinvertebrates, and Amphibians (April, 1975); Standard Methods of the Examination of Water and Wastewater (16th Edition); or Standard Method of Test for ASTM D1345-59 (Reapproved 1970) and published in the 1975 Annual Book of ASTM Standards - part 31 - Water; or EPA Environmental Monitoring Series Publication, EPA-600/4-78-013, Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (600/4-013) (3rd Edition February 1985). Test waters shall be reconstituted according to recommendations and methodologies specified in the previously cited references or methodologies approved in writing by the Chief.

APPENDIX A
 CATEGORY B-2 - TROUT WATERS

<u>River Basin</u>	<u>County</u>	<u>Stream</u>
James River J	Monroe	South Fork Potts Creek
Potomac River P	Jefferson	Town Run
P	"	Rocky Marsh Run
P	Berkeley	Opequon Creek
P	"	Tuscarora Creek (Above Martinsburg)
P	"	Middle Creek (Above Route 30 Bridge)
P	"	Mill Creek
P	"	Hartland Run
P	"	Mill Run
P	"	Tillance Creek
P	Morgan	Meadow Branch
PS	Jefferson	Flowing Springs Run (Above Halltown)
PS	Jefferson	Cattail Run
PS	"	Evitt's Run
PS	"	Big Bullskin Run
PS	"	Long Marsh Run
PC	Hampshire	Cold Stream
PC	"	Edwards Run and Impoundment
PC	"	Dillons Run
PC	Hardy	Lost River
PC	"	Camp Branch
PC	"	Lower Cove Run
PC	"	Moore's Run
PC	"	North River (Above Rio)
PC	"	Waites Run
PC	"	Trout Run
PC	"	Trout Pond (Impoundment)
PC	"	Warden Lake (Impoundment)
PC	"	Rock Cliff Lake (Impoundment)
PSB	Hampshire	Mill Creek
PSB	"	Mill Run
PSB	Hardy	Dumpling Creek
PSB	Grant-	North Fork South Branch

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	Pendleton	
PSB	Grant	North Fork Lunice Creek
PSB	"	South Fork Lunice Creek
PSB	"	South Mill Creek (Above Hiser)
PSB	"	Spring Run
PSB	Pendleton	Hawes Run (Impoundment)
PSB	"	Little Fork
PSB	"	South Branch (Above North Fork)
PSB	"	Senaca Creek
PSB	"	Laurel Fork
PSB	"	Big Run
PNB	Mineral	North Fork Patterson Creek
PNB	"	Fork Ashby (Impoundment)
PNB	"	New Creek
PNB	"	New Creek Dam 14 (Impoundment)
PNB	"	Mill Creek (Above Markwood)

Monongahela River

M	Monongalia- Marion	Whiteday Creek (Above Smithtown)
MC	Monongalia	Morgan Run
MC	"	Coopers Rock (Impoundment)
MC	"	Blaney Hollow
MC	Preston	Laurel Run
MC	"	Elsey Run
MC	"	Saltlick Creek
MC	"	Buffalo Creek
MC	"	Wolf Creek
MC	Tucker	Clover Run
MC	"	Elklick Run
MC	"	Horseshoe Run
MC	"	Maxwell Run
MC	"	Red Creek
MC	"	Slip Hill Mill Branch
MC	"	Thomas Park (Impoundment)
MC	"	Blackwater River (Above Davis)
MC	Randolph	Camp Five Run
MC	"	Dry Fork (Above Otter Creek)
MC	"	Glady Fork
MC	"	Laurel Fork
MC	"	Gandy Creek (Above Whitmer)
MC	"	East Fork Glady Fork (Above C & P Compressor Station)
MC	Randolph	Shavers Fork (Above Little Black Fork)

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MC	"	Three Spring Run
MC	"	Spruce Knob Lake (Impoundment)
MW	Harrison	Dog Run (Pond)
MW	Lewis	Stonecoal
MT	Barbour	Brushy Fork (Above Valley Furnace)
MT	"	Teter Creek Lake (Impoundment)
MT	"	Mill Run
MT	Taylor- Barbour	Tygart Lake Tailwaters (Above Route 119 Bridge)
MT	Preston	Roaring Creek (Above Little Lick Branch)
MT	Randolph	Tygart River (Above Huttonsville)
MT	"	Elkwater Fork
MT	"	Big Run
MTB	Upshur- Randolph	Right Fork Buckhannon River
MTB	Upshur	Buckhannon River (Above Beans Mill)
MTB	Upshur	French Creek
MTB	Upshur- Randolph	Left Fork Right Fork
MTM	Upshur	Right Fork Middle Fork River
MTM	Randolph	Middle Fork River (Above Cassity)
MY	Preston	Rhine Creek
Little Kanawha River		
LK	Upshur	Left Fork-Right Fork Little Kanawha River
LK	Upshur-Lewis	Little Kanawha River (Above Wildcat)
Kanawha River		
KE	Braxton	Sutton Reservoir
KE	"	Sutton Lake Tailwaters (Above Route 38/5 Bridge)
KE	Webster	Back Fork
KE	"	Desert Fork
KF	"	Fall Run

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KE	"	Laurel Fork
KE	Pocahontas	Laurel Run
KE	Webster	Left Fork Holly River
KE	"	Sugar Creek
KE	"	Elk River (Above Webster Springs)
KC	Raleigh	Stephens Lake (Impoundment)
KC	"	Marsh Fork (Above Sundial)
KG	Nicholas	Summersville Reservoir (Impoundment)
KG	"	Summersville Tailwaters (Above Collison Creek)
KG	Nicholas	Deer Creek
KG	Randolph-	Gauley River (Above Moust Coal Webster Tipple)
KG	Fayette	Glade Creek
KG	Nicholas	Hominy Creek
KG	"	Anglins Creek
KG	Greenbrier	Big Clear Creek
KG	"	Little Clear Creek and Laurel Run
KG	Greenbrier	Meadow Creek
KG	Fayette	Wolf Creek
KG	Nicholas	Cherry River
KG	Greenbrier-	Laurel Creek
	Nicholas	
KG	Greenbrier-	North Fork Cherry River
	Nicholas	
KG	Greenbrier	Gumt Lake (Impoundment)
KG	Greenbrier-	South Fork Cherry River
	Nicholas	
KGC	Pocahontas-	Cranberry River
	Webster-	
	Nicholas	
KGC	Pocahontas	South Fork Cranberry River
KGW	Pocahontas	Tea Creek
KGW	Pocahontas-	Williams River (Above Dyer)
	Webster	
KN	Raleigh	Glade Creek
KN	Summers	Meadow Creek
KN	Fayette	Mill Creek
KN	"	Laurel Creek (Above Cotton Hill)
KN	Raleigh	Pinch Creek
KN	Monroe	Rich Creek

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KN	"	Turkey Creek
KN	Fayette	Dunloup Creek (Downstream from Harvey Sewage Treatment Plant)
KN	Mercer	East River (Above Kelleysville)
KN	"	Pigeon Creek
KN	Monroe	Laurel Creek
KNG	Monroe	Kitchen Creek (Above Gap Mills)
KNG	Greenbrier	Culverson Creek
KNC	"	Milligan Creek
KNG	Greenbrier- Monroe	Second Creek (Rt. 219 Bridge to Nickell's Mill)
KNG	Greenbrier	North Fork Anthony Creek
KNG	"	Spring Creek
KNG	"	Anthony Creek (Above Big Draft)
KNG	Pocahontas	Watoga Lake
KNG	"	Beaver Creek
KNG	"	Knapp's Creek
KNG	"	Hills Creek
KNG	"	North Fork Deer Creek (Above Route 28/5)
KNG	"	Deer Creek
KNG	"	Sitlington Creek
KNG	"	Stoney Creek
KNG	"	Swago Creek
KNG	"	Buffalo Fork (Impoundment)
KNG	"	Seneca (Impoundment)
KNG	"	Greenbrier River (Above Hosterman)
KNG	"	West Fork Greenbrier River
KNG	"	Little River-East Fork
KNG	"	Little River-West Fork
KNG	"	East Fork, Greenbrier River
KNG	"	Five Mile Run
KNG	"	Mullenax Run
KNG	"	Abes Run
KNB	Mercer	Marsh Fork
KNB	"	Camp Creek
OG	Wyoming	Pinnacle Creek
BST	McDowell	Dry Fork (Above Canebrake)

APPENDIX B
 CATEGORY A - WATER SUPPLY PUBLIC

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
Potomac River			
P	Jefferson	3-M Company	Turkey Run
P	"	Shepardstown Water	Potomac River
P	Jefferson	Harpers Ferry Water	Elk Run
P	Berkeley	DuPont Potomac River Works	Potomac River
P	Berkeley	Berkeley County PSD.	Le Feure Spring
P	"	Opequon PSD	Quarry, Spring
P	"	Hedgesville PSD	Speck Spring
P	Morgan	Paw Paw Water	Potomac River
PS	Jefferson	Charlestown Water	Evitt's Run
PSB	Hampshire	Romney Water	South Branch Potomac River
PSB	Hampshire	Peterkin Conference Center	Mill Run
PSB	Hardy	Moorfield Municipal Water	South Fork River
PSB	Pendleton	U.S. Naval Radio Sta.	South Fork River
PSB	"	Circilville Water Inc.	North Fork of South Branch, Potomac River
PSB	Grant	Mountain Top PSD	Mill Creek, Imp.
PSB	"	Petersburg Municipal Water	South Branch, Potomac River
PNB	Grant	Island Creek Coal	Impoundment
PNB	Mineral	Piedmont Municipal Water	Savage River, Maryland
PNB	Mineral	Keyser Water	New Creek
PNB	"	Fort Ashby PSD	Lake
Monongahela River			
M	Monongalia	Morgantown Water Comm.	Colburn Creek & Monongahela R.
M	Monongalia	Morgantown Ordinance Works	Monongahela R.
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

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MC	Preston	Fibair Inc.	Impoundment
MC	Monongalia	Cheat Neck PSD	Cheat Lake
MC	"	Lakeview Country Club	Cheat Lake- Lake Lynn
MC	Monongalia	Union District PSD	Cheat Lake- Lake Lynn
MC	Monongalia	Cooper's Rock State Park	Impoundment
MC	Preston	Kingwood Water	Cheat River
MC	"	Hopemount State Hospital	Snowy Creek
MC	Preston	Rowlesburg Water	Keyser Run & Cheat River
MC	Preston	Albright	Cheat River
MC	Tucker	Parsons Water	Shavers & Elk Lick Fork
MC	Tucker	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	Tucker	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	Harrison	Salem Water Bd.	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	"	Weston State Hospital	West Fork River
MW	"	Kennedy Comprssor Station	West Fork River
MW	Lewis	Jane Lew Water Comm.	Hackers Creek
MW	Harrison	Bel-Meadow Country Club	Lake
MW	Harrison	Harrison Power Station	West Fork River
MW	Harrison	Oakdale Portal	Impoundment
MW	"	Robinson Port	Impoundment
MT	Marion	Fairmont Water Comm.	Tygart River
MT	"	Manningtyon Water	Impoundment

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MT	"	Monongah Water Works	Tygart River
MT	"	Eastern Assoc. Coal Corp.	Impoundment
MT	Marion	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	Barbour	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	Randolph	Mill Creek Water	Mill Creek
MTB	Upshur	Buckhannon Water Board	Buckhannon River

Ohio River

O-1	Hancock	Chester Water & Sewer	Ohio River
O-1	Brooke	Weirton Steel Division	Ohio River
O-1	Ohio	Wheeling Water	Ohio River
O-1	Mason	Philip Sporn Plant	Ohio River
O-1	Tyler	Sistersville Municipal Water	Ohio River
O-1	Pleasants	Pleasants Power Station	Ohio River
O-1	Cabell	Huntington Water Corp.	Ohio River
O-1	Marshall	Mobay Chemical Co.	Ohio River
O-2	Marshall	Cameron Water	Glass House Hollow
O-2	Marshall	New Urindahana Water System	Wheeling Creek
O-2	Wetzel	Pine Grove Water	North Fork, Fishing Creek
O-2	Marshall	Consolidated Coal Co.	Impoundment
O-2	Tyler	Middlebourne Water	Middle Island Creek
O-2	Doddridge	West Union Municipal Water	Middle island Creek
O-2	Mason	Hidden Valley Country	Lake/Impoundment
O-2	Jackson	Ripley Water	Mill Creek
O-2	"	WV-FAA-FFA Camp	Cedar Lake
O-2	Wayne	Wayne Municipal Water	Twelve Pole

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O-2	Wayne	East Lynn Lake	Creek
O-2	"	Monterey Coal Co.	East Lynn Lake Impoundment
Little Kanawha			
LK	Wood	Claywood Park PSD	Little Kanawha River
LK	Wood	Mineral Wells PSD	Little Kanawha River
LK	Calhoun	Grantsville Municipal Water	Little Kanawha River
LK	Gilmer	Glenville Utility	Little Kanawha River
LK	Gilmer	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	Ritchie	Harrisville Water	North Fork Hughes River
LKH	Ritchie	Pennsboro Water	North Fork Hughes Fork
Kanawha River			
K	Putnam	Buffalo Water	Cross Creek
K	"	Winfield Water	Poplar Fork & Crooked Creek
K	Putnam	South Putnam PSD	Poplar Fork & Ceoked Creek
K	Kanawha	Cedar Grove Water	Kanawha River
K	"	Kanawha River Plant	Kanawha River
K	"	Pratt Water	Kanawha River
K	"	Community Water- Chelyan	Kanawha River
K	Fayette	Armstrong PSD PO- K1-CO-EL	Kanawha River & Gum Hollow
K	Fayette	Kanawha Water Co.- Beards Fork	Unnamed Tributary
K	Kanawha	Midland Trail School	Kanawha River Impoundment
K	"	Rita's Motel	Kanawha River

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K	"	Cedar Coal Co.	Impoundment
K	Fayette	Elkem Metals Co.	Kanawha River
K	"	Deepwater PSD	Kanawha River
K	"	Kanawha Falls PSD	Kanawha River
K	"	Glen Ferris	Kanawha River
K	"	Boomer	Kanawha River
K	"	Charlton Heights	Kanawha River
K	"	W.V. Water-Montgomery	Kanawha River
K	"	Community Water Co.	Kanawha River
Pocatalico River			
KP	Kanawha	Sissonville PSD	Pocatalico River
KP	Roane	Walton PSD	Silcott Fork Dam
Coal River			
KC	Kanawha	St. Albans Water	Coal River
KC	"	Washington PSD	Coal River
KC	Lincoln	Lincoln PSD	Coal River
KC	Boone	Coal River PSD	Coal River
KC	"	Whitesville PSD	Coal River
KC	Raleigh	Armco Mine 10	Marsh Fork
KC	"	Armco Steel-Montc. Stickney	Coal River
KC	Raleigh	Peabody Coal	Coal River
KC	"	Stephens Lake Park	Lake Stephens
KC	Boone	W.V. Water-Madison Dist.	Little Coal River
KC	Boone	Van PSD	Pond Fork
KC	Raleigh	Consol. Coal Co.	Workmans Creek
Elk River			
KE	Kanawha	Clendenin Water	Elk River
KE	"	W.V. Water-Kanawha Valley Dist.	Elk River
KE	Kanawha	Pinch PSD	Elk River
KE	Clay	Clay Waterworks	Elk River
KE	"	Prociuous PSD	Elk River
KE	"	Clinchfield Coal Co.	Fitzwater Run
KE	Braxton	Flatwoods-Canoe Run PSD	Elk River
KE	Braxton	Sugar Creek PSD	Elk River
KE	"	W.V. Water-Gassaway Dist.	Elk River
KE	Braxton	W.V. Water-Sutton District	Elk River
KE	Webster	W.V. Water-Webster	Elk River

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	KE	Webster	Springs Holly River State Park	Holly River
Gauley River				
	KG	Nicholas	Craigsville PSD	Gauley River
	KG	"	Summersville Water	Impoundment/ Muddlety Creek
	KG	Nicholas	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
New River				
	KN	Fayette	Ames Heights Water	Mill Creek
	KN	"	Mt. Hope Water	Impounded Mine (Surface)
	KN	Fayette	Ansted Municipal Water	Mill Creek
	KN	"	Fayette Co. Park	Impoundments
	KN	"	New River Gorge Campground	Impoundment
	KN	Fayette	Fayetteville Water	Wolfe Creek
	KN	Raleigh	Beckley Water	Glade Creek
	KN	"	Westmoreland Coal Co.	Farley Branch
Bluestone River				
	KNB	Summers	Jumping Branch-Nimitz	Mt. Valley Lake
	KNB	"	Bluestone Conf. Center	Bluestone Lake
	KNB	"	Pipestem State Park	Impoundment
	KNB	Mercer	Town of Athens	Impoundment
	KNB	"	Bluewell PSD	Impoundment
	KNB	"	Bramwell Water	Impoundment
	KNB	"	Green Valley-Glenwood PSD	Bailey Reservoir
	KNB	Mercer	Kelly's Tank	Spring
	KNB	"	W.V. Water Princeton	Impoundment- Brush Creek
	KNB	Mercer	Lashmeet PSD	Impoundment
	KNB	"	Pinnacle Water Assoc.	Mine
	KNB	"	W.V. Water Bluefield	Impoundment
Greenbrier River				
	KNG	Summers	W.V. Water Hinton	Greenbrier River & New River
	KNG	Summers	W.V. Prison for Women	Greenbrier River

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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	Pocahontas	City of Marlinton Water	Knapp Creek
KNG	Pocahontas	Cass Scenic Railroad	Leatherbark Creek
KNG	Pocahontas	Upper Greenbrier PSD	Greenbrier River
KNG	"	The Hermitage	Greenbrier River

Guyandotte River

OG	Cabell	Salt Rock PSD	Guyandotte River
OG	Lincoln	West Hamlin Water	Guyandotte River
OG	Logan	Logan Water Board	Guyandotte River
OG	"	Man Water Works	Guyandotte River
OG	"	Buffalo Creek PSD	Buffalo Creek/ Mine/Wells
OG	Logan	Logan PSD	Whitman Creek
OG	Mingo	Gilbert Water	Guyandotte River
OG	Wyoming	Oceana Water	Laurel Fork
OG	"	Glen Rogers PSD	Impoundment
OG	"	Pineville Water	Pinnacle Creek/ Guyandotte River
OG	Wyoming	Mullens Water Works	Slab Fork Creek
OG	Raleigh	Raleigh Co. PSD-Amigo	Tommy Creek
OGM	Cabell	Milton Water Works	Guyandotte River
OGM	"	Culloden PSD	Indian Fork Creek
OGM	Putnam	Hurricane Municipal Water	Mud River
OGM	Putnam	Lake Washington PSD	Lake Washington

Big Sandy River

BS	Wayne	Kenova Municipal Water	Big Sandy River
BS	"	Bisor Grill	Impoundment
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

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BST

McDowell

City of Gary

Impoundment/
Mine

APPENDIX C

CATEGORY E-3 - POWER PRODUCTION

<u>River Basin</u>	<u>County</u>	<u>Station Name</u>	<u>Operating Company</u>
Monongahela River			
M	Monongalia	Fort Martin Sta.	Monongahela Power
M	Marion	Rivesville Sta.	Monongahela Power
MC	Preston	Albright Sta.	Monongahela Power
MW	Harrison	Harrison Sta.	Monongahela Power
Ohio River			
O-1	Marshall	Kamer	Ohio Power
O-1	"	Mitchell	" "
O-1	Pleasants	Pleasants Sta.	Monongahela Power
O-1	Pleasants	Willow Island Station	Monongahela Power
O-1	Mason	Phillip Sporn Plant	Central Operating (AEP)
O-1	Mason	Mountaineer	Appalachian Power Company
K	Putnam	Winfield (Hydro)	Appalachian Power Company
K	Kanawha	Marmet (Hydro)	Appalachian Power Company
K	Kanahwa	London (Hydro)	Appalachian Power Company