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STATE WATER RESOURCES BOARD

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January 12, 1981

The Honorable A. James Manchin
Secretary of State
Capitol Building
Charleston, WV 25305

*obsolete
valid Feb 12, 1981
to July 25, 1981*

Dear Mr. Secretary:

Enclosed are the Administrative Regulations promulgated by the State Water Resources Board regarding requirements governing water quality standards and regulations setting forth special regulations under Chapter 20 - 5 and Chapter 20 - 5A.

I hereby certify that the attached regulations are true and accurate copies of official regulations adopted by the Board on December 30, 1980.

Very truly yours,

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

JCA/feh

Enclosures 2

FILED IN THE OFFICE OF
SECRETARY OF STATE
THIS DATE 1-12-81



STATE OF WEST VIRGINIA
 OFFICE OF THE SECRETARY OF STATE
 CHARLESTON 25305

A. JAMES MANCHIN
 SECRETARY OF STATE

STATE REGISTER FILING

I, John C. Ailes, Chairman,
 Title or Position

State Water Resources Board, hereby submit to record in
 Department or Division

the State Register on 8 1/2 x 11" paper two (2) copies of

- proposed rules and regulations concerning topics of material not covered by existing rules and regulations;
- proposed rules and regulations superseding rules and regulations already on file;
- notice of hearing;
- findings and determinations;
- rules and regulations; or
- other - specify () .

This filing pertains to

Chapter 20
 Article 5 and 5A
 Series _____
 Section _____
 Page No. _____

- proposed rules and regulations are required to go to Legislative Rule Making Committee;
- proposed rules and regulations are excluded from Legislative Rule Making Committee;

January 12, 1981

Date Submitted

John C. Ailes
 Signature of Person Authorizing
 this Filing

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A

1980

FILED IN THE OFFICE OF
SECRETARY OF STATE
THIS DATE 1-12-81

Department of Natural Resources
Division of Water Resources
Charleston, West Virginia
25311

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS

STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A

Subject: Requirements Governing Water Quality Standards and Regulations
Setting Forth Special Regulations

CHAPTER 1

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 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 stream standards which in turn 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.

Section 1. General

1.01 Scope - These regulations 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.

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

1.03 Filing Date - These regulations were filed in the Office of the Secretary of State on January 12, 1981.

1.04 Effective Date - These regulations become effective February 12, 1981.

1.05 Certification - These regulations are certified authentic by the Chairman 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 regulations unless otherwise specified herein, or unless the context in which used clearly requires a different meaning:

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

(b) 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.

(c) "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.

(d) "National resource waters" are those whose unique character, ecological or recreational value or pristine nature constitute a valuable National or State resource.

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

(1) Those water quality values which exist unaffected by -- or unaffected as a consequence of -- any water use by any person; and

(2) 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.

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

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

(h) "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.

(i) "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.

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

(k) "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.

(l) "Water quality criteria" shall mean levels of parameters or stream conditions that are required to be maintained by these regulations.

(m) "Water quality standards" means the combination of water uses to be protected and the water quality criteria necessary to protect those uses.

(n) "Wet weather streams" are streams that flow in direct response to precipitation, whose channel is at all times above the water table.

Section 3. Conditions Not Allowable in State Waters.

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.

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:

- (a) Distinctly visible floating or settleable solids, suspended solids, scum, foam or oily slicks;
- (b) Deposits or sludge banks on the bottom;
- (c) Odors in the vicinity of the waters;
- (d) Taste or odor that would adversely affect the designated uses of the affected waters;
- (e) Concentrations of materials harmful, hazardous or toxic to man, animal or aquatic life;
- (f) Distinctively visible color;
- (g) Concentrations of bacteria which may impair or interfere with the designated uses of the affected waters;
- (h) Requiring an unreasonable degree of treatment for the production of potable water by modern water treatment processes as commonly employed; and
- (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

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

(a) In all cases, existing beneficial water uses must 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 beneficial uses.

(b) Less restrictive uses than those contained in existing stream standards may be established, however, only where it can be demonstrated that:

- (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
- (3) Application of effluent limitations for existing sources more stringent than those required pursuant to Section 301 (b)(2)(A) and (B) of the Federal Act in order to attain the existing designated use would result in substantial and widespread adverse economic and social impact.

(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.

(d) In establishing a less restrictive 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 Law 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.

(e) Existing trout and other high quality waters must be maintained at their existing high quality unless the State decides after public comment and hearing to allow limited degradation as a result of necessary and justifiable economic or social development. 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.

(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 that feasible management or regulatory programs pursuant to Section 208 of the Federal Act for non-point sources, both existing and proposed, be utilized.

(g) In all cases, waters which constitute an outstanding national resource as designated in Section 7.73 shall be maintained and protected and improved where necessary.

(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 regulations.

Section 5. Mixing Zones

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.

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

(1) Mixing zones shall

- (i) be kept as small as practical in area and length;
- (ii) not be used for, or considered as, a substitute for waste treatment;
- (iii) shall provide for as rapid a mixing as practicable;
- (iv) not prevent the free passage of aquatic species or include spawning or nursery areas;
- (v) not overlap a public water supply intake;
- (vi) the mixing zone shall not consist of materials which cause or contribute to any of the conditions prohibited in Section 3; and
- (vii) shall not interfere with any designated water use category.

(2) The boundaries of the mixing zone shall reflect

- (a) receiving water body characteristics such as:
 - (i) water quality,
 - (ii) local meteorology,
 - (iii) flow regime (including low-flow records),
 - (iv) magnitude of water exchange at point of discharge,
 - (v) stratification phenomena,
 - (vi) waste capacity of the receiving system including retention time,
 - (vii) turbulence and speed of flow,
 - (viii) morphology of the receiving system as related to plume behavior, and biological phenomena,

- (ix) Designated water use categories; and
- (b) discharge characteristics such as:
 - (i) flow regime,
 - (ii) volume,
 - (iii) design,
 - (iv) location,
 - (v) rate of mixing and dilution, and
 - (vi) plume behavior and mass-emission rates of constituents including knowledge of their persistence, toxicity, and chemical or physical behavior with time.

(b) Where the 7-day, 10-year return frequency is 5 cfs or less, instantaneous mix will be required and no mixing zone established.

(c) 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

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

Category A. Water Contact Recreation:

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:

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:

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

Category B3. Water Supply, Agricultural:

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.

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 Section 2 (k) and Section 7.71.

Category D. Water Transport, Cooling and Power:

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 hydropower.

Section 7. West Virginia Waters

7.01 Applicability of Water Quality Standards

(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 C2 - Trout Waters. 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 paragraph (c) of 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) In wet weather streams, water quality standards shall not apply, provided that the designated uses of downstream waters are not adversely affected.

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

(e) Water quality standards shall apply except where lesser quality is due to natural conditions. The naturally occurring values shall be considered the applicable standards until higher values are achieved by stream rehabilitation.

7.11 Potomac River Basin

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.

7.21 Kanawha River Basin: Zone One

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.

Exeptions:

- (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 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

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 B3 shall not apply; and
- (b) The minimum flow shall be 1,960 cfs at the Charleston gauge.

7.31 Bluestone River, East River, New River and Gauley River Basins

The Bluestone River and all its tributaries arising in West Virginia and flowing into Virginia, and from the Virginia-West Virginia state line to the head of the backwater of the Bluestone Lake; the East River and all its tributaries from its source to the West Virginia-Virginia state line; the New River and all its tributaries except the Bluestone and East Rivers, from the West Virginia-Virginia state line to the head of the backwaters of the Bluestone Lake and from the tailwaters of Bluestone Lake to the confluence with the Gauley River and the Gauley River and all its tributaries from its source to the confluence with the New River.

Exceptions:

No exceptions specified.

7.32 Bluestone Lake

All waters of Bluestone Lake.

Exception:

(a) Water categories B2 and D are deleted.

7.41 Big Sandy and Guyandot River Basins

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 Guyandot River and all its tributaries from its mouth at Huntington, West Virginia to its headwaters.

Exceptions:

No exceptions specified.

7.51 Ohio River Basin - 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.

Exceptions:

No exceptions specified.

7.52 Ohio River Basin - Tributaries

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

Exception:

Except the stretch of Conners Run (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.

7.61 Monongahela River Basin

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.

Section 7.71 Trout Waters

The primary purpose of this section is to identify 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 (above Valley Furnace)	Barbour
Buckhannon River (above Beans Mill)	Upshur
Buffalo Creek	Preston
Camp Branch	Hardy
Camp Creek	Mercer
Camp Five Run	Randolph
Cattail Run	Jefferson
Cherry River	Nicholas
Clover Run	Tucker
Cold Stream	Hampshire

<u>Stream</u>	<u>County</u>
Cranberry River	Pocahontas, Webster, Nicholas
Culverson Creek	Greenbrier
Deer Creek	Nicholas
Deer Creek	Pocahontas
Desert Fork	Webster
Dillons Run	Hampshire
Dry Fork (above Canebrake)	McDowell
Dry Fork (above Otter Creek)	Randolph, Tucker
Dumpling Run	Hardy
East Fork Glady Fork (above C & P Compressor Station)	Randolph
East Fork, Greenbrier River	Pocahontas
East Lynn Lake (tailwaters - above Rt. 37 Bridge)	Wayne
East River (above Kellysville)	Mercer
Edwards Run and Pond	Hampshire
Elklick Run	Tucker
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

<u>Stream</u>	<u>County</u>
Glade Creek	Raleigh
Glady 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
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

<u>Stream</u>	<u>County</u>
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
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

<u>Stream</u>	<u>County</u>
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
Pigeon Creek	Mercer
Pinch Creek	Raleigh
Pinnacle Creek	Wyoming
Red Creek	Tucker
Rhine Creek	Preston
Rich 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
Saltlick Creek	Preston
Seneca Creek	Pendleton
Shavers Fork (above Little Black Fork)	Pocahontas, Randolph
Sitlington Creek	Pocahontas
Slip Hill Mill Run	Pocahontas
South Branch (above North Fork)	Pendleton
South Fork Cherry River	Greenbrier, Nicholas
South Fork Cranberry River	Pocahontas
South Fork Lunice Creek	Grant
South Fork Potts Creek	Monroe

<u>Stream</u>	<u>County</u>
South Mill Creek (above Hiser)	Grant
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
Tilhance Creek	Berkeley
Town Run	Jefferson
Trout Run	Hardy
Turkey Creek	Monroe
Tuscarora Creek (above Martinsburg)	Berkeley
Tygart River (above Huttonsville)	Randolph
Tygart Tailwaters (above Route 119 Bridge)	Taylor
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

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

7.72 High Quality Waters

High quality waters shall include but are not limited to:

(a) All streams designated by the West Virginia Legislature under the West Virginia Natural Streams Preservation Act, West Virginia Code 20-5B-1 et seq.

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

7.73 National Resource Waters

National Resource Waters shall include but are not limited to the following waters of the State:

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

(b) All naturally reproducing trout streams.

(c) All streams and other bodies of water in State and National Forests and Parks and recreation areas:

(d) National Rivers.

SECTION 8

CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)									
	7.21	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71
<u>ALUMINUM:</u> Not to exceed 0.5 mg/l										X
<u>AMMONIA:</u> 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 = 1.3 (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	X	
..... The concentration of un-ionized ammonia (NH ₃) shall not exceed 20 ug/l										X
<u>ARSENIC:</u> Not to exceed 50 ug/l	X	X	X	X	X	X	X	X	X	X
<u>BARIUM:</u> Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X	X
<u>CADMIUM:</u> Hardness Soluble Cadmium mg/l as CaCO ₃ (ug/l)										
0-35 0.8										
36-75 2.0										
76-150 5.0										
>151 10.0	X	X	X	X	X	X		X	X	
..... Not to exceed 10 ug/l							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
CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)									
	7.11	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71
<u>CHLORIDE:</u>										
Not to exceed 100 mg/l	X	X		X	X	X		X	X	X
Not to exceed 150 mg/l			X							
Not to exceed 250 mg/l							X			
<u>COPPER:</u>										
Hardness mg/l as CaCO ₃	Copper Criterion 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	75									
	X	X	X	X	X	X	X	X	X	X
<u>CYANIDE (As Free Cyanide HCN + CN⁻)</u>										
Not to exceed 5 ug/l	X	X	X	X	X	X	X	X	X	X
<u>DISSOLVED OXYGEN:</u>										
Not less than 5.0 mg/l at any time	X	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
CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)									
	7.11	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71
<u>FECAL COLIFORM CONTENT:</u> (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	X
<u>FLUORIDE:</u> Not to exceed 1.0 ug/l	X	X	X	X	X	X	X	X	X	X
<u>HEXAVALENT CHROMIUM:</u> Not to exceed 50 ug/l	X	X	X	X	X	X	X	X	X	X
<u>IRON (total):</u> Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X	
..... Not to exceed .5 mg/l										X
<u>LEAD:</u> Hardness Lead Criterion mg/l as CaCO ₃ ug/l Total Lead 0-100 25 >101 50	X	X	X	X	X	X	X	X	X	X
<u>MANGANESE:</u> Not to exceed 1.0 mg/l	X	X	X	X	X	X	X	X	X	X
<u>MERCURY:</u> 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	X
..... The total mercury concentration (unfiltered) in any water sample shall not exceed 0.05 ug/l	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			

SECTION 8

CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)																					
	7.11	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71												
<u>RADIOACTIVITY:</u>																						
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	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 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															
<u>SELENIUM:</u>																						
Not to exceed 10 ug/l	X	X	X	X	X	X	X	X	X	X												
<u>SILVER:</u>																						
<table border="0"> <tr> <td>Hardness</td> <td>Silver Criterion</td> </tr> <tr> <td>mg/l as CaCO₃</td> <td>ug/l Total Silver</td> </tr> <tr> <td>0-50</td> <td>2</td> </tr> <tr> <td>51-100</td> <td>4</td> </tr> <tr> <td>101-200</td> <td>12</td> </tr> <tr> <td>>201</td> <td>24</td> </tr> </table>	Hardness	Silver Criterion	mg/l as CaCO ₃	ug/l Total Silver	0-50	2	51-100	4	101-200	12	>201	24	X	X	X	X	X	X	X	X	X	X
Hardness	Silver Criterion																					
mg/l as CaCO ₃	ug/l Total Silver																					
0-50	2																					
51-100	4																					
101-200	12																					
>201	24																					
<u>TEMPERATURE:</u>																						
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																			

SECTION 8
CHART OF SPECIFIC WATER QUALITY STANDARDS

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SPECIFIC CRITERIA	WV WATERS (See Section 7)																																
	7.11	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71																							
TEMPERATURE (continued)																																	
Temperature rise shall be limited to no more than 50°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																													
Temperature rise shall be limited to no more than 30°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					X																												
Temperature rise shall be limited to no more than 50°F above natural temperature. Allowable maximums are: <table style="margin-left: 20px;"> <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>	Jan.	50	July	89	Feb.	50	Aug.	89	March	60	Sept.	87	April	70	Oct.	78	May	80	Nov.	70	June	87	Dec.	57									
Jan.	50	July	89																														
Feb.	50	Aug.	89																														
March	60	Sept.	87																														
April	70	Oct.	78																														
May	80	Nov.	70																														
June	87	Dec.	57																														
Water temperature shall not exceed the maximum limits in the above table during more than 1% of the hours in the 22 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 30°F							X																										
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 50°F above natural temperature. In lakes and reservoirs, the temperature of the epilimnion should not be raised more than 30°F by the addition of heat of artificial origin. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes should be maintained. The maximum temperatures for cold waters are expressed in the following table: <table style="margin-left: 20px;"> <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									
	Daily Mean °F	Hourly Maximum °F																															
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SECTION 8
CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)									
	7.11	7.21	7.22	7.31	7.32	7.41	7.51	7.52	7.61	7.71
<u>THRESHOLD ODOR:</u>										
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	X
<u>TOTAL RESIDUAL CHLORINE:</u>										
Not to exceed 10 ug/l as measured by the amperometric or equivalent method	X	X	X	X	X	X	X	X	X	
Not to exceed 2 ug/l as measured by the amperometric or equivalent method										X
The following chart may be used to derive the criteria instead of the above fixed criteria:										
<p align="center">MATTICE AND METAL SCALE</p>										

SECTION 8

CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

SPECIFIC CRITERIA	WV WATERS (See Section 7)																					
	7.11	7.21	7.22	7.31	7.32	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 on a site specific basis as determined by the appropriate 208 cooperative with concurrence of the Chief or an approved Federal or State Surface Mining Permit is in effect. This exemption shall not apply to trout waters.</p>										X												
<p>ZINC:</p> <table border="0"> <tr> <td>Hardness</td> <td>Zinc Criterion</td> </tr> <tr> <td>mg/l as CaCO₃</td> <td>ug/l Total Zinc</td> </tr> <tr> <td>0-150</td> <td>50</td> </tr> <tr> <td>151-300</td> <td>100</td> </tr> <tr> <td>301-400</td> <td>300</td> </tr> <tr> <td>>401</td> <td>600</td> </tr> </table>	Hardness	Zinc Criterion	mg/l as CaCO ₃	ug/l Total Zinc	0-150	50	151-300	100	301-400	300	>401	600	X	X	X	X	X	X	X	X	X	X
Hardness	Zinc Criterion																					
mg/l as CaCO ₃	ug/l Total Zinc																					
0-150	50																					
151-300	100																					
301-400	300																					
>401	600																					

Section 9. Establishment of Safe Concentration Values

When a specific water quality standard has not been established by these regulations and a discharge into waters of the State, the use of which has been designated as Category C1 or C2 is proposed, such discharge may be regulated by the Chief where necessary to protect State water through establishment of a safe concentration value as follows:

(a) Establishment of a safe concentration value shall be based upon data obtained from relevant aquatic field studies, standard bio-assay 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.

(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:

- (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.
- (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.

(c) Persons seeking issuance of a permit pursuant to these regulations authorizing the discharge of a pollutant for which a safe concentration value is to be established using special bioassay tests pursuant to subsection (2) of this section shall perform such testing as approved by the Chief and shall submit all of the following in writing to the Chief:

- (1) A plan proposing the bioassay testing to be performed.
- (2) Such periodic progress reports of the testing as may be required by the Chief.
- (3) A report of the completed results of such testing including, but not limited to all data obtained during the course of testing, and all calculations made in the recording, collection, interpretation, and evaluation of such data.

(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 (14th 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-600/4-78-012, Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms (January 1978). Test waters shall be reconstituted according to recommendations and methodologies specified in the previous cited references or methodologies approved in writing by the Chief.