

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

STATE WATER RESOURCES BOARD

Chapter 20-5 and 20-5A

1980

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*Valid July 26, 1981*

*to ~~Nov 11, 1983~~*

*April 14, 1984*

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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

*Series*  
~~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 June 26, 1981.

1.04 Effective Date - These regulations become effective July 26, 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 constitutes 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 channels are 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, no mixing zone may be 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.

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 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 B1 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 Guyandotte 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 Guyandotte 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, Guyandotte 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 Gladly 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           |
| Moores 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<br>Collison Creek) | Nicholas            |
| Sutton Lake (Tailwaters) (above Route 38/5<br>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              |
| 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             |

| <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", Public Law 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. "National Parks and Recreation Act of 1978." Public Law 95-625, as amended, 16 U.S.C. 1, et seq.

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>ALUMINUM:</u><br>Not to exceed 0.5 mg/l  |                           |      |      |      |      |      |      |      |      | X    |
| <u>AMMONIA:</u><br>The concentration of un-ionized ammonia (NH <sub>3</sub> ) 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:<br><br>Un-ionized ammonia = 1.3 (total ammonia-N/[ 1 + 10 (pk <sub>a</sub> - pH) ]) where pk <sub>a</sub> = 0.0902 + 2730/(273.2 + T) and T = Temperature in degrees C | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| The concentration of un-ionized ammonia (NH <sub>3</sub> ) shall not exceed 20 ug/l   |                           |      |      |      |      |      |      |      |      | X    |
| <u>ARSENIC:</u><br>Not to exceed 50 ug/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <u>BARIUM:</u><br>Not to exceed 1.0 mg/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <u>CADMIUM:</u><br><br>Hardness mg/l as CaCO <sub>3</sub> Soluble Cadmium (ug/l)<br>0-35                              0.8<br>36-75                              2.0<br>76-150                              5.0<br>>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 <sub>3</sub> and 1.2 ug/l in water where hardness is greater than 75 mg/l as CaCO <sub>3</sub>   |                           |      |      |      |      |      |      |      |      | 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<br>mg/l as CaCO <sub>3</sub>  | Copper Criterion<br>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    |
| <u>CYANIDE (As Free Cyanide HCN + CN<sup>-</sup>)</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 |
| <b>FECAL COLIFORM CONTENT:</b><br>(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    |
| <b>FLUORIDE:</b><br>Not to exceed 1.0 mg/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b>HEXAVALENT CHROMIUM:</b><br>Not to exceed 50 ug/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b>IRON (total):</b><br>Not to exceed 1.0 mg/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| .....<br>Not to exceed 0.5 mg/l   |                           |      |      |      |      |      |      |      |      | X    |
| <b>LEAD:</b><br>Hardness<br>mg/l as CaCO <sub>3</sub><br>0-100<br>>101<br>Lead Criterion<br>ug/l Total Lead<br>25<br>50   | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b>MANGANESE:</b><br>Not to exceed 1.0 mg/l   | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b>MERCURY:</b><br>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    |
| .....<br>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    |
| .....<br>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>NICKEL:</u>  |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 50 ug/l   |                           |      |      |      |      |      |      |      |      | X    |
| <u>NITRATE (As Nitrate - N):</u>  |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 10 mg/l   | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <u>NITRITE (As Nitrite - N):</u>  |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 1.0 mg/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    |      |
| .....   |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 60 ug/l   |                           |      |      |      |      |      |      |      |      | X    |
| <u>ORGANICS:</u>  |                           |      |      |      |      |      |      |      |      |      |
| Water Quality Criteria ug/l   |                           |      |      |      |      |      |      |      |      |      |
| Fish Body Burden ug/g   |                           |      |      |      |      |      |      |      |      |      |
| Chlordane   | .01                       |      |      |      |      |      |      |      |      |      |
| DDT   | .001                      |      |      |      |      |      |      |      |      |      |
| Aldrin-Dieldrin   | .003                      |      |      |      |      |      |      |      |      |      |
| Endrin  | .004                      |      |      |      |      |      |      |      |      |      |
| Toxaphene   | .005                      |      |      |      |      |      |      |      |      |      |
| PCB   | .001                      |      |      |      |      |      |      |      |      |      |
| Methoxychlor  | .03                       |      |      |      |      |      |      |      |      |      |
| 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, instream values will be calculated from discharge concentrations and flow rates and from fish body burden | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <u>pH:</u>  |                           |      |      |      |      |      |      |      |      |      |
| No value below 6.0 nor above 9.0. High value due to photosynthetic activity may be tolerated  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <u>PHENOLIC MATERIALS:</u>  |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 5 ug/l  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |

SECTION 8

CHART OF SPECIFIC WATER QUALITY STANDARDS

NOTE: X Denotes Applicable Criteria

| SPECIFIC CRITERIA   | WY WATERS (See Section 7) |      |      |      |      |      |      |      |      |      |
|---|---------------------------|------|------|------|------|------|------|------|------|------|
|   | 7.11                      | 7.21 | 7.22 | 7.31 | 7.32 | 7.41 | 7.51 | 7.52 | 7.61 | 7.71 |
| <b>RADIOACTIVITY:</b>   |                           |      |      |      |      |      |      |      |      |      |
| 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    |      |      |      |
| <b>SELENIUM:</b>  |                           |      |      |      |      |      |      |      |      |      |
| Not to exceed 10 ug/l   | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b>SILVER:</b>  |                           |      |      |      |      |      |      |      |      |      |
| Hardness<br>mg/l as CaCO <sub>3</sub>   |                           |      |      |      |      |      |      |      |      |      |
| 0-50  |                           |      |      |      |      |      |      |      |      |      |
| 51-100  |                           |      |      |      |      |      |      |      |      |      |
| 101-200   |                           |      |      |      |      |      |      |      |      |      |
| >201  | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| Silver Criterion<br>ug/l Total Silver   |                           |      |      |      |      |      |      |      |      |      |
| .2  |                           |      |      |      |      |      |      |      |      |      |
| 4   |                           |      |      |      |      |      |      |      |      |      |
| 12  |                           |      |      |      |      |      |      |      |      |      |
| 24  |                           |      |      |      |      |      |      |      |      |      |
| <b>TEMPERATURE:</b>   |                           |      |      |      |      |      |      |      |      |      |
| Temperature rise shall be limited to no more than 50°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 50°F above natural temperature, not to exceed 90°F in any case  |                           |      | 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              |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| <p><u>TEMPERATURE</u> (continued)</p> <p>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</p>  |                           |                   |                   | X            |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| <p>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</p>   |                           |                   |                   |              | X    |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| <p>Temperature rise shall be limited to no more than 50°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>  | 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                |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| <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 30°F</p>   |                           |                   |                   |              |      |      | X           |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| <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 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:</p> <table border="0"> <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 |                   |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| Oct. - April  | 50                        | 55                |                   |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| Sept. - May   | 58                        | 62                |                   |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| Transition Period   |                           |                   |                   |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |
| June - August   | 66                        | 70                |                   |              |      |      |             |      |       |                   |       |    |               |    |      |    |     |    |      |    |      |    |      |    |   |  |  |  |  |  |  |  |  |  |

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><br>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><br>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">90% TISSUE DAMAGE</p> <p align="center">MAYBE AND FITTED 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 |
| <b><u>TURBIDITY:</u></b>   |                           |      |      |      |      |      |      |      |      |      |
| 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.   |                           |      |      |      |      |      |      |      |      |      |
| 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. |                           |      |      |      |      |      |      |      |      | X    |
| .....  |                           |      |      |      |      |      |      |      |      |      |
| 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.         | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| <b><u>ZINC:</u></b>  |                           |      |      |      |      |      |      |      |      |      |
| <u>Hardness</u><br>mg/l as CaCO <sub>3</sub>   |                           |      |      |      |      |      |      |      |      |      |
| 0-150  |                           |      |      |      |      |      |      |      |      |      |
| 151-300  |                           |      |      |      |      |      |      |      |      |      |
| 301-400  |                           |      |      |      |      |      |      |      |      |      |
| >401   |                           |      |      |      |      |      |      |      |      | X    |
| .....  |                           |      |      |      |      |      |      |      |      |      |
| <u>Zinc Criterion</u><br>ug/l Total Zinc   |                           |      |      |      |      |      |      |      |      |      |
| 0-50   |                           |      |      |      |      |      |      |      |      |      |
| 51-80  |                           |      |      |      |      |      |      |      |      |      |
| 81-120   |                           |      |      |      |      |      |      |      |      |      |
| 121-160  |                           |      |      |      |      |      |      |      |      |      |
| 161-200  |                           |      |      |      |      |      |      |      |      |      |
| 201-240  |                           |      |      |      |      |      |      |      |      |      |
| 241-280  |                           |      |      |      |      |      |      |      |      |      |
| 281-300  |                           |      |      |      |      |      |      |      |      |      |
| 301-320  |                           |      |      |      |      |      |      |      |      |      |
| 321-340  |                           |      |      |      |      |      |      |      |      |      |
| 341-400  |                           |      |      |      |      |      |      |      |      |      |
| >401   | X                         | X    | X    | X    | X    | X    | X    | X    | X    | X    |

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-600/1-78-012, 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 previously cited references or methodologies approved in writing by the Chief.

CHAPTER 3 - SPECIAL REGULATIONS

Section 1. Reporting Spills and Accidental Discharges

1.01 It is recognized that spills and accidental discharges of sewage, industrial wastes and other wastes are contrary to the language and intent of the State Law and Federal Law and that these spills and accidental discharges may occur from time to time, notwithstanding efforts to prevent them.

It is further recognized that such spills and discharges are likely to have adverse effects upon the quality of the waters of the State impairing existing and future uses of those waters. The State Water Resources Board hereby declares it mandatory that, in order to minimize the adverse effects which the above described occurrences may have upon users of waters of the State, the following procedures shall be followed:

(a) Each and every person who may cause or be responsible for any spill or accidental discharge of pollutants into the waters of the State shall give immediate notification to the designated spill telephone number of the Department of Natural Resources, Division of Water Resources.

(b) Such notification shall set forth the time and place of such spill or discharge, type or types and quantity or quantities of the material or materials therein, action or actions taken to stop such spill or discharge and to minimize the polluting effect thereof, the measure or measures taken or to be taken in order to prevent a recurrence of any such spill or discharge and such additional information as may be requested by the Division of Water Resources. A written verification of such notification shall be submitted upon request of the Division of Water Resources.

(c) It shall be the responsibility of each industrial establishment or other entity discharging directly to a stream to have available the following information pertaining to those substances that are employed or handled in its operation in sufficiently large amounts as to constitute a hazard in case of an accidental spill and discharge into a public stream:

- (1) Potential toxicity in water to man, animals and aquatic life;
- (2) Details on analytical procedures for the quantitative estimation of such substances in water; and
- (3) Suggestions on safeguards or other precautionary measures to nullify the toxic effects of a substance once it has gotten into a stream.

1.02 Section 1 (a) and (b) shall also apply to spills to the waters of the State resulting from accidents to common carriers by highway, rail and water.

1.03 Failure to furnish such information as required by Section 9, Article 5A, Chapter 20, Code of West Virginia shall be punishable under Section 19, Article 5A, Chapter 20, Code of West Virginia.

1.04

(a) It shall be the responsibility of any person who causes or contributes in any way to the spill or accidental discharge of any pollutant or pollutants into State waters to immediately take any and all measures necessary to contain such spill or discharge.

(b) It shall further be the responsibility of such person to take any and all measures necessary to clean-up, remove, and otherwise render such spill or discharge harmless to the waters of the State.

(c) When the Chief determines it necessary for the effective containment and abatement of spills and accidental discharges, the Chief may require the person or persons responsible for such spill or discharge to monitor affected waters in a manner prescribed by the Chief until the possibility of any adverse effect on the waters of the State no longer exists.

## Section 2. Coin-Operated and Other Commercial Laundries

2.01 The increasing appearance of coin-operated and other commercial laundries, particularly in unsewered areas, has led to a variety of wastewater treatment problems. In order to establish minimum requirements governing construction of such wastewater handling facilities and in accordance with Chapter 20, Article 5A, Code of West Virginia, the following Administrative Regulations are established.

2.02 Coin-operated laundries and other commercial laundries located within the corporate limits of a West Virginia municipality, town, or within the boundaries of a public service district, or sanitary district, or a privately owned installation having an approved sewage treatment facility shall divert wastewater to these systems for treatment.

(a) Laundry discharging directly to sewer: a laundry without pretreatment of the wastewater connected to a sewer requires adherence to local plumbing codes and to any special regulations regarding acceptance of waste at the sewage treatment plant.

(b) Laundry with pretreatment and discharge directly to sewer: the laundry shall provide equipment for removal of lint from the water.

2.03 Coin-operated and other commercial laundries located outside of the corporate limits of a West Virginia municipality, town or the boundaries of a public service district or sanitary district not served by an approved sewage treatment facility shall either divert wastewater to an approved sewage treatment facility or shall be governed by the following:

(a) Construction and operation of such treatment facilities shall meet the following minimum requirements in addition to those described elsewhere by law or

- (1) Substantial removal of all settleable solids.
- (2) Ninety percent removal of 5-day biochemical oxygen demand.
- (3) Chlorination of final effluent is required at the initial installation. A chlorination contact chamber shall provide a contact period of at least 15 minutes with a residual of 0.5 mg/l of chlorine at maximum flow.
- (4) Laundry discharging water to a receiving stream used primarily for recreational pursuit and supporting sport fisheries shall in addition to items (1) through (3) provide tertiary treatment of additional BOD removal to 10 mg/l. Dechlorination may be necessary to meet water quality standards (see Section 8, Chapter 1).

(b) Laundry with no wastewater discharge: a laundry may be located where no discharge of the wastewater can be made to a sanitary sewer or a receiving stream. In these cases, holding tanks shall be provided for wastes and the waste must be transported to an approved wastewater treatment plant for treatment.

2.04 The following systems are non-allowable and will not be permitted:

- (a) Septic tanks with or without leach fields.
- (b) Cesspools.
- (c) Direct or indirect discharge of untreated or inadequately treated laundry wastewater to the waters of the State.

### Section 3. Coin-Operated and Other Commercial Car Washing Establishments

3.01 The increasing appearance of coin-operated and other commercial car washing establishments, particularly in unsewered areas, has led to a variety of wastewater treatment problems. In order to establish minimum requirements governing construction of such wastewater handling facilities and in accordance with Chapter 20, Article 5A, Code of West Virginia, the following Administrative Regulations are established.

3.02 Coin-operated and other commercial car washing establishments located within the corporate limits of a West Virginia municipality, town, or within the boundaries of a public service district, sanitary district or privately owned installation having an approved sewage treatment facility shall divert wastewater to these systems for treatment:

- (a) Car wash with discharge directly to sewer: a car wash discharging to the sewer without pretreatment of the wastewater requires adherence to local plumbing codes and to any special local regulations regarding acceptance of waste at the sewage treatment plant.
- (b) Car wash with pretreatment system discharging directly to sewer: a device to prevent large items from entering the sewer lines shall be required. A settling tank shall be required to remove

settleable solids from the wastewater.

(c) Coin-operated and other commercial car washing establishments located within the corporate limits of a West Virginia municipality, town or within the boundaries of a Public service district or sanitary district having an approved sewage treatment facility and not wishing nor required to utilize this facility must proceed under Section 3.03 of this regulation.

3.03 Any coin-operated or other commercial establishment located outside the corporate limits of a West Virginia municipality or town or outside the boundaries of a public service district or sanitary district or within the corporate limits of a West Virginia municipality or town or the boundaries of a public service district or sanitary district not served by an approved sewage treatment facility shall either divert wastewater to an approved sewage treatment facility or shall be governed by the following:

(a) Construction and operation of such treatment facilities shall meet the following minimum requirements in addition to those prescribed elsewhere by law or

- (1) Substantial removal of all settleable solids.
- (2) Ninety percent removal of 5-day biochemical oxygen demand.
- (3) Chlorination of final effluent is required at the initial installation, if domestic sewage is to be treated within the installation. A chlorination contact chamber shall provide a contact period of at least 15 minutes with a residual of 0.5 mg/l of chlorine at maximum flow. Dechlorination may be necessary to meet water quality standards (see Section 8, Chapter 1).

- (4) A grease trap shall be installed and properly maintained within the system to prevent oil and grease entrapment with wastewater effluent.
- (5) A grit removal chamber shall be installed in such a manner to be readily cleaned.
- (6) A car wash discharging wastewater to a receiving stream used primarily for recreational pursuit and supporting sport fisheries shall in addition to items (1) through (5) provide tertiary treatment in addition to secondary treatment. Tertiary treatment provides for additional BOD removal to 10 mg/l in the effluent.

(b) Car wash with no wastewater discharge: car washes may be located where no discharge of the wastewater can be made to a sanitary sewer or receiving stream. In these cases, holding tanks shall be provided for wastes and the wastes must be transported to an approved wastewater treatment plant for treatment.

(c) Car wash re-using wastewater: car washes employing a reuse system shall provide removal facilities for settleable materials. These materials must be transported to an approved disposal site.

3.04 The following systems are non-allowable and will not be permitted:

- (a) Septic tanks with or without leach fields.
- (b) Cesspools.
- (c) Direct or indirect discharge of untreated or improperly treated wastewater from coin-operated and other commercial car washing establishments to the waters of the State.

Section 4. Water Purification Wastewater Control Measure

4.01 Waste Disposal: provision must be made for proper disposal of wastes from water treatment plants. Such wastes include but are not limited to those emanating from sanitary facilities, laboratories, clarification facilities, softening facilities, and filter backwash. Discharges shall be governed by Chapter 20, Article 5A, Code of West Virginia and the following regulations:

(a) The following means of waste and sludge disposal may be considered:

(1) Lagoon design must provide the following:

- (i) Location above the 25-year flood level;
- (ii) Dikes, deflecting gutters or other means of diverting surface water when necessary;
- (iii) A minimum depth of 4 to 5 feet;
- (iv) Multiple cell;
- (v) Adjustable decanting devices; and
- (vi) Convenient cleaning.

(2) Sludge beds for lime softening sludge or other sludges must provide the following:

- (i) Location above the 25-year flood level;
- (ii) Multiple beds, each designed for at least one year's storage;
- (iii) Size of sludge beds will be governed by the concentration of solids to be disposed of with an ultimate depth of 12 inches dry basis
- (iv) Distribution channels may be required for spreading sludge over entire area;

- (v) Easy access roads and loading ramps with proper under drains must be provided; and
  - (vi) Tank Truck: trucking wet sludge to agricultural lands or disposal areas requires proper handling, vehicles and equipment to permit hauling and spreading without creating of nuisances. It is necessary to provide sludge holding facilities for use during times that trucks cannot operate.
- (3) Community Wastewater Treatment Facility: discharges to sewer systems and their treatment facilities depend on type of treatment, rate of discharge, plant design capacity, character of waste, and local conditions.
- (4) Other Methods: these include holding tanks, vacuum filters, centrifuging and re-calcining. Detailed studies must be made to justify their use.
- (5) Sanitary Waste: the sanitary waste from water treatment plants, pumping stations, etc., must receive treatment. Waste from these facilities must be discharged either directly to a sanitary sewer system with approved treatment or to an individual waste disposal facility providing suitable treatment. The effluent must be acceptable for discharge to the surface or ground waters.

#### Section 5. Waste Load Allocations for Sewage Discharges

5.01 Purpose. Waste load allocations for sewage discharges are to be issued by the Chief to potential applicants for a Water Pollution Control Permit to assist with planning of wastewater treatment works

which will meet prescribed effluent requirements and not violate State Water Quality Standards for the receiving waters. Applications for the waste load allocation shall be made prior to the initiation of any planning of any facilities which will produce or result in a wastewater discharge to the State's surface waters. Waste load allocations are not intended to, and shall not be interpreted to be an advance approval of wastewater treatment facilities which may be proposed nor is it an assurance that a Water Pollution Control Permit will be issued. It is emphasized that waste load allocations are issued on major effluent criteria only for planning purposes.

5.02 Application forms may be prescribed by the Chief requiring submission of necessary information and data by the applicant to enable the Division of Water Resources to make a waste load allocation determination. Such determination shall be valid for a period of time specified by the Chief. Reapplication for a new waste load allocation will be required upon expiration of the preceding waste load allocation unless application for a Water Pollution Control Permit has been filed.

5.03 Waste load allocations shall prescribe the concentration and quality of significant wastewater substances and physical, chemical, or biological conditions for the proposed discharge. The waste load limitations shall represent 30-day and 7-day average values for biochemical oxygen demand, solids, nitrogen, and other criteria defining the load, except for pH and dissolved oxygen which are instantaneous limits if it is deemed necessary to assure protection of water uses immediately downstream from the point of discharge to the receiving waters.

5.04 Waste load allocations for the achievement of water quality standards shall normally be based on a specified low flow. The design flow for this purpose shall be the minimum mean 7-consecutive day flow with a 10-year return frequency.

5.05 In cases where a waste discharge is proposed to a wet weather stream or to a stream with a zero mean 7-consecutive day drought flow with a 10-year return frequency, the allocation shall define the treatment plant effluent quality which shall be equal to or better than existing quality of water in the nearest downstream segment of the stream having a minimum mean 7-consecutive day flow of greater than zero with a return frequency of 10 years but in no case less than the established water quality standard for this segment.

5.06 More stringent requirements may be specified by the Chief where necessary to protect downstream uses or where special conditions such as recreation or water supply impoundments or danger to aquatic or animal life exists.

5.07 A waste load allocation may be denied when the assimilative capacity of the receiving waters is being fully utilized or if the additional waste load would result in a violation of water quality standards.

5.08 Waste load allocations are not required prior to an application to dispose of treated domestic sewage effluents by land treatment and disposal methods. Applications for a Water Pollution Control Permit for such purpose will be reviewed on a case-by-case basis. Such systems may require a Water Pollution Control Permit from the Chief, Division of Water Resources.

5.09 United States Geological Survey data may be used in

determining the mean 7-consecutive day drought flows with a 10-year recurrence interval but does not preclude the use of other reliable data systems as they become available.

#### Section 6. Small Wastewater Treatment Plants

6.01 For the purpose of this section, these regulations pertain to sewage treatment plants of 40,000 gallons per day capacity or less.

6.02 Operational reliability for such plants shall be provided in order that pollutants are not discharged during periods of power failure.

6.03 The wastewater treatment structure shall be protected against physical damage for the 25-year flood level and operability be maintained during the 10-year flood level.

6.04 In the case of mine bathhouses, schools, shopping centers, or other wastewater treatment facilities which surcharge the plant on a periodic basis, as opposed to generally constant flows, equalization facilities shall be provided. In cases where the organic loading is of low concentration, supplemental substances may be added, to obtain adequate treatment.

6.05 No construction, installation, modification or operation of a wastewater disposal system (treatment plant, sewers, lift stations and appurtenances) shall be performed until a Water Pollution Control Permit has been issued for the facilities.

#### Section 7. Permit Application Filing Fee

7.01 A filing fee of fifty dollars (\$50) by check or money order shall accompany the application.

7.02 If the application submitted is determined not to be complete and must be returned to the applicant for more information required by the application form, another filing fee of fifty dollars (\$50) by check or money order shall accompany the filing of a new application.

7.03 Further, a filing fee in the amount of fifty dollars (\$50) is required each time an application is submitted.

7.04 The check or money order shall be made payable to the "West Virginia Department of Natural Resources". The filing fee shall be deposited in the State Treasury to the credit of the State General Fund. The filing fee shall not be returned to the applicant.

#### Section 8. Outlet Markers

8.01 In accordance with the definitions provided in Chapter 20, Article 5A, Code of West Virginia, the following regulations are established to identify outlets.

8.02 Each holder of a Water Pollution Control Permit shall post a permanent marker at the establishment under permit in accordance with the following:

(a) A marker shall be posted on the stream bank at each outlet covered by the permit.

(b) The marker shall consist of the name of the establishment to which the permit was issued, the permit number, and the outlet number.

(c) The marker shall be a minimum of two feet by two feet and shall be a minimum of three (3) feet above ground level.

Section 9. Oil and Gas Well Drilling Control Measures

9.01 In order to establish minimum requirements governing the handling of surface water and the construction of wastewater handling facilities and in accordance with Chapter 20, Article 5A, Code of West Virginia, the following Administrative Regulations are established.

9.02 The construction of access roads to drilling sites shall meet the following minimum requirements:

(a) Access roads shall be constructed in a manner to direct and carry surface runoff to sedimentation control device(s).

(b) Sedimentation control device(s) shall be sized based on the watershed area, the coefficient of runoff and rainfall intensity based on a 5-year storm.

(c) If possible, uncontaminated surface runoff from undisturbed areas shall be directed or carried away from disturbed areas to prevent it from intercepting contaminated runoff from access roads.

(d) If it is not possible to direct and carry uncontaminated surface runoff from undisturbed areas away without intercepting the contaminated runoff, then the sedimentation control device(s) shall be sized in accordance with the requirements of (b) above with the additional watershed area considered.

(e) Sedimentation control device(s) and access roads not to be used again, shall be reclaimed in accordance with applicable State and Federal laws.

(f) All natural drainage areas shall be maintained by the use of temporary culverts and bridges as required.

9.03 The preparation of the drilling site shall meet the following minimum requirements:

(a) The entire drilling site shall be constructed in a manner to prevent surface runoff from adjacent areas from carrying wastes away from the site.

(b) Uncontaminated surface runoff from any highwalls should be directed to natural drainage areas to prevent contamination by runoff from disturbed areas. Contaminated runoff from any highwalls shall be directed to a sedimentation control device(s).

(c) Any sedimentation control device(s) shall be reclaimed in accordance with applicable State and Federal laws.

(d) Provisions shall be made within the confines of the drilling site and the drilling site properly graded to collect all surface runoff from the drilling site proper and any material leaked or spilled within the drilling site.

(e) Any pits or sumps shall be reclaimed in accordance with applicable State and Federal laws.

9.04 The construction of the drilling pits or ponds shall meet the following minimum requirements:

(a) Any drilling pit or pond shall be constructed and maintained so as to prevent seepage, leakage or overflow and to maintain its integrity.

(b) Provisions shall be made for diverting surface water from the drilling pits or ponds.

(c) When an operator is unable to maintain adequate freeboard to prevent overflow from any drilling pit or pond, an additional drilling pit or pond shall be constructed.

(d) If existing soil is not impervious, other impervious materials shall be used for lining.

(e) Blow pipes should have appropriate fittings on the discharge

end to confine the discharged material to the ditch or pond into which it is being directed.

(f) Upon completion of the drilling activity, the ponds shall be allowed to dry up prior to reclamation. Reclamation of the drilling ponds can commence when the material has completely evaporated or evaporated to the point where the pond can be filled in without allowing an overflow and discharge of material.

9.05 No material moved or cut for access roads or site preparation shall be placed in or near any stream.

9.06 When non-productive wells are plugged, the blow-back material from plugging shall be directed to the drilling pond to permit settling.

9.07 Sections 9.02, 9.03 and 9.05 shall not apply to those drilling operations 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.

#### Section 10. Acid Mine Drainage Control Measures

10.01 Certain acid mine drainage control measures were adopted by the Ohio River Valley Water Sanitation Commission and promulgated as Resolution No. 5-60, as amended January 10, 1963. The State of West Virginia is a member of the Ohio River Valley Water Sanitation Compact and as such has agreed to carry out the control measures so established. Waters of the State of West Virginia are being polluted by acid discharges from coal mining and related operations hereinafter referred to as "acid mine drainage", contrary to the language and intent of the State Water Pollution Control Law.

10.02 It has been demonstrated that the conscientious application

of certain principles and practices will, under certain conditions, alleviate the pollution from acid mine drainage. Therefore, in furtherance of the policy and procedures of the State Water Resources Board the following measures are hereby adopted by the Water Resources Board for the control of acid mine drainage pollution in the State of West Virginia:

- (a) (1) Surface waters and ground waters shall be diverted where practicable to prevent the entry or reduce the flow of waters into and through workings.
- (2) Water that does gain entry to the workings shall be handled in a manner which will minimize the formation and discharge of acid mine drainage to streams.
- (b) (1) Refuse from the mining and processing of coal which produces a discharge of less than 6.0 pH shall be handled and disposed of at a location above the 25-year flood level or protected from a 25-year flood.
- (2) Such refuse shall be handled and disposed of in a manner which will prevent acid mine drainage.
- (c) Where acid-producing materials are encountered in the overburden in stripping operations, these materials shall be handled so as to prevent the production of acid mine drainage.
- (d) Discharge of acid mine drainage to streams shall be regulated insofar as practicable to equalize the flow of daily accumulations throughout a 24-hour period.
- (e) Upon discontinuance of operations of any mine, all practicable mine-closing measures, consistent with safety requirements, shall be employed to minimize the formation and discharge of acid mine drainage.

(f) Under appropriate circumstances, consideration shall be given to the treatment of acid mine drainage by chemical or other means in order to mitigate its pollution properties.

Section 11. Industrial Discharges to Publicly Owned Treatment Works

11.01 Discharge of industrial process wastewater or other substances to a publicly owned sewerage system operating under authority of an existing valid Water Pollution Control Permit is prohibited unless prior approval is obtained from the Chief in accordance with sub-sections 11.03, 11.04 and 11.05.

11.02 A permittee is responsible for contacting the Chief, Division of Water Resources, regarding the proposed discharge and shall provide such information and data as deemed necessary by the Chief to evaluate said discharge with regard to its impact on the permittee's capacity to meet State requirements on treatment, water quality standards, and reliable operation and maintenance of the treatment works.

11.03 Publicly owned wastewater treatment works contemplating acceptance of an industrial discharge considered by the Chief to be a significant increase or input on the existing or planned publicly owned treatment works will be required to file an application for a new permit.

11.04 Industrial discharges considered by the Chief to be of minor significance to the municipal treatment system may be approved by issuance of an addendum to the existing Water Pollution Control Permit.

11.05 Industrial discharges considered by the Chief to have no significant impact on the existing or planned publicly owned wastewater treatment works may be approved by letter.

11.06 The Chief may prescribe forms necessary to administer this Section.