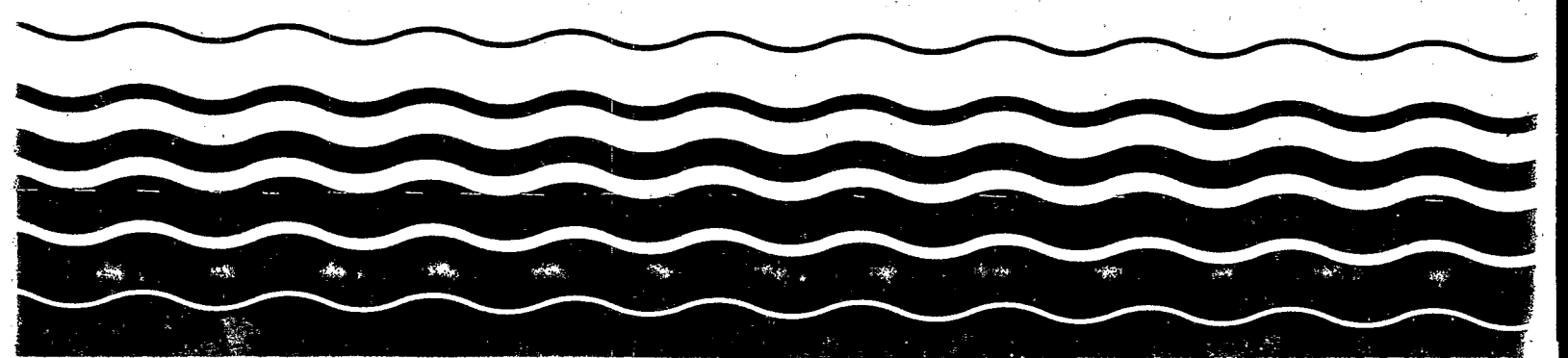
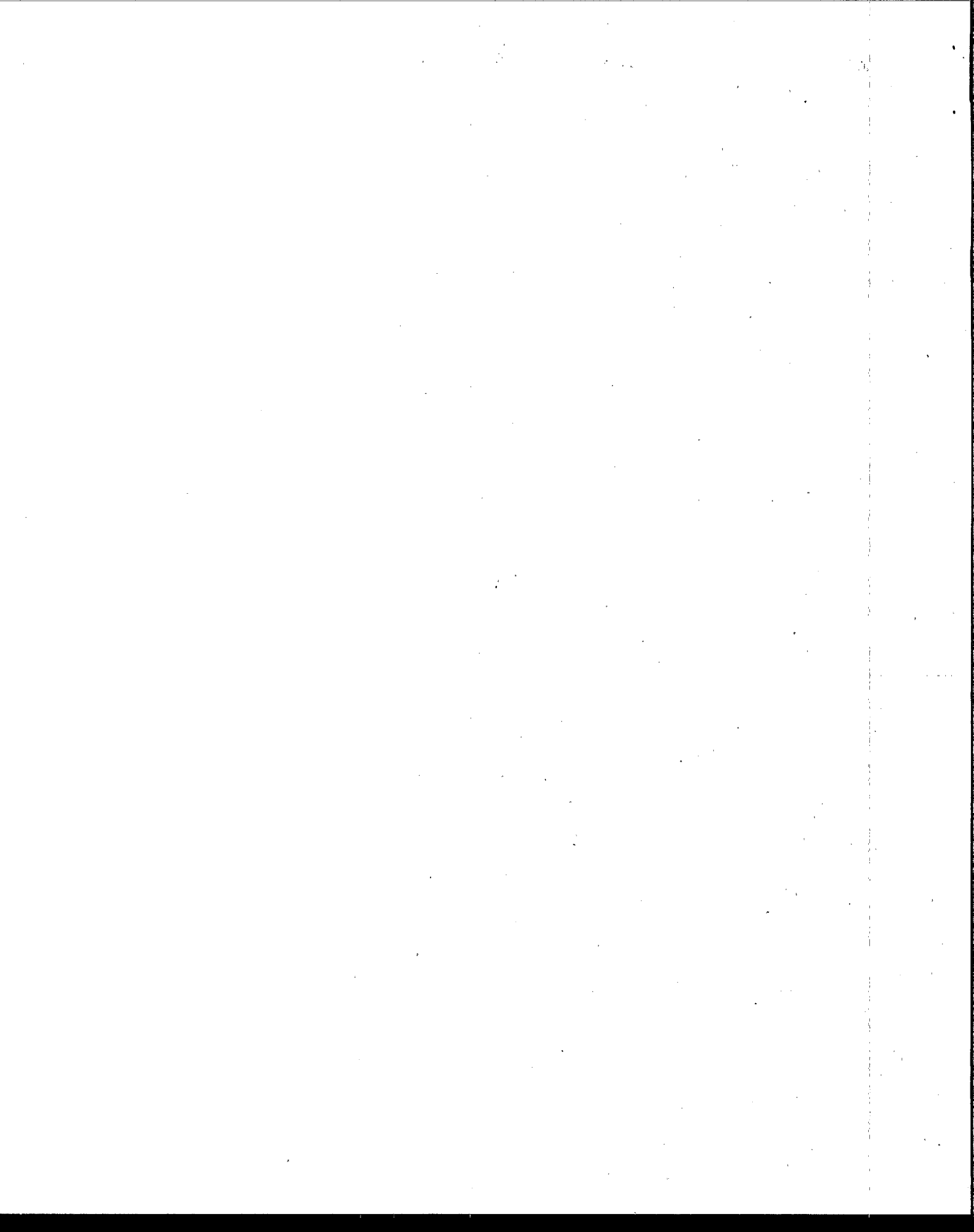


Water



State Water Quality Standards Summary: West Virginia





DISCLAIMER

This publication was prepared by Battelle under contract to the U.S. Environmental Protection Agency (Contract 68-03-3534). Secondary information sources were used to compile data presented in this document. Each State was given an opportunity to review and provide comments on a draft of this information document. In no event shall either the United States or Battelle have any responsibility or liability for any use, misuse, or reliance upon the information contained herein, nor does either warrant or otherwise represent in any way the accuracy, adequacy, efficacy, or applicability of the contents hereof.

The reader should consult the water quality standards of a particular State for exact regulatory language applicable to that State. Copies of State water quality standards may be obtained from the State's Water Pollution Control Agency or its equivalent.

Additional information may also be obtained from the:

Standards Branch
Criteria and Standards Division (WH-585)
Office of Water Regulations and Standards
U.S. Environmental Protection Agency
Washington, D.C. 20460
202-475-7315

This document may be obtained only from the National Technical Information Service (NTIS) at the following address:

National Technical Information Service
5285 Front Royal Road
Springfield, Virginia 22161
703-487-4650

The NTIS order number is: PB89-142194

WEST VIRGINIA

Responsible Agency:

State Water Resources Board
1260 Greenbrier Street

Charleston 25311
304-348-4002

State Contact:

Mr. Jan R. Taylor
Technical Advisor
State Water Resources Board
1260 Greenbrier Street

Charleston 25311 304-348-4002

Standards Available From:

Division of Water Resources
1201 Greenbrier Street

Charleston 25311
304-348-7561 Fee: no Mailing List: yes

State Contact:**State Narrative Language For: Antidegradation**

Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Waste assimilation and transport are not recognized as designated uses. The classification of the waters must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural industrial and other purposes including navigation. Subcategories of a use may be adopted and appropriate criteria set to reflect varying needs of such subcategories of uses, for example, to differentiate between trout water and other waters.

Please refer to the "EPA Water Quality Criteria Summaries: A Compilation of State/Federal Criteria" for additional antidegradation language for West Virginia.

State Narrative Language For: Toxics

No sewage, industrial wastes or other wastes present in any of the waters of the State shall cause or materially contribute to concentrations of materials harmful, hazardous, or toxic to man, animal, or aquatic life.

State Narrative Language For: Free From

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 and/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. Distinctly 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;
- I. Any other condition, including radiological exposure, which alters the chemical, physical or biological integrity of the waters of the State.

State Narrative Language For: Low Flow

Water quality standards shall not apply in wet weather streams (or intermittent streams, when they are dry or have no measurable flow) provided that the designated uses of downstream waters are not adversely affected.

State Narrative Language For: 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:

WEST VIRGINIA

(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. 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. Not cause or contribute to any of the conditions prohibited in Section 3; and vii. Not interfere with any designated 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, iv. Magnitude of water exchange at point of discharge, v. Stratification phenomena, vi. Waste capacity of the receiving stream 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.

WEST VIRGINIA

Classifications:

Warmwater Aquatic Habitat Cat. B1,B3	B1 - Warm Water Fishery Streams - Streams or stream segments which contain a fish population composed overwhelmingly of warm water species (primarily sport fisheries and may be stocked with trout seasonally). B3 - Small Non-Fishable Streams - Streams or stream segments which because of their size or flow patterns do not offer sport fishing; they generally contain only minnows, darters, etc.
Water Contact Recreation Category C	This category includes swimming, fishing, water skiing, and certain types of pleasure boating such as sailing in very small craft and small outboard motor boats.
Public Water Supply Category A	This category is used to describe waters which, after conventional treatment are used for human consumption.
Agricultural Water Supply Categ. B3	This category includes all water used for agriculture, includes irrigation as well as livestock watering. It is understood that these waters would also be suitable for wildlife watering.
Trout Waters Categ. B2	
Water Transport, Cooling and Power E1, E2, E3	This category includes, cooling water, power production, commercial and pleasure vessel activity, except those small craft included in Category C.

WEST VIRGINIA

	All Classes	Water Contact Category C	Public Water Su.. Category A	Warmwater Aquat.. Cat. B1,B3
Physical				
pH				
Upper Value	9.0			
Lower Value	6.0			
Dissolved Oxygen				
Lower Value		5.0 mg/L	5.0 mg/L	5.0 mg/L
Temperature				
Upper Value				Narr.
Temperature Change				
Upper Value	Narr.			
Turbidity				
Upper Value		Narr.		
Chlorides				
Upper Value		250 mg/L		
Nutrients				
Ammonia				
Upper Value			0.05 mg/L	
Nitrate				
Upper Value	10.0 mg/L			
Nitrite				
Upper Value				1.0 mg/L
Toxic Metals				
Arsenic				
Upper Value	100 ug/L			
Cadmium				
Upper Value			Narr. (10 mg/L)	
Chromium - Hexavalent				
Upper Value			50 ug/L	
Copper				
Upper Value			1000 ug/L	
Cyanide				
Upper Value		5.0 ug/L		
Iron				
Upper Value			1.5 mg/L	1.5 mg/L
Lead				
Upper Value			50.0 ug/L	
Zinc				
Upper Value			Narr. (600 ug/L)	
Barium				
Upper Value			1.0 mg/L	
Manganese				
Upper Value			1.0 mg/L	
Selenium				
Upper Value			10.0 ug/L	
Silver				
Upper Value			Narr. (24 ug/L)	
Pesticides				

WEST VIRGINIA

	All Classes	Water Contact Category C	Public Water Su.. Category A	Warmwater Aquat.. Cat. B1,B3
Aldrin & Dieldrin Upper Value	0.0019 ug/L			
Chlordane Upper Value	0.0043 ug/L			
DDT Upper Value	0.001 ug/L			
Endrin Upper Value	0.0023 ug/L			
Methoxychlor Upper Value	0.03 ug/L			
Toxaphene Upper Value	0.005 ug/L			
Organics				
Phenolic Compounds Upper Value		5.0 ug/L		
PCBs Upper Value	0.001 ug/L			
Bacteria				
Fecal Coliform Upper Value		Narr.	Narr.	

WEST VIRGINIA

Trout Waters Categ. B2	Agricultural Wa.. Categ. B3	Water Transport.. E1, E2, E3
---------------------------	--------------------------------	---------------------------------

Physical

Nutrients

Toxic Metals

Iron

Upper Value 0.5 mg/L

Nickel

Upper Value 50.0 ug/L

Pesticides

Organics

Bacteria

