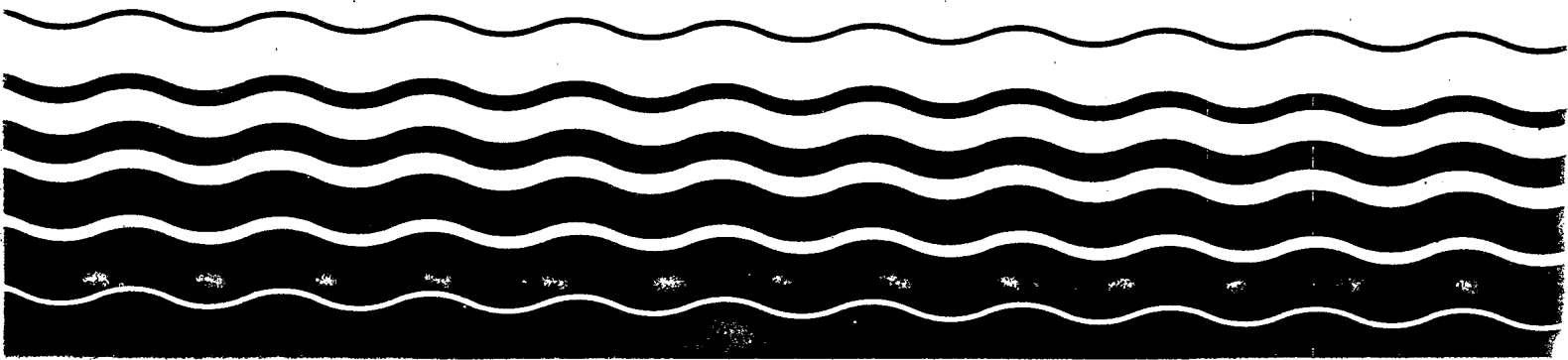




Water

State Water Quality Standards Summary: Kentucky



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: PB89-141840.

KENTUCKY

Responsible Agency:

Ky. Natural Res. and Env. Prot. Cabinet
Capital Plaza Tower

Frankfort 40601
502-564-3350

State Contact:

Mr. Bob Ware
Manager
Water Quality Branch
Kentucky Division of Water
18 Reilly Road, Frankfort Office Park
Frankfort 40601 502-564-3410

Standards Available From:

Bob Ware
KNREPC
Division of Water
18 Reilly Road, Frankfort Office Park
Frankfort 40601
502-564-3410 Fee: none Mailing List: yes

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

1. It is the purpose of these regulations to safeguard the waters of the Commonwealth for their designated uses, to prevent the creation of any new pollution of the waters of the Commonwealth, and to abate any existing pollution.
2. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the cabinet finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the cabinet shall assure water quality adequate to protect existing uses fully. The state water quality standards and continuing planning process designed to provide for the protection of existing water quality and/or the upgrading or enhancement of water quality in all waters of the Commonwealth shall serve as the method for implementation of this policy.
3. The implementation of this policy shall conform to 40 CFR 131.12 to the extent allowed by KRS 224.020.
4. Water quality shall be maintained and protected in waters designated as outstanding resource waters.
5. In those cases where potential water quality impairment associated with a thermal discharge is involved, a successful demonstration conducted under Section 316(a) of the Clean Water Act is considered to be in compliance with all portions of this non-degradation section.

State Narrative Language For: Toxics

Surface waters shall not be aesthetically or otherwise degraded by substances that injure, be toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life.

1. The allowable instream concentration of toxic substances which are noncumulative or nonpersistent (half-life of less than 96 hours) shall not exceed 0.1 of the 96-hour median lethal concentration (LC50) of a representative indigenous aquatic organism(s).
2. The allowable instream concentration of toxic substances which are bio-accumulative or persistent, including pesticides, when not specified elsewhere in this section, shall not exceed 0.01 of the 96-hour median lethal concentration (LC50) of a representative indigenous aquatic organism(s).
3. Where specific application factors have been determined for a toxic substance such as an acute/chronic ratio or water effect ratio, they may be used instead of the 0.1 and 0.01 factors listed in this subsection upon approval by the cabinet.

State Narrative Language For: Free From

Surface waters shall not be aesthetically or otherwise degraded by substances that:

- A. Settle to form objectionable deposits;
- B. Float as debris, scum, oil, or other matter to form a nuisance;
- C. Produce objectionable color, odor, taste, or turbidity;
- D. Injure, be toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;

KENTUCKY

- E. Produce undesirable aquatic life or result in the dominance of nuisance species.

State Narrative Language For: Mixing Zones

The following guidelines are applicable in determining all mixing zones:

- (1) The cabinet shall, on a case-by-case basis, specify definable geometric limits for mixing zones. Applicable limits shall include but may not be limited to the linear distances from the point of discharge, surface area involvement, volume of receiving water, and taking into account other nearby mixing zones.
- (2) Concentrations of toxic substances which exceed the ninety-six (96) hour LC50 or other appropriate LC50 tests for representative indigenous aquatic organisms are not allowed at any point within the mixing zone. A zone of initial dilution may be assigned on a case-by-case basis at the discretion of the cabinet.
- (3) The location of a mixing zone shall not interfere with spawning areas, nursery areas, fish migration routes, public water supply intakes, bathing areas, nor preclude the free passage of fish or aquatic life.
- (4) Whenever possible the mixing zone shall not exceed one-third ($1/3$) of the width or cross-sectional area of the receiving stream and in no case shall exceed one-half ($1/2$) of this volume.
- (5) In lakes and other surface impoundments, the volume of a mixing zone shall not affect in excess of ten percent of the volume of that portion of the receiving waters available for mixing.
- (6) In all cases, a mixing zone must be limited to an area or volume which will not adversely alter the legitimate uses of the receiving water; nor shall a mixing zone be so large as to adversely affect an established community of aquatic organisms.
- (7) In the case of thermal discharges, a successful demonstration conducted under Section 316(a) of the Clean Water Act shall constitute compliance with all provisions of this section.
- (8) Criteria listed in Section 4 of 401 KAR 5:031 do not apply in the mixing zone.

State Narrative Language For: Low Flow

On occasion surface water quality may be outside of the limits established to protect designated uses because of natural conditions. When this condition occurs during periods when stream flows are below the low flow which is used by the cabinet to establish effluent limits for wastewater treatment facilities consistent with the definition contained in 401 KAR 5:029, Section 1(1)(n), a discharger shall not be considered a contributor to instream violations of water quality standards, provided that treatment in compliance with permit requirements is maintained.

KENTUCKY

Classifications:

Outstanding Resource Waters

Warmwater Aquatic Habitat

Protective of productive warmwater aquatic communities, fowl, animal wildlife, arborous growth, agriculture, and industrial uses.

Coldwater Aquatic Habitat

Protective of productive coldwater aquatic communities and streams which support trout populations (whether self-sustaining or reproducing) on a year round basis.

Domestic Water Supply Use

Applicable at the point of withdrawal for use for domestic water supply from surface water sources.

Primary Contact Recreation Waters

Suitable for full body contact recreation during the recreation season of May 1 through October 31.

Secondary Contact Recreation Waters

Suitable for partial body contact recreation, with minimal threat to public health due to water quality.

KENTUCKY

All Classes		Warmwater Aquat..	Coldwater Aquat..	Domestic Water
Physical				
pH				
Upper Value		9.0	9.0	
Lower Value		6.0	6.0	
Dissolved Oxygen				
Lower Value		4	5	mg/L
Temperature				
Upper Value		31.4	C	Narr.
Total Dissolved Solids				
Upper Value		Narr.	Narr.	
Nutrients				
Ammonia				
Upper Value		0.05	mg/L	0.05
Nitrate				
Upper Value				10
Toxic Metals				
Arsenic				
Upper Value		50	ug/L	
Cadmium				
Upper Value		4.0	ug/L	
Secondary Upper Limit		12.0	ug/L	
Chromium - Total				
Upper Value		100	ug/L	0.05
Cyanide				
Upper Value		5	ug/L (free)	
Iron				
Upper Value		1.0	mg/L	
Lead				
Upper Value				0.05
Barium				
Upper Value				1
Beryllium				
Upper Value		11	ug/L	
Secondary Upper Limit		1100	ug/L	
Manganese				
Upper Value				0.05
Selenium				
Upper Value				0.01
Silver				
Upper Value				0.05
Pesticides				
Chlordane				
Upper Value		0.0043	ug/L	
Organics				
Phthalate Esters				
Upper Value		3	ug/L	

KENTUCKY

All
Classes

Warmwater Aquat.. Coldwater Aquat.. Domestic Water

PCBs

Upper Value

0.0014 ug/L

Bacteria

Fecal Coliform

Upper Value

2000 /100ml 6M

KENTUCKY

Primary Contact Secondary Conta..

Physical

pH

Upper Value

9.0

9.0

Lower Value

6.0

6.0

Nutrients

Toxic Metals

Pesticides

Organics

Bacteria

Fecal Coliform

Upper Value

200 /100ml GM 1000 /100ml GM

