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Water

EPA

Organics

Water Quality Standards Criteria Summaries A Compilation of State/Federal Criteria

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U. S. Environmental Protection Agency
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NATIONAL SUMMARY

OF

STATE WATER QUALITY STANDARDS

ORGANICS

OCTOBER, 1980

PREPARED FOR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CRITERIA AND STANDARDS DIVISION

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INTRODUCTION

This digest is compiled to provide general information to the public as well as to Federal, State, and local officials. It contains excerpts from the individual Federal-State water quality standards establishing pollutant specific criteria for interstate surface waters. The water quality standards program is implemented by the U. S. Environmental Protection Agency where responsibility for providing water quality recommendations, approving State-adopted standards for interstate waters, evaluating adherence to the standards, and overseeing enforcement of standards compliance, has been mandated by Congress.

Standards, a nationwide strategy for surface water quality management, contain three major elements: the use (recreation, drinking water, fish and wildlife propagation, industrial, or agricultural) to be made of the navigable water; criteria to protect these uses; and an antidegradation statement to protect existing high quality waters, from degradation by the addition of pollutants.

Water quality criteria (numerical or narrative specifications) for physical, chemical, temperature, and biological constituents are stated in the July 1976 U. S. Environmental Protection Agency publication Quality Criteria for Water (QCW), available from the Government Printing Office, Washington, D. C. The 1976 QCW, commonly referred to as the "Red Book," is the most current compilation of scientific information used by the Agency as a basis for assessing water quality. This publication is subject to periodic updating and revisions in light of new scientific and technical information.

This digest summarizes three organic compounds which are usually incorporated into State Water Quality Standards. They are: phenol, phthalate esters, and polychorinated biphenyls (PCB's). Phenol and phenolic compounds are present in waters receiving wastes resulting from wood and coal distillation, oil refining, chemicals production and the natural degradation of organic wastes. Phthalate esters are not known to be naturally occuring. Their presence in water systems is a result of their production for use in plastics and to a limited extent pesticides. Likewise, PCB's are not naturally occuring. Their presence in water has been of particular importance because of toxic effects associated with very minute quantities of the chemical, and because it is a suspected carcinogen. PCB has, in the past, been primarily used as a heat exchanger in electrical capacitors and transformers. The production of PCB's for this use has been greatly reduced. EPA has established a zero discharge PCB federal effluent standard for new and existing production facilities (40 CFR 129.105). The presence of PCB's in water is primarily a result of spills and uncontrollable non-point source leaching.

All three substances exert detrimental effects on aquatic and animal life. For these reasons EPA has established water quality criteria recommendations for the chemicals in its publication, Quality Criteria for Water (1976).

The criteria are as follows:

Phenol	1 ug/l for domestic water supply (welfare), and to protect against fish flesh tainting.
Phthalate esters	3 ug/l for freshwater aquatic life.
Polychlorinated Biphenyls	0.001 ug/l for freshwater and marine aquatic life and for consumers thereof. Every reasonable effort should be made to minimize human exposure.

Since water quality standards experience revisions and upgrading from time to time, following procedures set forth in the Clean Water Act, individual entries in this digest may be superseded. As these revisions are accomplished and allowing for the States to revise their standards accordingly, this digest will be updated and reissued. Because this publication is not intended for use other than as a general information resource, to obtain the latest information and for special purposes and applications, the reader needs to refer to the current approved water quality standards. These can be obtained from the State water pollution control agencies or the EPA or Regional Offices.

Individual State-adopted criteria follow:

REFERENCES

A California Water Quality Standards by River Basins, c.a. 1975

For more detailed information on selected basins, sub-basins and stretches of streams and coastal areas refer to California State Water Quality Standards.

B Delaware Water Quality Standards, March 25, 1979

C Idaho Water Quality Standards, c.a. September, 1979

D Missouri Water Quality Standards, c.a. February, 1978

E American Samoa Water Quality Standards, Revised July, 1973

F Territory of Guam Water Quality Standards, Sept. 1975

G Trust Territory of the Pacific Islands Water Quality Standards, October 21, 1973

H Virgin Islands Water Quality Standards, Aug. 1973

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1 Pages 701:0501-0509, February 16, 1979

2 Pages 706:1004-1008, July 20, 1979

3 Pages 711:0542-0544, August 5, 1977

4 Pages 716:0603, March 26, 1976

5 Pages 726:1005, 1011-1013, March 7, 1980

Basic Water Quality Standards adopted May 22, 1979, have not yet been submitted to EPA for formal approval.

6 Pages 731:1002-1009, September 8, 1978

7 Pages 746:1008-1014, October 19, 1979

8 Pages 751:0504-0505, January 25, 1980

9 Pages 765:0512-0515, January 30, 1976

10 Page 761:0503-0504, 1973

11 Page 766:0504-0509, October 5, 1979

12 Pages 771:0502-0504, September 29, 1978

13 Pages 776:0504-0506, April 10, 1979

14 Pages 781:0501-0502, May 18, 1979

15 Pages 786:0501-0502, August 29, 1975

16 Page 791:0583, May 26, 1978

17 Pages 796:0103-0108, February 16, 1979

18 Pages 801:1001-1002, Sept. 29, 1978

19 Page 806:1003, March 30, 1979

20 Page 811:1043, 1974

21 Pages 816:0602-0607, 0642-0648, 1974

22 Pages 821:0502-0505, June 30, 1978

23 Pages 831:0501-0510, February 21, 1975

24 Page 836:0502, June 30, 1978

25 Pages 841:0507-0537, December 7, 1979

26 Pages 846:0501-0508, November 17, 1978

27 Pages 851:1001-1023, December 15, 1978

28 Pages 856:1001-1002, July 18, 1978

29 Pages 861:1002-1007, August 11, 1979

30 Pages 866:1004-1009, December 28, 1979

31 Pages 871:0501-0506, November 25, 1977

32 Pages 876:1001-1043, May 26, 1978

33 Pages 881:1001-1007, September 21, 1979

34 Pages 886:0513-0524, August 29, 1975

35 Pages 891:1001-1129, November 16, 1979

36 Pages 901:0501-0505, November 3, 1978

37 Pages 906:0501-0506, October 13, 1978

38 Pages 911:0501-0507, June 22, 1979

39 Pages 916:0541-0544, April 14, 1978

40 Pages 921:1001-1003, August 13, 1976

41 Pages 926:0541-0563, January 26, 1979

42 Pages 931:0501-0508, May 26, 1978

43 Pages 936:1001-1003, June 27, 1975

44 Pages 941:1001-1005, May 26, 1978

45 Pages 946:0501-0520, July 14, 1978

46 Pages 951:1002-1003, April 28, 1978

47 Pages 956:1001-1007, January 11, 1980

48 Page 741:1002, November 23, 1979

49 Pages 896:0301-0310, March 31, 1978

ORGANICS, INCLUDING PHTHALATES, PCB'S PHENOL

State	Criteria Values in mg/l	Designated Stream Use
Alabama[1]	Not specified	All
	Toxic Substances narrative: only such amounts, whether alone or in combination with other substances as will not render the waters unsafe or unsuitable as a source of water supply for drinking or food-processing purposes, or injurious to fish, wildlife and aquatic life.	Public water supply
	Toxic Substances narrative: only such amounts, whether alone or in combination with other substances or wastes, as will not: render the water unsafe or unsuitable for swimming and water-contact sports; be injurious to fish, wildlife and aquatic life or, where applicable, shrimp and crabs; impair the waters for any other usage established for this classification.	Swimming and other whole body water-contact sports
	Toxic substances narrative: Only such amounts, whether alone or in combination with other substances, as will not: be injurious to fish and aquatic life, including shrimp and crabs; exceed one-tenth of the 96-hour median tolerance limit for fish, aquatic life or shellfish, including shrimp and crabs.	Shellfish harvesting
	Toxic Substances narrative: Only such amounts, whether alone or in combination with other substances, as will not: be injurious to fish and aquatic life including shrimp and crabs in estuarine or salt waters or the propagation thereof; not to exceed one-tenth of the 96-hour median tolerance limit for fish and aquatic life including shrimp and crabs in salt and estuarine waters except that other limiting concentrations may be used when factually justified and approved by the Commission.	Fish and wildlife

State	Criteria Value in mg/l	Designated Stream Use
Alabama (con't)	Only such amounts as will not render the waters unsuitable for agricultural irrigation, livestock watering, industrial cooling, industrial process water supply purposes, and fish survival, nor interfere with downstream uses.	Agricultural and industrial water supply
	Only such amounts as will not render the waters unsuitable for industrial cooling and industrial process water supply purposes, nor interfere with downstream water uses.	Industrial operations
	Only such amounts as will not render the waters unsuitable for agricultural irrigation, livestock watering, industrial cooling, and industrial process water supply purposes, where applicable nor interfere with downstream water use.	Navigation
Alaska[2.]	Not specified	All
	Toxic substances narrative: shall not exceed Alaska Drinking Water Standards or EPA Quality Criteria for Water.	I. Fresh water (A) water supply (i) drinking, culinary and food processing
	Toxic substances narrative: same as I. (A) (i) where contact with a product destined for subsequent human consumption is present. Same as I. (C) or FWPCA Water Quality Criteria as applicable to substances for stockwaters. Concentrations for irrigation waters shall not exceed FWPCA Water Quality Criteria or WQC 1972.	(ii) agriculture, including irrigation and stock watering
	Toxic substances narrative: shall not individually or in combination exceed 0.01 times the lowest measured 96-hour LC_{50} for life stages of species identified by the department as being the most sensivtive, biologically important to the situation or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards whichever concentration is less.	(iii) aquaculture

State	Criteria Value in mg/l	Designated Stream Use
Alaska (con't)	Toxic substances narrative: substances shall not be present which pose hazards to worker contact.	(iv) industrial, including any water supplies used in association with a manufacturing or production enterprise other than food processing), including mining, placer mining, energy production or development
	Toxic substances narrative: same as I. (A) (i).	(B) water recreation (i) contact recreation.
	Toxic substances narrative: substances shall not be present which pose hazards to incidental human contact.	(ii) secondary recreation
	Toxic substances narrative: shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC_{50} for life stages of species identified by the department as being the most sensitive, biologically important to the location, or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards whichever concentration is less.	(C) growth and propagation of fish, shellfish, other aquatic life, and wildlife including waterfowl and furbearers
	Toxic substances narrative: same as I. (A) (iii).	II. Marine water (A) water supply (i) aquaculture
	Toxic substances narrative: shall not exceed EPA Quality Criteria for Water as applicable to the substance.	(ii) seafood processing
	Toxic substances narrative: same as I. (A) (iv).	(iii) industrial, including any water supplies used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development

State	Criteria Value in mg/l	Designated Stream Use
Alaska (con't)	Toxic substances narrative: same as II. (A) (ii).	(B) water recreation
		(i) contact recreation
	Toxic substances narrative: same as I. (B) (ii).	(ii) secondary recreation
	Toxic substances narrative: same as I. (C).	(C) growth and propagation of fish, shellfish, aquatic life, and wildlife including seabirds, waterfowl and furbearers
	Toxic substances narrative:same as I. (C) but excluding the phrase "or Alaska Drinking Water Standards."	(D) harvesting for consumption of raw mollusks or other raw aquatic life
Arizona[3]	Phthalates: Not specified	All
	PCB: Not specified	All
	Phenol: 0.001	All except agricultural
	Other organics: Not specified	All
	Toxic substances narrative: Toxic substances shall be kept below levels which are deleterious to human, animal, plant or aquatic life, or in amounts sufficient to interfere with the beneficial use of the water. As a minimum evaluation for the presence of toxic substances, a water shall be evaluated by use of a 96-hour bioassay, guided by the document Standard Methods for the Examination of Water and Wastewater. The survival of the test organisms shall not be less than that in controls which utilize appropriate experimental water.	
Arkansas[4]	Not specified	All
	Toxic substances narrative: Toxic materials attributable to municipal, industrial, agricultural, or other waste discharges, shall not be present in receiving waters in such quanitities as to be toxic to human,	All

State	Criteria Value in mg/l	Designated Stream Use
Arkansas (con't)	animal, plant or aquatic life or to interfere with the normal propagation of aquatic life. For any toxicants, concentrations in the receiving waters after mixing shall not exceed 0.01 of the 96-hour TLm, unless they can be shown to be nonpersistant and noncumulative, and to exhibit no synergistic interactions with other waste or stream components. In no case shall concentrations exceed 0.05 of the 96-hour TLm.	
California[A]	CAE - m 3.0	Municipal supply
	CCE - m 0.7	Municipal supply
	MBAS 0.5	Municipal supply
	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation in pesticide concentrations found in bottom sediments or aquatic life.	
	Total identifiable chlorinated hydrocarbon pesticides shall not be present at concentrations detectable within the accuracy of analytical methods prescribed in Standard Methods for the Examination of Water and Wastewater, latest edition, or other equivalent methods approved by the Executive Officer.	
	(See California Basin Plan Standards for specific limits)	
Colorado[5]	PCB (Polychlorinated Biphenyls) 0.000001	Aquatic life
	Chlorophenol 0.001	Aquatic life
	Monohydric phenol 0.5	Aquatic life
	Benzidine 0.0001	Aquatic Life
	PCB (Polychlorinated Biphenyls) Not specified	Domestic water supply

State	Criteria Value in mg/l	Designated Stream Use
Colorado (con't)	Chlorophenol 0.001	Domestic water supply
	Monohydric phenol 0.001	Domestic water supply
	Benzidine 0.0001	Domestic water supply
Connecticut[6]	Not specified	All
	The waters shall be free from chemical constituents in concentrations or combinations which would be harmful to human, animal or aquatic life for the most sensitive and governing water use class. Criteria for chemical constituents contained in the "Quality Criteria for Water" published by the Environmental Agency shall be considered and used as guidance. In areas where fisheries are the governing considerations and approved limits have not been established, bioassays are necessary to establish limits on toxic substances, the recommendations for bioassay procedures contained in "Standard Methods for the Examination of Water and Wastewater" and the application factors contained in "Quality Criteria for Water" shall be considered. For public drinking water supplies, the raw water sources must be of such quality that U. S. Environmental Protection Agency limits as defined by the Safe Drinking Water Act (Public Law 93-523), or state limits if more stringent, for finished water can be met after conventional treatment.	All
	Toxic substances narrative: None in concentrations or combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation or impair the waters for any other uses. (See Note 4. above).	Coastal and marine water uses
Delaware[B]	Phenols: Shall not exceed 0.01 mg/l at any time except where natural conditions cause this value to be increased.	All

State	Criteria Value in mg/l	Designated Stream Use
Delaware (con't)	Synthetic detergents (MBAS) 0.5	All
	PCB: Not specified	All
	Phthalates: Not specified	All
Florida[7]	Phenolic compounds as listed - Chlorinated phenols including trichlorophenols; chlorinated creosols; 2-chlorophenol; 2, 4-dichlorophenol and pentachlorophenol; 2, 4-dinitrophenol; phenol - shall not exceed 1.0 micrograms per litre (ug/l) unless higher values are shown not to be chronically toxic. Such higher values shall be approved in writing by the Secretary. Phenolic compounds other than those produced by the natural decay of plant material, named or unnamed, shall not taint the flesh of edible fish or shellfish or produce objectinable taste or odor in a drinking water supply.	All
	Phthalate esters 0.003	Drinking water supply, recreation, fish and wildlife
	PCB 0.000001	Drinking water supply, shellfish harvesting, recreation, fish or wildlife
	Other organics: Not specified	All
Georgia[8]	Not specified	All
Hawaii[9]	Not specified	All
	All waters shall be free of substances attributable to domestic, industrial, or other controllable sources as follows: toxic substances at levels or combinations sufficient to be toxic or harmful to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water. As a minimum, evaluation by use of a 96-hour bioassay described in the most recent edition of Standard Methods for the Examination	All

State	Criteria Value in mg/l	Designated Stream Use
Hawaii (con't)	of Water and Wastewater shall be conducted. Survival of test organisms shall not be less than that in controls which utilize appropriate experimental water.	
Idaho[10]	Not specified	All
	A material or combination of materials which, if discharged in any quantity into State waters, presents a substantial present or potential hazard to human health, the public health, or the environment. Unless otherwise specified, published guides such as Quality Criteria for Water (1976) by E.P.A., Water Quality Criteria (Second Edition, 1963) by the State of California Water Quality Control Board, their subsequent revisions, and more recent research papers, regulations and guidelines will be used in identifying individual and specific materials and in evaluating the tolerance of the identified materials for the beneficial uses indicated.	
Illinois[11]	Phenol 0.001	Water supply after treatment
	Phenol 0.3	Secondary contact, indigenous aquatic life
	Phenols: 0.1 mg/l	All waters except water supply and secondary contact and indigenous aquatic life
	PCB: Not specified	All
	Phthalates: Not specified	All
	Other organics: Not specified	All
	Any substance toxic to aquatic life shall not exceed 1/10th of the 96-hour median tolerance limit (96-hr TL_m) for native fish or essential fish food organisms	

State	Criteria Value in mg/l	Designated Stream Use
Illinois (con't)	except for USEPA registered pesticides approved for aquatic application and applied pursuant to the following conditions: (i) Applications shall be made in strict accordance with label directions. (ii) Applicator shall be properly certified under the provisions of the Federal Insecticide Fungicide, and Rodenticide Act, 7 U.S.C. 135 et seq. (1972) (iii) Application of aquatic pesticides must be in accordance with the laws, regulations and guidelines of all State and Federal agencies authorized by law to regulate, use, or supervise pesticide applications, among which are included the Illinois Department of Conservation pursuant to Ill. Rev. Stat. Ch. 56, Secs. 1.1-250 (1976); the Illinois Department of Agriculture and the Illinois Department of Public Health pursuant to Ill. Rev. Stat., Ch.5, Secs. 256-257 (1976); and the Illinois Natural History Survey pursuant to Ill. Rev. Stat., Ch. 127, Sec. 58-14 (1976). (iv) No aquatic pesticide shall be applied to water affecting public or food processing water supplies unless a permit to apply the pesticide has been obtained from the Illinois Environmental Protection Agency. All permits shall be issued so as not to cause a violation of the Act or of any of the Board's rules or regulations. To aid applicators in determining their responsibilities under this subsection, a list of waters affecting public water supplies will be published and maintained by the Agency's Division of Public Water Supplies.	
Indiana[12]	Not specified	All
	Toxic Substance Narrative: Concentrations of toxic substances shall not	

State	Criteria Value in mg/l	Designated Stream Use
Indiana (con't)	exceed one-tenth of the 96-hour median lethal concentration for important indigenous aquatic species. More stringent application factors shall be used when justified on the basis of available evidence and approved by the Board after public notice and opportunity for hearings. Persistent or Bioconcentrating Substances: Concentrations of organic contaminants which can be demonstrated to be persistent, to have a tendency to bioconcentrate in the aquatic biota, and are likely to be toxic on the basis of available scientific evidence, shall be limited as determined by the Board after public notice and opportunity for hearing. (Note: For subsections 6 (b)(2) and 6 (b)(3), The United States Environmental Protection Agency Administrators' Quality Criteria for Water will be among the documents used in establishing water quality standards for toxic and/or persistent substances)	
Iowa[13]	Phenol 0.05	Public water supply, fish and aquatic life, secondary recreation
	PCB: Not specified	All
	Phthalates: Not specified	All
	Other organics: Not specified	All
Kansas[14]	Not specified	All
Kentucky[15]	Not specified	All
Louisiana[16]	Not specified	All
Maine[17]	Not specified	All
	Toxic substances narrative: no waste substances containing chemical constituents which would be harmful to humans, animal or aquatic life.	All

State	Criteria Value in mg/l	Designated Stream Use
Maryland[18]	Not specified	All
Massachusetts[19]	Not specified	All
	Toxic substances narrative: free from pollutants in concentrations or combinations that are toxic to humans or aquatic life.	All
	For each class, the most sensitive beneficial uses are identified and minimum criteria for water quality in the water column are established. The minimum criteria in Reg. 3.4 have been developed by applying the criteria contained in the EPA publication Quality Criteria for Water (EPA-440/9-76-023) to account for local conditions including, but not limited to:	
	(a) The characteristics of the biological community	
	(b) Temperature, weather and flow characteristics, and	
	(c) Synergistic and antagonistic effects of combinations of pollutants.	
	The Division will use the EPA publication entitled Quality Criteria for Water, EPA-440/9-76-023 as guidance in establishing case-by-case discharge limits for pollutants not specifically listed in these standards but included under the heading "Other Constituents" in Regulation 3.4, for identifying bioassay application factors and for interpretations of narrative criteria. Where the minimum criteria specifically listed by a Division in this part differ from those contained in the federal criteria, the provisions of the specifically listed criteria in these standards shall apply.	
Michigan[20]	Not Specified.	All
	Toxic substances narrative: (1) toxicity of undefined toxic substances not included	All

State	Criteria Value in mg/l	Designated Stream Use
Michigan (con't)	in (2) and (3) below shall be determined by development of 96-hour TLm's or other appropriate effect end points obtained by continuous-flow or in situ bioassays using suitable test organisms. Shall not exceed safe concentrations as determined by applying an application factor, based on knowledge of behavior of toxic substances and organisms to be protected, to the TLm or other appropriate effect end point.	
	(2) defined toxic substances shall be limited by application of recommendations contained in the chapter on Freshwater Organisms, Report of the NTAC to Secretary of the Interior, WQC, 1968, or by application of any toxic effluent standard, limitation or prohibition promulgated by EPA pursuant to section 307(a) of PL92-500, whichever is more restrictive.	All
	(3) shall not exceed the permissible inorganic chemicals criteria for raw public water supply in Report of the NTAC to Secretary of the Interior, WQC, 1968.	Public water supply
Minnesota[21]	Phenol: 0.001	Drinking water supply
	0.01 - None that could impart odor or taste to fish flesh or other fresh water edible products such as crayfish, clams, prawns and like creatures. Where it seems probable that a discharge may result in tainting of edible aquatic products, bioassays and taste panels will be required to determine whether tainting is likely or present.	Fisheries and recreation (Classes A and B)
	0.1 - None that could impart odor or taste to fish flesh or other fresh water edible products such as crayfish, clams, prawns and like creatures. Where it seems probable that a discharge may result in tainting of edible aquatic products, bioassays and taste panels will be required to determine whether tainting is likely or present.	Fisheries and recreation (Class C)

State	Criteria Value in mg/l	Designated Stream Use
Minnesota (con't)	Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish or other Biota shall be resolved in accordance with the latest methods recommended by the U. S. Environmental Protection Agency. The recommendations of the National Technical Advisory Committee appointed by the U. S. Environmental Protection Agency shall be used as official guidelines in all aspects where the recommendations may be applicable. Toxic substances shall not exceed 1/10 of the 96-hour median tolerance limit (TLM) as a water quality standard except that other more stringent application factors shall be used when justified on the basis of available evidence.	
Mississippi[22]	Phenol 0.05	Fish and wildlife
	Phenol 0.001	Public water supply
	Other organics: Not specified	All
Missouri[D]	PCB: 0.0	All
	Phenol: 0.001	Aquatic life Drinking water supply
	Other organics: Not specified	All
Montana[23]	Not specified	All
Nebraska[24]	Not specified	All
Nevada[25]	(see Article 4.5.2., Nevada Water Pollution Control Regs. for numerical water quality standards for selected waters of the State)	All
New Hampshire[26]	Phenol: 0.001	Water supply, recreation
	Phenol 0.002	Boating, fishing, industrial
	PCB: Not specified	All
	Phthalates: Not specified	All

State	Criteria Value in mg/l	Designated Stream Use
New Hampshire (con't)	Other organics: Not specified	All
	Toxic substances narrative: none unless naturally occurring	Water supply (after disinfection)
	Toxic substances narrative: Not in toxic concentrations of combinations	Water supply (after adequate treatment), recreation, fish habitat, swimming, industrial
New Jersey[27]	Phenols: 0.005	All uses Delaware River main stem and Delaware Bay, Zones 1, 2, and 3
	Phenols: 0.02	All uses Delaware River Zone 4
	Phenols: 0.01	All uses Delaware River, Zones 5 and 6
	Toxic or Deleterious Substances, including but not limited to Mineral Acids, Caustic Alkali, Cyanides, Heavy Metals, Carbon Dioxide, Ammonia or Ammonium Compounds, Chlorine, Phenols, Pesticides, etc.-None, either alone or in combination with other substances, in such concentrations as to affect humans or be detrimental to the natural aquatic biota, produce undesirable aquatic life, or which would render the waters unsuitable for the designated uses. Where source of public water supply is a potential use, none which would cause standards for drinking water to be exceeded after appropriate treatment.	All
New Mexico[28]	Not specified	All
New York[29]	Phenolic compounds: 0.001	Drinking water supply
	No other organics specified	All
North Carolina[30]	Phenol: 0.001	Drinking water supply Class AA
	Phenol: 0.005	Drinking water supply Class A

State	Criteria Value in mg/l	Designated Stream Use
North Carolina (con't)	MBAS 0.5	Drinking water supply
	Other organics: Not specified	All
North Dakota[31]	PCB's: 0.001	All
	Phenols: 0.01	All
	Other organics: Not specified	All
Ohio[32]	Phthalate esters: 0.003	Warmwater habitat, coldwater habitat, Ohio River, Lake Erie
	PCB's: Not to exceed 0.000001 mg/l at any time in a water sample, or 0.01 mg/l (wet weight) in any whole sample of any representative aquatic organism.	Warmwater habitat, coldwater habitat
	PCB's: Total PCB shall not exceed 0.001 ug/l; however, when the level is less than the practical laboratory quantification level (currently 0.1 ug/l) a fish flesh body burden level in excess of 2 ug/g shall be cause for concern and further investigation.	Ohio River
	Absent	Public water supply
	Phenol (Phenolic Material): 0.01	Ohio River
	Phenolic compounds: 0.01	Warmwater habitat
	Phenolic compounds: 0.001	Coldwater habitat, public water supply
	Phenolic Compounds: .001	Exceptional warm water habitat, as well as cold water habitat and public water supply and Lake Erie.
	MBAS: 0.5	Warmwater habitat, coldwater habitat
	Other organics: Not specified	All

State	Criteria Value in mg/l	Designated Stream Use
Oklahoma[33]	Detergents (total): 0.2	Drinking water supply
	Methylene blue active substances: 0.5	
	Phthalate esters: 0.003	
	Cyanide: 0.2	Drinking water supply
	PCB: 0.3	All
Oregon[34]	Phenols: 0.001	All uses of Main stem Klammath River; Multnomah Channel; Main stem Willamette River; Main stem Columbia River from eastern Oregon-Washington border westward to Pacific Ocean; Main stem Grande Ronde River; Main stem Walla Walla River; Main stem Snake River in and adjacent to Oregon; Rouge River Basin; Umpqua River Basin; McKenzie River Basin; Santiam River Basin
	Other organics: Not specified	All
Pennsylvania[35]	Phenolics: 0.005	All
	MBAS: 0.5	All
	$MBAS_2$: 1.0 mg/l	All
	Other organics: Not specified	All
Rhode Island[36]	None in concentrations or combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation, impair the palatability of same, or impair the waters for any other uses.	Class SA/SA_m
	None in concentrations on combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish of shellfish or their propagation, or impair the water for any other usage assigned to this Class.	Class SB

State	Criteria Value in mg/l	Designated Stream Use
Rhode Island (con't)	None in concentrations or combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation, or impair the water for any other usage assigned to this Class.	Class SC
	Waters shall be free from chemical constitutents in concentrations or combinations which would be harmful to human, animal, or aquatic life for the appropriate most sensitive and governing water class use or unfavorably alter the biota. In areas where fisheries are the governing considerations and approved limits have not been established, bioassays shall be performed as required by the appropriate agencies. The latest edition of the federal publication Water Quality Criteria will be considered the interpretation and application of bioassay result. Bioassays shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater (APHA). For public drinking water supplies, the limit prescribed by the United States Environmental Protection Agency will be used where not superseded by more stringent state requirements.	Class A, B, C, and D
South Carolina[37]	Not specified	All
	Toxic substances narrative: none (zero).	Domestic and food processing; trout fishing; outstanding recreational or ecological resources
	Toxic substances narrative: none in amounts exceeding limitations established and adopted by the Department of Health and Environmental Control.	Direct water contact (swimming); domestic supply; propagation of fish; industrial; agricultural

State	Criteria Value in mg/l	Designated Stream Use
South Carolina (con't)	Toxic substances narrative: none alone or in combination with other substances or wastes in sufficient amounts to be injurious to edible fish or shellfish or the culture or propagation thereof.	Shellfish harvesting; direct water contact (swimming); crabbing; commercial fishing; propagation of marine fauna and flora
	Toxic substances narrative: shall be free from toxic substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which are harmful to human, animal, plant or aquatic life.	All
South Dakota[38]	PCB's: 0.000001	All except domestic water supply
	Other organics: Not specified	All
	Concentrations of chemicals toxic to humans, animals, plants, or the most sensitive stage or form of aquatic life, greater than 0.1 times the median tolerance limit for short residual compounds or 0.01 times the median tolerance limit for an accumulative substance or substances exhibiting a residual life exceeding thirty days in the receiving waters. Median tolerance limits shall be determined in accordance with section 34:04:02:06. Concentrations specified for toxic materials shall be based on daily averages, but the concentrations shall not exceed one hundred and twenty-five per cent of the value specified in this section at any time or at any point in the receiving water.	All
Tennessee[39]	Not specified	All
	Toxic substances narrative: No toxic substances added that will produce toxic conditions that materially affect man or animals; impair the safety of a conventionally treated water supply; affect the water for industrial processing, fish or aquatic life, man or animal, livestock and wildlife, navigation, irrigation.	All

State	Criteria Value in mg/l	Designated Stream Use
Texas[40]	Not specified	All
	Toxic substances narrative: the surface waters of the State shall be maintained so that they will not be toxic to man, fish and wildlife, and any other terrestrial and aquatic life.	All
	Toxic substances narrative: toxic materials not removable by ordinary water treatment techniques shall not exceed USPHS Drinking Water Standards or those established by EPA pursuant to the Safe Drinking Water Act. For a general guide, with respect to fish toxicity, receiving waters outside mixing zones should not have a concentration of nonpersistent toxic materials exceeding 0.1 of the 96-hour TLm, where the bioassay is made using fish indigenous to the receiving waters. For persistent toxicants, concentrations should not exceed 0.05 of the 96-hour TLm.	Public drinking water supplies
Utah[41]	Phenol: 0.01	Aquatic life
	Other organics: Not specified	All
Vermont[42]	PCB: Prohibited	All
	Wastes discharged to waters of the State shall contain no chemical or radiological constituents which would be inconsistent with the water uses associated with the assigned water class.	
	Discharge of radioactive material to waters of the State shall not exceed the lowest practicable limits after utilization of the latest technological development and equipment for control of radioactive emissions. In no event shall the discharge of such materials exceed the limits established by the Agency of Human Services.	
	There shall be no discharge of wastes containing any of the prohibited substances in detectable amounts either to waters of the State or to a municipal	

State	Criteria Value in mg/l	Designated Stream Use
Vermont (con't)	wastewater collection and /or treatment facility except in those cases where a process water contains an incoming level of a prohibited substance due to natural or other causes. In such cases the concentration of the prohibited substance or substances in the actual wastes discharged shall not be increased. The Secretary shall determine in accordance with the provisions of Section 1259 of Title 10 V.S.A. the appropriate limits for discharges containing chemical and other substances when such limits are not otherwise specified by these regulations. In establishing such effluent limitations, the Secretary shall use the current edition of the United States Environmental Protection Agency publication Quality Criteria for Water as a guideline and reference and shall give consideration to concentrations of prohibited substances and other constituents in the receiving waters and to any synergistic relationship which may exist between the various substances being discharged and those existing in the receiving waters.	
Virginia[43]	Phenols: 0.001	Public water supply
	MBAS: 0.5	Public water supply
	Phenol: 1 ug/l	All waters, Class I, II, III, IV, V, & VI waters
	Phalate Ester: 3 ug/l	Class III, IV, V, & VI waters
	(3 ug/l is a goal for class I & II waters pending additional effect date)	
	PCB's: None	All
	Other organics: Not specified	All

State	Criteria Value in mg/l	Designated Stream Use
Washington[44]	Not Specified	All
	Toxic substances narrative: toxic material concentrations shall be below those which adversely affect public health, and the natural aquatic environment.	All uses for extraordinary (class AA) and lake class waters
	Toxic substances narrative: toxic material concentrations shall be below those which adversely affect public health, or which may cause acute or chronic toxic conditions to the aquatic biota.	All uses for excellent (class A), good (class B), and fair (class C) waters
	Deleterious concentrations of toxic, or other nonradioactive materials, shall be determined by the department in consideration of the "Quality Criteria for Water," published by EPA 1976, and as revised, as the authoritative source for criteria and/or other relevant information, if justified.	
West Virginia[45]	Phenol: 0.001	All
	Other organics: Not specified	All
Wisconsin[46]	Not specified	All
	Toxic substances narrative: substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor which are acutely harmful to animal, plant or aquatic life.	All
	Toxic substances narrative: the intake water supply will by appropriate treatment and adequate safeguards meet the PHS Drinking Water Standards, 1962.	Public water supply
	(d) Unauthorized concentrations of substances are not permitted that alone or in combination with other materials present are toxic to fish or other aquatic life. The determination of the toxicity of a substance shall be based upon the available scientific date base.	All

State	Criteria Value in mg/l	Designated Stream Use
Wisconsin (con't)	References to be used in determining the toxicity of a substance shall include, but not be limited to: 1. "Quality Criteria for Water" EPA 440 /9-76-003, United States Environmental Protection Agency, Washington, D. C. 1976, and 2. "Water Quality Criteria 1972" EPA-R-73-003. National Academy of Sciences, National Academy of Engineering. United State Government Printing Office, Washington, D. C. 1974. 3. Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish and other biota shall be resolved in accordance with the methods specified in "Water Quality Criteria 1972." "Standard Methods for the Examination of Water and Wastewater" 14th Edition, 1975 (American Public Health Asociation, New York) or other methods approved by the Department of Natural Resources.	
Wyoming[47]	Benzedine: 0.0001	All
	Other organics: Not specified	All
	Toxic substances narrative: none in concentrations or combinations attributable to or influenced by the activities of man which would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life. Maximum allowable concentrations shall be based on latest edition of Quality Criteria for Water by EPA and/or more generally accepted scientific information.	All
American Samoa[E]	Not specified	All

State	Criteria Value in mg/l	Designated Stream Use
District of Columbia [48]	Detergents (linear alkylate sulfonates - LAS) - 0.2 mg/1 of 96 hr. LC_{50}	All
	Oil, grease: 96 hr LC_{50} x 0.01	All
	PCB: 0.000001 mg/l max.	All
	Phenol: 0.001 mg/l max.	All
	Phalate Esters: 0.003 mg/l max.	All
	Oil, grease: essential free	Domestic water supply
	Phenol: 0.001 mg/l max.	Domestic Water Supply
	Toxic substances narrative: The waters shall at all times be free from: toxic substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which interfere directly or indirectly with water uses, or which are harmful to human, animal, plant, or aquatic life.	
Guam [F]	PCB's: 0.0005 mg/kilogram of wet weight of aquatic organisms or 0.000002 mg/l	All
	Phenol: 0.0001 or 0.05 times the 96-hour LC50	All
	LAS: 0.02 or 0.05 times the 96-hour LC50	All
	MBAS: 0.5	Drinking water supply
	CCE: 0.3	Drinking water supply
	CAE: 1.5	Drinking water supply
Puerto Rico [49]	Phenols: 0.001	All surface waters
	Phenols: 0.010	All coastal waters
	MBAS: 0.1	All surface waters
	MBAS: 0.5	All coastal waters
	CCE: 0.15	All surface waters
	CCE: 28.0	All coastal waters
	Other organics: Not specified	All

State	Criteria Value in mg/l	Designated Stream Use
Trust Territories[G] of the Pacific Islands	Phenol: None (zero)	Drinking water supply
	MBAS: Virtually absent	Drinking water supply
	CCE: 0.025	Drinking water supply
	Other organics: Not specified	All
Virgin Islands[H]	Not specified	All

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