



Dissolved Solids

Water Quality Standards

Criteria Digest

A Compilation

of State/Federal Criteria

ENVIRONMENTAL PROTECTION AGENCY
WATER QUALITY STANDARDS
CRITERIA DIGEST - CORRECTIONS

In December 1979, EPA published four documents containing the summaries of State Water Quality Standards. In those four documents a number of errors appeared which need correction. These corrections are listed below.

ACIDITY-ALKALINITY (pH)

1. Idaho. Page 7: add as the first phrase the following general statement - Values for all waters are to be within the range of 6.5 - 9.0.
2. Mississippi. Page 11: delete the criteria and uses for agriculture, industrial, and navigation.

BACTERIA

1. Alabama. Page 1: for F & WL, change the geometric mean of 100/100 to 1,000/100.
2. Florida. Page 9: for PWS change 1,000/100 fecal coliforms to 1,000/100 total fecal coliforms.
3. Nevada. Page 19: (a) second paragraph, change intrastate to interstate. (b) under the more stringent criteria, change interstate to intrastate and add Class B with Class A.
4. Tennessee. Page 29: for PWS, change total to fecal, and for F & WL replace "no criteria" with "same as Class 1."
5. Utah. Page 31: Continues as:

Utah (cont'd) Class C (PWS after treatment; recreation, excepting swimming unless natural purification action results in quality consistent with class "CR" standard and swimming is specifically approved by State board of health): Monthly arithmetic mean total coliforms not to exceed 5,000/100, except 20% of samples may exceed this if no more than 5% exceed 20,000/100, and monthly arithmetic mean coliforms shall not exceed 2,000/100.

Class CR (swimming): Monthly arithmetic mean coliforms not exceed 1,000/100; no more than 20% exceed this and no more than 5% exceed 4,000/100; and monthly arithmetic mean fecal coliforms exceed 200/100, provided no more than 10% exceed 400/100.

Class D (limited irrigation, not including lawns, rec. areas, dairy pastures, root crops or low growing crops for human consumption): Monthly arithmetic mean coliforms not exceed 5,000/100, except 20% of samples may exceed this if no more than 5% exceed 20,000/100.

Vermont

Class A (PWS with disinfection): Total coliforms not exceed 100/100. Fecal coliform: none attributable to discharge of domestic or industrial wastes.

Class B (PWS with treatment; bathing): Total coliforms not exceed 500/100. Fecal coliform not exceed 200/100.

Class C (secondary contact recreation): Fecal coliforms not to exceed 1,000/100.

Virginia

In all surface waters, except those areas where public or leased private shellfish beds are present, the fecal coliform bacteria shall not exceed a log mean of 200/100 ml with not more than 10% of total samples during any 30-day period exceeding 400/100 ml. Evaluation should be determined by either multi-tube fermentation for marine waters or membrane filtration method for freshwaters and should be based upon not less than 10% of samples taken over not more than a 30-day period.

Shellfish - In all open ocean or estuarine waters capable of propagating shellfish or in specific areas where public or leased private shellfish beds are present, and including those waters on which condemnation or restricted classifications are established by State Department of Health, the following standard will apply: the median fecal coliform value for a sampling station shall not exceed an MPN of 14/100 of samples and not more than 10% of the samples shall exceed 43 for a 5-tube, 3-dilution test or 49 for a 3-tube, 3-dilution test.

DISSOLVED OXYGEN

1. Idaho. Page 8: substitute the given criteria with the following:

Cold Water Fishery - exceed 6 mg/l at all times, minimum daily average will be 7 mg/l.

Warm Water Fishery - exceed 5 mg/l at all times, minimum daily average will be 6 mg/l.

Miscellaneous - Salmonid Spawning; exceed 90% of saturation or 6 mg/l, whichever is greater.

2. Mississippi. Page 13: Substitute the given criteria with the following:

Dissolved oxygen concentrations shall be maintained at a daily average of not less than 5.0 mg/l with an instantaneous minimum of not less than 4.0 mg/l in streams; shall be maintained at a daily average of not less than 5.0 mg/l with an instantaneous minimum of not less than 4.0 mg/l in estuaries and in the tidally-affected portions of streams; and shall be maintained at a daily average of not less than 5.0 mg/l with an instantaneous minimum of not less than 4.0 mg/l in the epilimnion (i.e., the surface layer of lakes and impoundments that are thermally stratified, or 5 feet from the water's surface (mid-depth if the lake or impoundment is less than 10 feet deep at the point of sampling) for lakes, and impoundments that are not stratified.

Epilimnion samples may be collected at the approximate mid-point of that zone (i.e., the mid point of the distance or if the epilimnion is more than 5 feet in depth, then at 5 feet from the water's surface.

(Applicable to all classes).

3. Oregon. Page 17: Replace the Cold Water Fishery criteria of 75% with 90% and delete the phrase "or 5-7 mg/l."

DISSOLVED SOLIDS

1. Arizona. Page 1: Delete the phrase for no requirements. Also, in the last sentence of paragraph change "goals" to "standards."
2. Kentucky. Page 10: Delete the use and criteria for industrial water supply.
3. North Carolina. Page 16: Replace the phrase for no requirements with Class A-II: total dissolved solids - 500 mg/l; sulfates - 250 mg/l.

INTRODUCTION

This digest was compiled to provide general information to the public as well as to Federal, State, and local officials. It contains excerpts from the individual State-Federal water quality standards establishing pollutant specific criteria for navigable 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 navigable waters, evaluating adherence to the standards, and overseeing enforcement of standards compliance, has been mandated by Congress.

The standards program, a nationwide strategy for surface water quality management, contains two major elements: the use (recreation, drinking water, fish and wildlife propagation, industrial, or agricultural) to be made of the navigable water; and criteria to protect these uses.

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), order # 055-001-01049-4, price \$3.50, 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.

Although natural waters contain dissolved solids, the subject of this digest, consisting mainly of carbonates, bicarbonates, chlorides, sulfates, phosphates, and possibly nitrates with traces of metallic elements, increases in these substances above normal are undesirable and sometimes detrimental. Concentrations or effects of these substances can be raised or synergistically altered by, for example, the addition of chemical wastes, dissolved salts, acids, alkalis, gas and oil-well brines, or irrigation drainage. Adverse effects may be unpalatable drinking water, fish kills, crop damage, or corrosion damage in water systems.

The 1976 Quality Criteria for Water recommends a criterion of 250 mg/l for chlorides and sulfates in domestic water supplies (welfare).

Since water quality standards are revised from time to time, following procedures set forth in the Clean Water Act, individual entries in this digest may be superseded. This digest will be updated periodically. Because this publication is intended for use only as a general information reference, the reader needs to refer to the current approved water quality standards to obtain the latest information for special purposes and applications. These can be obtained from the State water pollution control agencies or the EPA Regional Offices.

Individual State-adopted criteria follow:

KEY

PWS	Public Water Supply
Rec.	Recreation
F&WL	Fish and Wildlife
Ind.	Industrial
Agric.	Agricultural
Mg/l	Milligrams per Liter
SAR	Sodium Absorption Ratio

(For explanation of use classifications, see EPA publication,
General Stream Use Designations.)

DISSOLVED SOLIDS

- Alabama No specific requirement found in standards.
- Alaska Fresh - PWS - Total dissolved solids under 500 mg/l.
Chlorides and sulfates not to exceed 200 mg/l.
- Swimming - Numerical value is not applicable.
- F&WL - Not to exceed 1,500 mg/l.
- Shellfish - Maximum variation above natural salinity:
0. - 3.5, 1ppt., 3.5 - 13.5, 2ppt.; 13.5 - 35, 4 ppt.
- Agricultural - Not to exceed 1,000 mg/l TDS. SAR less than 2.5, sodium percentage less than 60%, residual carbonate less than 1.25 mg/l and boron less than 0.3 mg.l.
- Industrial - No amounts above natural conditions which will cause undue corrosion, scaling, or process problems.
- American Samoa No specific requirements found in standards.
- Arizona Colorado River Salinity Standards: the recommended flow-weighted average annual numerical salinity criteria for three locations in the lower main stem of the Colorado River system are 723 mg/l salinity below Hoover Dam, 747 mg/l salinity below Parker Dam, and 879 mg/l salinity below Imperial Dam. These are 1972 river levels that were adopted as standards for the salinity control program.
- Arkansas (1) Mineral Quality - Existing mineral quality shall not be altered by municipal, industrial or other waste discharges so as to interfere with other beneficial uses. The following limits apply to the streams indicated, and represent concentrations of chloride (Cl), sulfate (SO₄) and total dissolved solids (TDS) not to be exceeded in more than (1) in ten (10) samples:

<u>Stream</u>	<u>Concentration - mg/l</u>		
	<u>Cl</u>	<u>SO₄</u>	<u>TDS</u>
(1) Arkansas River Basin			
Arkansas River (Mouth to L&D #7)	250	100	750
Arkansas River (L&D #7 to L&D #10)	250	100	750

<u>Stream</u>	<u>Concentration - mg/l</u>		
	<u>Cl</u>	<u>SO₄</u>	<u>TDS</u>
Cadron Creek	100	20	280
Arkansas River (L&D #10 to Oklahoma line, including Dardanelle Reservoir)	250	120	750
James Fork	20	100	275
Illinois River	20	20	300
(2) White River Basin			
White River (Mouth to L&D #3)	20	60	430
Big Creek	20	30	270
Cache River	20	30	270
Bayou DeView	20	30	270
Little Red River	20	30	270
Black River	20	30	270
Strawberry River	20	30	270
Spring River	20	30	290
Eleven Point River	20	30	270
South Fork Spring River	20	30	270
Myatt Creek	20	30	270
Current River	20	30	270
White River (L&D #3 to Missouri line, including Bull Shoals Reservoir)	20	20	180
Buffalo Creek	20	20	200
Crooked Creek	20	20	200
White River (Missouri line to Headwaters, including Beaver Reservoir)	20	20	160

<u>Stream</u>	<u>Concentration - mg/l</u>		
	<u>Cl</u>	<u>SO₄</u>	<u>TDS</u>
West Fork White River	20	20	150
(3) St. Francis River Basin			
St. Francis River (Mouth to 36° N. Lat.)	10	30	330
L'Anguille River	20	30	235
Tyronza River	20	30	350
Little River	20	30	365
Pemiscot Bayou	20	30	380
St. Francis River (36° N. Lat. to 36° 30' N. Lat.)	10	20	180
(4) Ouachita River Basin			
Bayou Bartholomew	30	30	220
Chemin-a-Haut Creek	50	20	570
Overflow Creek	20	30	170
Bayou Macon	30	40	330
Boeuf River	90	30	460
Big Cornie Creek	230	30	560
Little Cornie Creek	200	10	400
Three Creeks	800	10	1500
Little Cornie Bayou	200	20	560
Bayou D'Loutre	800	90	1500
Ouachita River (Louisiana line to Camden)	160	40	350
Saline River	20	40	120

<u>Stream</u>	<u>Concentration - mg/l</u>		
	<u>Cl</u>	<u>SO₄</u>	<u>TDS</u>
Hurricane Creek	20	500	1000
Lost Creek	20	500	1000
Holly Creek	20	500	1000
Moro Creek	30	20	260
Smackover Creek	1000	30	1700
Ouachita River (Camden to Carpenter Dam)	50	40	150
Little Missouri River	10	10	90
Ouachita River (Carpenter Dam to Headwaters, including Lake Ouachita tributaries)	10	10	150

(5) Red River Basin

Bayou Dorcheat	250	10	650
Cypress Creek	250	70	500
Crooked Creek	350	10	650
Rodcau Creek	250	70	650
Posten Bayou	120	40	1000
Kelly Bayou	90	40	660
Red River	340	220	1160
Sulphur River	120	100	500
Days Creek	500	250	800
McKinney Bayou	180	60	480
Little River	20	20	100
Saline River	20	10	90
Rolling Fork	100	20	200

Mountain Fork	20	20	110
(6) Mississippi River (Louisiana line to Arkansas River)	60	150	425
Mississippi River (Arkansas River to Missouri line)	60	175	450

As a guideline for tributary streams not listed, an increase of 1/3 over naturally occurring levels may be permitted. However, in no case shall discharges cause these tributaries to exceed 250, 250, and 500 mg/l respectively, for chloride, sulfate, and total dissolved solids.

California

(2) San Francisco Bay Basin - Alameda Creek Watershed

The following chemical quality limits shall be maintained in the surface waters of the Alameda Creek watershed above Niles:

TDS: 250 mg/l 90 day-arithmetic mean
360 mg/l 90 day-90th percentile
500 mg/l daily maximum

Chlorides 60 mg/l 90 day-arithmetic mean
100 mg/l 90 day-90th percentile
250 mg/l daily maximum

(5 A,B,C) Sacramento-San Joaquin Delta

This includes water quality objectives that apply to all inland surface waters (excluding the Delta) of the basins, and objectives that apply only to specific surface water bodies.

- Shall not exceed 1,300,000 tons Goose Lake
- Shall not exceed 125 mg/l (90 percentile) North Folk,
American River,
Source to
Folsom Lake
- Middle Fork,
American River,
Source to
Folsom Lake
- South Fork,
American River,
Source to
Folsom Lake
- American River,
Folsom

- Shall not exceed 100 mg/l (90 percentile) Folsom Lake

This presents specific numeric objectives which apply to all waters of the Sacramento-San Joaquin Delta. All waters lying within the legal boundaries of the Delta are covered by these objectives unless otherwise specified.

Total Dissolved Solids - The total dissolved solids (TDS) concentration of Delta waters shall be maintained below the indicated limits for the waters specified. If a reliable correlation can be demonstrated between TDS and EC, such correlation can be used to aid in monitoring for compliance with these objectives.

- (1) At Cache Slough at the City of Vallejo intake, the TDS shall not exceed 250 mg/l.
- (2) At Rock Slough at Contra Costa Canal intake, the mean tidal cycle value TDS shall not exceed 750 mg/l and in addition shall not exceed 380 mg/l for at least 65 percent of any year.
- (3) In the San Joaquin River near Vernalis, the mean average TDS concentration shall not exceed 500 mg/l over any consecutive 30-day period.
- (4) In eastern Delta channels, the mean monthly TDS concentration shall not exceed 700 mg/l.
- (5) At Terminous in Little Potato Slough, at Rio Vista in the Sacramento River, at San Andreas Landing in the San Joaquin River, at Clifton Court Ferry in Old River, and after the initial operation of the Peripheral Canal, at the bifurcation of Middle River and Old River,
 - a. a mean daily TDS concentration of 700 mg/l or less when measured on the basis of the average mean daily value for any 14 consecutive days,
 - b. a mean monthly TDS concentration of 500 mg/l or less when measured on the basis of the average mean daily value for any calendar month,
 - c. a mean annual TDS concentration of 450 mg/l or less when measured on the basis of the average mean daily value for any calendar year.
- (6) After 1 April in a dry or critical year and after 1 August in a below normal year and until 31 December of the same calendar year, the TDS criteria specified in (5) above may reach, but not exceed 800 mg/l for item a, 600 mg/l for item b, and 500 mg/l for item c; provided, however, the average of the values of the total dissolved solids concentration at all of the named locations shall not exceed, for the balance of the calendar year, the mean values specified in (5) above.

- (7) Whenever the recorded TDS concentration in the Sacramento River at Green's Landing exceeds a mean 14-day or mean monthly value of 150 mg/l, the quality criteria in (5) and (6) may be changed by adding to those values the product of 1 1/2 times the amount by which the recorded TDS concentration at Green's Landing exceeds 150 mg/l.
- (8) At Antioch, in the San Joaquin River, the average of mean daily TDS for any 14 consecutive days shall not exceed 450 mg/l throughout a period of at least 150 days in each normal or below normal water year; provided, however, that the period is reduced to 120 days during dry water years and 100 days during critical water years. These objectives shall not apply when the State Board determines that adequate substitute supplies are available to all existing municipal and industrial water users located in the vicinity of Antioch and Pittsburg.

	Colorado River Salinity Standards - see Arizona
Colorado	Class A - PWS - Total dissolved solids, annual volume weighted average, should be less than 500 mg/l.
	Class B & C - No specific requirement found in standards.
	Class D - Irrigation Use - A time weighted monthly mean at a monitoring station which exceeds the time weighted monthly mean for a base period established by the commission by more than two standard deviations shall be subject to review by the commission.
	Colorado River Salinity Standards - see Arizona
Connecticut	No specific requirement found in standards.
Delaware	Shall not exceed 250 mg/l of which the sulfate portion shall not be greater than 100 mg/l.
	This criterion applies only to the Red Clay Drainage Basin, the White Clay Drainage Basin, the Brandywine River Drainage Basin, the Christina River Basin Drainage.
District of Columbia	No specific requirement found in the standards.
Florida	PWS - Not to exceed 500 mg/l as a monthly average or exceed 1,000 mg/l at any time.
Georgia	No specific requirement found in standards.
Guam	No specific requirement found in the standards.
Hawaii	Class AA Waters - Oceanographic research, propagation of shellfish and marine life and aesthetics. No changes in channels, in basin geometry of the area or in the fresh water influx shall be made which would cause permanent changes in isohaline patterns of more than + 10% of naturally occurring variations or which

would otherwise affect biological and sedimentological situations. Total dissolved solids shall not be below 23,000 mg/l from other than natural causes. No other requirements found for any other classification.

Idaho

No specific requirement found in standards.

Illinois

Public and Food Processing Water Supply - In addition to the General Standards, waters designated in Part III of this Chapter for public food processing water shall meet the following standards at any point at which water is withdrawn for treatment and distribution as a potable supply or for food processing except that such standards, including the General Standards, may be exceeded if such occurrence results from the application of an algicide in accordance with the terms of an Algicide Permit issued by the Agency under Chapter VI, Rule 203 and 204(d) of these Rules and Regulations.

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Sulfates	00945	250.
Chloride	00940	250.
Total Dissolved Solids	70300	500.

Lake Michigan

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Chloride	00940	12.0
Sulfate	00945	24.0
Total Solids (Dissolved)	70300	180.0

Secondary Contact and Indigenous Aquatic Life Standards

Total Dissolved Solids (STORET Number 00515) shall not be increased more than 750 mg/l above background concentration levels unless caused by recycling or other pollution abatement practices, and in no event shall exceed 3,500 mg/l at any time.

Indiana

Water Quality for Potable Supply - The following standards are established to protect the water quality at the point at which water is withdrawn for

treatment and distribution as a potable supply:

The concentrations of either chlorides or sulfates shall not exceed 250 mg/l other than due to naturally occurring sources.

Water Quality for Industrial Water Supply - The standard to ensure protection of water quality at the point at which water is withdrawn for use (either with or without treatment) for industrial cooling and processing is that, other than from naturally occurring sources, the dissolved solids shall not exceed 750 mg/l as a monthly average, nor exceed 1,000 mg/l at any time. Values of specific conductance of 1,200 and 1,600 micromhos/cm (at 25°C) may be considered equivalent to the dissolved solids concentrations of 750 and 1,000 mg/l.

SPC 4R-2, Lake Michigan and Contiguous Harbor Areas

Parameter	Inner Harbor, Gary Harbor and Burns Harbor	Lake Michigan
<u>Filtrable Residue (mg/l)</u> (Total Dissolved Solids)		
Monthly average	185	172
Daily maximum	215	200
<u>Chlorides (mg/l)</u>		
Monthly average	15	15
Daily maximum	20	20
<u>Sulfates (mg/l)</u>		
Monthly average	26	26
Daily maximum	50	50

SPC 7R-3, Grand Calumet River and Indiana Harbor Ship Canal

Filtrable Residue (total dissolved solids) - The filtrable residue content shall not exceed 500 mg/l at any time.

Chlorides - The total chloride content shall not average more than 40 mg/l during any 12-month period nor exceed 125 mg/l at any time.

Sulfates - The total sulfate content shall not average more than 75 mg/l during any 12-month period nor exceed 225 mg/l at any one time.

Iowa	750 mg/l in any lake or impoundment or any stream with a flow equal to or greater than 3 times the upstream point source discharge.
Kansas	No specific requirement found in standards.
Kentucky	PWS - Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time. Values of specific conductance of 800 and 1,200 micromhos (cm at 25°C) may be considered equivalent to dissolved solids concentrations of 500 and 750 mg/l. No specific requirement found for other water uses.
Louisiana	Chlorides, sulfates, and dissolved solids - By segment generally between 100-500 mg/l, with a few segments between 1,000 and 3,000 mg/l. Values for these parameters apply to the approximate midpoint of the stream segment with reasonable gradients applying towards segment boundaries. Values listed in the standards in general represent the arithmetic mean of existing data plus one standard deviation.
Maine	No specific requirement found in standards.
Maryland	No specific requirement found in standards.
Massachusetts	Class A: Total dissolved solids shall not exceed 500 mg/l; and chlorides shall not exceed 250 mg/l and sulfates shall not exceed 250 mg/l.
Michigan	(1) The addition of any dissolved solids shall not exceed concentrations which are or may become injurious to any designated use. Point sources containing dissolved solids shall be considered by the commission on a case-by-case basis and increases of dissolved solids in the waters of the State shall be limited through the application of best practicable control technology currently available as prescribed by the Administrator of the United States Environmental Protection Agency pursuant to section 304(b) of United States Public Law 92-500, except that in no instance shall total dissolved solids in the waters of the State exceed a concentration of 500 milligrams per liter as a monthly average nor more

than 750 milligrams per liter at any time, as a result of controllable point sources.

(2) In addition to the standards prescribed by subrule (1), waters of the State used for public water supply shall, at the point of the water intake, not exceed the permissible inorganic and organic chemicals criteria for raw public water supply in "Report of the National Technical Advisory Committee to the Secretary of the Interior, Water Quality Criteria, 1968," except chlorides. For the Great Lakes and connecting waters, chlorides shall, at the point of water intake, not exceed 125 milligrams per liter as a monthly average.

In Lake Erie, the level of total dissolved solids shall not be greater than 200 milligrams per liter.

Minnesota

1. Domestic Consumption

Class A

Total Dissolved Solids	500 mg/l
Chlorides	250 mg/l
Sulfates	250 mg/l

Class B

Total Dissolved Solids	500 mg/l
Chlorides	250 mg/l
Sulfates	250 mg/l

Class C

Total Dissolved Solids	500 mg/l
Chlorides	250 mg/l
Sulfates	250 mg/l

Class D

Meet 1962 Public Health Drinking Water Standards after treatment:

Total Dissolved Solids	500 mg/l
Chlorides	250 mg/l
Sulfates	250 mg/l

2. Fisheries and Recreation

Class A

Chlorides	50 mg/l
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3. Industrial Consumption

Class A	
Chlorides	50 mg/l
Class B	
Chlorides	100 mg/l
Class C	
Chlorides	250 mg/l

4. Agriculture and Wildlife

Class A
Total Dissolved Solids 700 mg/l
Sulfates 10 mg/l
applicable to waters used for production of
wild rice during periods when the rice may be
susceptible to damage by high sulfate levels.

Class B
Total salinity 1,000 mg/l

Mississippi

PWS - There shall be no substances added to the waters to cause the dissolved solids to exceed 500 mg/l.

Recreation Use - There shall be no substances added to the waters to cause the dissolved solids to exceed 750 mg/l as a monthly average value, nor exceed 1,500 mg/l at any time.

F&WL - Same as Recreation.

From MS/TN Border to Vicksburg - 425 mg/l. From Mississippi River Vicksburg south to MS/LA Border - 400 mg/l.

Missouri

No specific requirement found in standards.

Montana

No specific requirement found in standards.

Nebraska

Each segment is assigned a limit ranging from 200 to 1,200 depending on use designated and natural background.

Nevada

West Fork Carson River (HYW 88)

Annual Average	Not more than 75 mg/l
Single Value	Not more than 100 mg/l

East Fork Carson River

Annual Average	Not more than 110 mg/l
Single Value	Not more than 175 mg/l

East Carson River (HYW 395)		
Annual Average		Not more than 120 mg/l
Single Value		Not more than 200 mg/l
Carson River (Muller Lane)		
Annual Average		Not more than 250 mg/l
Single Value		Not more than 300 mg/l
	(Highway 395)	
Annual Average		Not more than 275 mg/l
Single Value		Not more than 300 mg/l
	(New Empire)	
Annual Average		Not more than 450 mg/l
Single Value		Not more than 600 mg/l
	(Weeks)	
Annual Average		Not more than 300 mg/l
Single Value		Not more than 450 mg/l
Lake Lahontan		
Pending further analysis.		
West Walker River		
Annual Average		Not more than 100 mg/l
Single Value		Not more than 170 mg/l
Topaz Lake		
Annual Average		Not more than 100 mg/l
Single Value		Not more than 170 mg/l
West Walker River (Wellington)		
Annual Average		Not more than 150 mg/l
Single Value		Not more than 240 mg/l
	(Above Confluence with E. Walker)	
Annual Average		Not more than 290 mg/l
Single Value		Not more than 485 mg/l
Sweetwater Creek		
Annual Average		Not more than 220 mg/l
Single Value		Not more than 300 mg/l
East Walker River (State Line)		
Annual Average		Not more than 175 mg/l
Single Value		Not more than 300 mg/l

(Yerington)

Annual Average	Not more than 250 mg/l
Single Value	Not more than 390 mg/l
Walker River	
Annual Average	Not more than 360 mg/l
Single Value	Not more than 530 mg/l
Chiatovich Creek	
Annual Average	Not more than 60 mg/l
Single Value	Not more than 75 mg/l
Desert Creek	
Annual Average	Not more than 110 mg/l
Single Value	Not more than 130 mg/l
Indian Creek	
Annual Average	Not more than 225 mg/l
Single Value	Not more than 300 mg/l
Leidy Creek	
Annual Average	Not more than 135 mg/l
Single Value	Not more than 150 mg/l
Snake Creek	
Annual Average	Not more than 100 mg/l
Single Value	Not more than 125 mg/l
Big Goose Creek	
Annual Average	Not more than 140 mg/l
Single Value	Not more than 160 mg/l
Salmon Falls Creek	
Annual Average	Not more than 200 mg/l
Single Value	Not more than 250 mg/l
Shoshore Creek	
Annual Average	Not more than 200 mg/l
Single Value	Not more than 250 mg/l
East Fork Jarbidge (Below Murphy's Hot spring)	
Annual Average	Not more than 120 mg/l
Single Value	Not more than 200 mg/l
Jarbidge River (Upstream from Jarbidge)	
Annual Average	Not more than 50 mg/l
Single Value	Not more than 75 mg/l
(Downstream)	
Annual Average	Not more than 65 mg/l
Single Value	Not more than 80 mg/l

West Fork Bruneau River		
Annual Average		Not more than 160 mg/l
Single Value		Not more than 180 mg/l
East Fork Owyhee (Above Mill Creek at Ranger Station)		
Annual Average		Not more than 170 mg/l
Single Value		Not more than 200 mg/l
East Fork Owyhee River (South of Owyhee)		
Annual Average		Not more than 200 mg/l
Single Value		Not more than 250 mg/l
	(State Line)	
Annual Average		Not more than 200 mg/l
Single Value		Not more than 250 mg/l
South Fork Owyhee River		
Annual Average		Not more than 240 mg/l
Single Value		Not more than 280 mg/l
Smoke Creek		
Annual Average		Not more than 225 mg/l
Single Value		Not more than 275 mg/l
Bronco Creek (Aterschdale Road)		
Annual Average		Not more than 225 mg/l
Single Value		Not more than 300 mg/l
Gray Creek		
Annual Average		Not more than 125 mg/l
Single Value		Not more than 165 mg/l
Truckee River (Farad)		
Annual Average		Not more than 80 mg/l
Single Value		Not more than 100 mg/l
	(Idlewild)	
Annual Average		Not more than 100 mg/l
Single Value		Not more than 125 mg/l
	(Boynton Lane)	
Annual Average		Not more than 125 mg/l
Single Value		Not more than 150 mg/l
	(Lagomarsino Bridge)	
Annual Average		Not more than 150 mg/l
Single Value		Not more than 175 mg/l
	(Ceresola Ranch)	
Annual Average		Not more than 250 mg/l
Single Value		Not more than 300 mg/l

Colorado River salinity standards - see Arizona

New Hampshire

No specific requirement found in standards.

New Jersey

Class FW-1 - Natural

FW-2 - 500 mg/l or 133% of background.
FW-3 - 133% of background.
TW-1 - 500 mg/l (PWS) or 133% of background.
TW-2 - 500 mg/l (PWS) or 133% of background.
TW-3 and TW-4(a) - No criteria.
CW-1, CW-2 - No criteria.
FW - Central Pine Barrens: Not greater than 100 mg/l.
Central Pine Barrens (Tidal): Not greater than 100 mg/l

Delaware River

Zone 1 - 133% of background as of 10/1/72 or 500 mg/l.
2 - Same as zone 1.
3 - Same as zone 1.
4 - 133% of background as of 10/1/72.
5 and 6 - No criteria.

New Mexico Colorado River Salinity Standards - see Arizona. By segment, refer to State standards.

New York Class N - Natural
AA - 500 mg/l.
A - 500 mg/l.
B - 500 mg/l if less than 500 mg/l as of 3/27/74.
C - Same as B.
D - No criteria.
SA,SB,SC,SD,I - No criteria.
A - Special - 200 mg/l
AA - Special - Natural.

North Carolina Class A-II: total dissolved solids - 500 mg/l;
sulfates - 250 mg/l.

North Dakota No specific requirement found in the standards.

Ohio Warmwater Habitat, Exceptional Warmwater Habitat, Coldwater Habitat, and Seasonal Warmwater Habitat - Dissolved solids may exceed one but not both of the following:
a) 1,500 mg/l (Equivalent 25°C specific conductance value in 2,400 micromhos/cm/) or
b) 150 mg/l attributable to human activities (Equivalent 25°C specific conductance value is 240 micromhos/cm/.)
(Seasonal warmwater habitat not approved by USEPA for designated waters)

Limited Warmwater Habitat - Same as warmwater habitat except for specific lower limits assigned on a case by case basis. (Not approved by USEPA for designated waters)

Public Water Supply - Dissolved solids may exceed one but not both of the following:

- a) 500 mg/l as a monthly average nor exceed 750 mg/l at any time (Equivalent 25°C specific conductance values are 800 and 1,200 micromhos/cm/) or
- b) 150 mg/l attributable to human activities (Equivalent to 25°C specific conductance value in 240 micromhos/cm/.)

Lake Erie outside excepted areas - 200 mg/l

Lake Erie within excepted areas - Same as warmwater habitat.

Ohio River - Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time. (Equivalent 25°C specific conductance values are 800 and 1,200 micromhos/cm.) (Not approved by USEPA)

Mahoning River Basin

Public Water Supply - Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time.

(The Mahoning River below the Leavittsburg Dam, Mosquito Creek, downstream of Federal Street in Niles, the last 200 yards of Yellow Creek, Little Squaw Creek downstream of Highway I-80, and Hines Run downstream of Lowellville Road also prohibit chlorides and sulfates exceeding 250 mg/l.)

Industrial Water Supply - Not to exceed 500 mg/l as a monthly average value and not to exceed 750 mg/l at any time.

Lower Cuyahoga River

A&B. Within 500 yards of any water supply intake, dissolved solids may exceed one, but not both of the following:

- 1) 500 mg/l as a monthly average nor exceed 750 mg/l at any time, or
- 2) 150 mg/l of dissolved solids attributable to human activities.

F. Dissolved solids may exceed one, but not both of the following:

- 1) 1,500 mg/l
- 2) 150 mg/l attributable to human activities.

In that portion of the Cuyahoga River from the

Cleveland Southerly Sewage Treatment Plant to the mouth of the Cuyahoga River, the dissolved solids standards set forth in A and B shall not apply.

Oklahoma

For chlorides, sulfates and total dissolved solids, the arithmetic mean of the concentration of the samples taken for a year at a particular sampling station shall not exceed the historical "yearly mean standard" generated at that station. Furthermore, not more than one (1) in twenty (20) samples randomly collected shall exceed the historical value of the "sample standard" generated at that station. Increased mineralization from other elements such as calcium, magnesium, sodium and their associated anions, etc., shall be maintained at or below a level that will not restrict any beneficial use.

Historical data are available only for sparsely distributed sampling stations. Therefore, care and best judgment must be exercised in the interpolation for intermediate locations. Further, it is anticipated that as nonpoint sources are identified and adequately addressed, the natural mineral concentrations should decrease over a period of time.

Oregon

Main stem of Klamath River conductivity - 400 micromhos at 77°F.

Main stem of Willamette River conductivity - 100 mg/l

Main stem of Columbia River conductivity - 200 mg/l

Main stem of Grande Ronde River conductivity - 200 mg/l

Main stem of Walla Walla River conductivity - 200 mg/l

Main stem of Snake River conductivity - 750 mg/l

Pennsylvania

e₂ Not more than 500 mg/l as a monthly average value;

e₂ Not more than 750 mg/l at any time.

e₂ Not more than 1,500 mg/l at any time.

e₃ Not to exceed 133 percent of background or 500 mg/l, whichever is less.

e₄ Not to exceed 133 percent of background.

Puerto Rico	Class SA - Natural SB,SC (Coastal) - No criteria. SD (PWS) - 500 mg/l
Rhode Island	No specific requirement found in the standards. Reference EPA Drinking Water Standards.
South Carolina	No specific requirement found in the standards.
South Dakota	PWS - 1,000 mg/l. Wildlife propagation - 2,500 mg/l. Irrigation - 700 to 1,500 mg/l.
Tennessee	PWS - Total dissolved solids shall at no time exceed 500 mg/l. Industrial - Total dissolved solids shall at no time exceed 500 mg/l. No specific requirements found for other water uses.
Texas	By segment, see State Standards.
Trust Territories	No specific requirements found in the standards.
Utah	No specific requirement found in the standards. Colorado River salinity standards - see Arizona
Vermont	No specific requirement found in the standards.
Virginia	500 mg/l total 250 mg/l chlorides 250 mg/l sulfates (applies only to PWS)
Virgin Islands	Class A,B,C (Coastal) - No criteria.
Washington	No specific requirement found in the standards.
West Virginia	Chlorides - 100 mg/l.
Wisconsin	<u>Standards for Public Water Supply</u> - In addition to the standard for fish and aquatic life and recreational use, waters used as a public water supply shall meet the following criteria at sites where water is withdrawn for treatment and distribution as a potable water: Dissolved solids: Not to exceed 500 mg/l as a monthly average value nor exceed 750 mg/l at any time.
Wyoming	No specific requirement found in the standards. Colorado River salinity standards - see Arizona.

