(See Part 1 of this issue of the Register for the Preamble of this Notice of Final Rulemaking.)

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY WATER QUALITY STANDARDS

ARTICLE 1. WATER QUALITY STANDARDS FOR SURFACE WATERS

Section

ARTICLE 1. WATER QUALITY STANDARDS FOR SURFACE WATERS

R18-11-101. Definitions

The terms of this Article ~~shall~~ have the following meanings:

1. "Acute toxicity" means toxicity involving a stimulus severe enough to ~~rapidly~~ induce a response rapidly. In aquatic toxicity tests, an effect observed in 96 hours or less is considered acute.
2. "AgI" means agricultural irrigation.
3. "AgL" means agricultural livestock watering.
4. "Agricultural irrigation" means the use of a surface water for the irrigation of crops.
5. "Agricultural livestock watering" means the use of a surface water as a supply of water for consumption by livestock.
6. "Annual mean" means the arithmetic mean of monthly values determined over a consecutive 12-month period, provided that monthly values are determined for at least ~~3~~ three months. The monthly value is the arithmetic mean of all values determined in a calendar month.
7. "Aquatic and wildlife (cold water ~~fishery~~)" means the use of a surface water by animals, plants, or other cold-water organisms~~, including salmonids~~, generally occurring at elevations greater than 5000 feet, for habitation, growth, or propagation.
8. "Aquatic and wildlife (~~effluent-dependent~~ effluent-dependent water)" means the use of an ~~effluent-dependent~~ effluent-dependent water by animals, plants, or other organisms for habitation, growth, or propagation.
9. "Aquatic and wildlife (ephemeral)" means the use of an ephemeral water by animals, plants, or other organisms, excluding fish, for habitation, growth, or propagation.
10. "Aquatic and wildlife (warm water ~~fishery~~)" means the use of a surface water by animals, plants, or other warm-water organisms, ~~excluding salmonids~~, generally occurring at elevations less than 5000 feet, for habitation, growth, or propagation.
11. "A&Wc" means aquatic and wildlife (cold water ~~fishery~~).
12. "A&We" means aquatic and wildlife (ephemeral).
13. "A&Wedw" means aquatic and wildlife (~~effluent-dependent~~ effluent-dependent water).
14. "A&Ww" means aquatic and wildlife (warm water ~~fishery~~).

15. "Clean Water Act" means the Federal Water Pollution Control Act~~, as amended by the Water Quality Act of 1987~~ [33 U.S.C. §§ 1251 to 1387].
16. "Criteria" means elements of water quality standards that are expressed as pollutant concentrations, levels, or narrative statements representing a water quality that supports a designated use.
17. "Designated use" means a use specified in Appendix B of this Article for a surface water.
18. "Domestic water source" means the use of a surface water as a potable water supply. Coagulation, sedimentation, filtration, disinfection, or other treatments may be necessary to yield a finished water suitable for human consumption.
19. "DWS" means domestic water source.
20. "EDW" means ~~effluent-dependent~~ effluent-dependent water.
21. ~~"Effluent-dependent~~ Effluent-dependent water" means a surface water that consists ~~primarily~~ of discharges of treated wastewater ~~which has been~~ that is classified as an ~~effluent-dependent~~ effluent-dependent water by the Director under R18-11-113. An effluent-dependent water is a surface water that, without the discharge of treated wastewater, would be an ephemeral water.
22. "Ephemeral water" means a surface water that has a channel that is at all times above the water table, and that flows only in direct response to precipitation~~, and that does not support a self-sustaining fish population~~).
23. "Existing use" means a use of a surface water that ~~has actually occurred~~ occurs in a surface water ~~on or after November 28, 1975~~ or a use that the existing water quality of a surface water will allow.
24. "FBC" means ~~full body~~ full-body contact.
25. "FC" means fish consumption.
26. "Fish consumption" means the use of a surface water by humans for harvesting aquatic organisms for consumption. Harvestable aquatic organisms include, but are not limited to, fish, clams, turtles, crayfish, and frogs.
27. "~~Full body~~ Full-body contact" means the use of a surface water ~~which~~ for swimming or other recreational activity that causes the human body to come into direct contact with the water to the point of complete submergence. The use is such that ingestion of the water is likely ~~to occur~~ and ~~certain~~ sensitive body organs, such as the eyes, ears, or nose, may be exposed to direct contact with the water.
28. "Geometric mean" mean the nth root of the product of n items or values. The geometric mean is calculated using the following formula:

$$G.M._Y = \sqrt[n]{(Y_1)(Y_2)(Y_3)...(Y_n)}$$

29. "Hardness" means the sum of the calcium and magnesium concentrations, expressed as calcium carbonate ($CaCO_3$) in milligrams per liter.
30. "Intermittent surface water" means a surface water that flows continuously for 30 days or more at times of the year when the surface water receives water from a spring or from another source such as melting snow.

~~30.~~31. "Mixing zone" means a prescribed area or volume of a surface water that is contiguous to a point source discharge where initial dilution of the discharge takes place.

~~31.~~32. "National Pollutant Discharge Elimination System" means the point source discharge permit program established by § 402 of the Clean Water Act [33 U.S.C. § 1342].

~~32.~~33. "Ninetieth percentile" means the value which may not be exceeded by more than 10% of the observations in a consecutive 12 month period. A minimum of 10 samples, each taken at least 10 days apart, are required to determine a ninetieth percentile.

~~33.~~34. "NNS" means no numeric standard.

~~34.~~35. "Oil" means petroleum in any form, including but not limited to crude oil, gasoline, fuel oil, diesel oil, lubricating oil, or sludge.

~~35.~~36. "~~Partial body~~ Partial-body contact" means the recreational use of a surface water ~~which~~ that may cause the human body to come into direct contact with the water, but normally not to the point of complete submergence (for example, wading or boating). The use is such that ingestion of the water is not likely ~~to occur, nor will~~ and sensitive body organs, such as the eyes, ears, or nose, will not normally be exposed to direct contact with the water.

~~36.~~37. "PBC" means ~~partial body~~ partial-body contact.

38. "Perennial surface water" means a surface water that flows continuously throughout the year.
39. "Pollutant" means fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and mining, industrial, municipal, and agricultural wastes or any other liquid, solid, gaseous, or hazardous substance.

~~37.~~40. "Practical quantitation limit" means the lowest level of quantitative measurement that can be reliably achieved during routine laboratory operations.

~~38.~~41. "Recreational uses" means the ~~full body~~ full-body contact and ~~partial body~~ partial-body contact designated uses.

~~39.~~42. "Regional Administrator" means the Regional Administrator of Region ~~9~~ IX of the U.S. Environmental Protection Agency.

~~40.~~43. "Surface water" means a water of the United States and includes the following:

a. ~~All waters which are~~ A water that is currently used, ~~were~~ was used in the past, or may be susceptible to use in interstate or foreign commerce;

b. ~~All~~ An interstate ~~waters~~ water, including an interstate ~~wetlands~~ wetland;

c. All other waters, such as an intrastate ~~lakes, reservoirs, natural ponds, rivers, streams (including intermittent and ephemeral streams), creeks, washes, draws, mudflats, sandflats, wetlands, sloughs, backwaters, prairie potholes, wet meadows, or playa lakes,~~ lake, reservoir, natural pond, river, stream (including an intermittent or ephemeral stream), creek, wash, draw, mudflat, sandflat, wetland, slough, backwater, prairie pothole, wet meadow, or playa lake, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such ~~waters~~ water:

i. ~~Which are~~ That is or could be used by interstate or foreign travelers for recreational or other purposes;

ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

iii. ~~Which are~~ That is used or could be used for industrial purposes by industries in interstate or foreign commerce;

d. ~~All impoundments of waters otherwise defined as surface waters under this definition~~ An impoundment of a surface water as defined by this definition;

e. ~~Tributaries of surface waters identified in paragraphs~~ A tributary of a surface water identified in subsections (a) through (d) of this definition; and

f. ~~Wetlands adjacent to surface waters identified in paragraphs~~ A wetland adjacent to a surface water identified in subsections (a) through (e) of this definition.

~~41.~~44. "Total nitrogen" means the sum of the concentrations of ammonia (NH_3), ammonium ion (NH_4+), nitrite (NO_2), and nitrate (NO_3), and dissolved and particulate organic nitrogen expressed as elemental nitrogen.

~~42.~~45. "Total phosphorus" means all of the phosphorus present in ~~the~~ a sample, regardless of form, as measured by a persulfate digestion procedure.

~~43.~~46. "Toxic" means ~~those pollutants~~ a pollutant, or combination of pollutants, which after discharge and upon exposure, ingestion, inhalation, or assimilation into ~~any~~ an organism, either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in ~~such organisms~~ the organism or ~~their~~ its offspring.

~~44.~~47. "Unique water" means a surface water ~~which~~ that ~~has been~~ is classified as an outstanding state resource water by the Director under R18-11-112.

~~45.~~48. "Use attainability analysis" means a structured scientific assessment of the factors affecting the attainment of a designated use ~~which may include,~~ including physical, chemical, biological, and economic factors.

~~46.~~49. ~~"Wetlands"~~ "Wetland" means ~~those are as~~ an area that ~~are~~ is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances ~~do~~ does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. ~~Wetlands include swamps, marshes, bogs, cienegas, tinajas,~~ A wetland includes a swamp, marsh, bog, cienega, tinaja, and similar areas.

~~47.~~50. "Zone of passage" means a continuous water route of volume, cross-sectional area, and quality necessary to allow passage of free-swimming or drifting organisms with no acutely toxic effect produced on the organisms.

R18-11-102. Applicability

A. The water quality standards prescribed in this Article apply to ~~all~~ surface waters.

B. The water quality standards prescribed in this Article do not apply to the following:

1. ~~Waste treatment systems~~ A waste treatment system, including ~~impoundments, ponds, lagoons, and constructed wetlands that are a part of such waste treatment systems~~ an impoundment, pond, lagoon, or constructed wetland that is a part of the waste treatment system.

2. ~~Man-made surface impoundments~~ A man-made surface impoundment and associated ditches and conveyances used in the extraction, beneficiation, ~~and~~ or processing of metallic ores, including ~~pits, pregnant leach solution ponds, raffinate ponds, tailing impoundments, decant ponds, ponds and sumps in mine pits associated with dewatering activity, ponds holding water that has come into contact with process or product and that is being held for recycling, spill or upset catchment ponds, or ponds used for on-site remediation that are not surface waters or are located in areas that once were surface waters but no longer remain surface waters because they have been legally converted~~ a pit, pregnant leach solution pond, raffinate pond, tailing impoundment, decant pond, pond or a sump in a mine pit associated with dewatering activity, pond holding water that has come into contact with a process or product and that is being held for recycling, spill or upset catchment pond, or pond used for onsite remediation, that is not a surface water or is located in an area that once was a surface water but no longer remains a surface water because it has been and remains legally converted.

R18-11-104. Designated ~~uses~~ Uses

A. The Director shall adopt or remove a designated ~~uses and subcategories of designated uses~~ use or subcategory of a designated use by rule.

B. Designated uses of a surface water may include ~~full body~~ full-body contact, ~~partial body~~ partial-body contact, domestic water source, fish consumption, aquatic and wildlife (cold water ~~fishery~~), aquatic and wildlife (warm water ~~fishery~~), aquatic and wildlife (ephemeral), aquatic and wildlife (~~effluent-dependent~~ effluent-dependent water), agricultural irrigation, and agricultural livestock watering. The designated uses for specific surface waters are listed in Appendix B of this Article.

C. Numeric water quality criteria to maintain and protect water quality for the designated uses are prescribed in Appendix A, R18-11-109, R18-11-110, and R18-11-112. Narrative water quality standards to protect all surface waters are prescribed in R18-11-108.

D. If a surface water has more than ~~1~~ one designated use listed in Appendix B, ~~then~~ the most stringent water quality criterion applies.

E. The Director shall revise the designated uses of a surface water if water quality improvements result in a level of water quality ~~which~~ that permits a use that is not currently listed as a designated use in Appendix B.

F. In designating uses of a surface water and in establishing water quality criteria to protect ~~those~~ the designated uses, the Director shall take into consideration the applicable water quality standards for downstream surface waters and shall ensure that the water quality standards that are established for an upstream surface water also provide for the attainment and maintenance of the water quality standards of downstream surface waters.

G. A use attainability analysis shall be conducted prior to removal of a designated use or adoption of a subcategory of a designated use that requires less stringent water quality criteria.

H. The Director may remove a designated use or adopt a subcategory of a designated use that requires less stringent water quality criteria, provided the designated use is not an existing use and it is demonstrated through a use attainability analysis that attaining the designated use ~~in~~ is not feasible for any of the following reasons:

1. ~~Naturally occurring pollutant concentrations prevent~~ A naturally-occurring pollutant concentration prevents the attainment of the use;
2. ~~Natural, ephemeral, intermittent, or low flow conditions or water levels prevent~~ A natural, ephemeral, intermittent, or low-flow condition or water level prevents the attainment of the use;
3. ~~Human caused conditions or sources of pollution prevent~~ A human-caused condition or source of pollution prevents the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;
4. ~~Dams, diversions, or other types of hydrologic modifications preclude~~ A dam, diversion, or other type of hydrologic modification precludes the attainment of the use, and it is not feasible to restore the surface water to its original condition or to operate ~~such~~ the modification in a way that would result in attainment of the use;
5. ~~Physical conditions~~ A physical condition related to the natural features of the surface water, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, ~~precludes~~ precludes attainment of an aquatic life designated ~~uses~~ use; or
6. Controls more stringent than those required by § 301 (b) and § 306 of the Clean Water Act [33 U.S.C. § 1311 and § 1316] are necessary to attain the use and implementation of ~~such~~ the controls would result in substantial and widespread economic and social impact.

R18-11-105. ~~Tributaries, Designated Uses~~ Tributaries; Designated Uses

The following water quality standards apply to a surface water that is not listed in Appendix B but that is a tributary to a listed surface water.

1. ~~For an unlisted tributary that is an ephemeral water, the~~ The aquatic and wildlife (ephemeral) and ~~partial body~~ partial-body contact standards apply to an unlisted tributary that is an ephemeral water.
2. ~~For an unlisted tributary that is an effluent-dependent water, the aquatic and wildlife (effluent-dependent water) and partial-body contact standards apply.~~
3.2. ~~For an unlisted tributary that is not an ephemeral water or an effluent-dependent water and which has salmonids present, the aquatic and wildlife (cold water fishery) and fish consumption standards apply as well as the water quality standards that have been established for the nearest downstream surface water listed in Appendix B that is not an ephemeral water or an effluent-dependent water.~~ The aquatic and wildlife (cold water), full-body contact, and fish consumption standards apply to an unlisted tributary that is a perennial or intermittent surface water and is above 5000 feet in elevation.
4.3. ~~For an unlisted tributary that is not an ephemeral water or an effluent-dependent water and which does not have salmonids present, the aquatic and wildlife (warm water fishery) and fish consumption standards apply as well as the water quality standards which have been established for the nearest downstream surface water listed in Appendix B that is not an ephemeral water or effluent-dependent water.~~ The aquatic and wildlife (warm water), full-body contact, and fish consumption standards apply to an unlisted tributary that is a perennial or intermittent surface water and is below 5000 feet in elevation.

R18-11-106. Net Ecological Benefit

A. The Director may, by rule, modify a water quality standard on the ground that there is a net ecological benefit associated with the discharge of effluent to support or create a riparian and aquatic habitat in an area where ~~such~~ water resources are limited. The Director may modify a water quality standard for a pollutant if it is demonstrated that:

1. The discharge of effluent creates or supports an ecologically valuable aquatic, wetland, or riparian ecosystem in an area where ~~such~~ these resources are limited~~.~~ ;
2. The ecological benefits associated with the discharge of effluent under a modified water quality standard exceed the environmental costs associated with the elimination of the discharge of effluent~~.~~ ;
3. The cost of treatment to achieve compliance with a water quality standard is so high that it is more cost effective to eliminate the discharge of effluent to the surface water. The discharger shall demonstrate that it is feasible to eliminate the discharge of effluent ~~which~~ that creates or supports the ecologically valuable aquatic, wetland, or riparian ecosystem and that a plan to eliminate the discharge is under active consideration ~~.~~ ;
4. The discharge of effluent to the surface water will not cause or contribute to a violation of a water quality standard that has been established for a downstream surface water ~~.~~ ;
5. All practicable point source discharge control programs, including local pretreatment, waste minimization, and source reduction programs are implemented; and
6. The discharge of effluent does not produce or contribute to the concentration of a pollutant in the tissues of aquatic organisms or wildlife that is likely to be harmful to humans or wildlife through food chain concentration.

B. The Director shall not modify a water quality criterion for a pollutant to be less stringent than a technology-based effluent limitation ~~which~~ that applies to the discharge of that effluent. The discharge of effluent ~~which creates or supports and ecologically valuable aquatic, riparian, or wetland ecosystem~~ shall, at a minimum, comply with applicable technology-based effluent limitations.

R18-11-107. Antidegradation

A. The ~~Department~~ Director shall determine whether there is ~~any~~ degradation of water quality in a surface water on a ~~pollutant by pollutant~~ pollutant-by-pollutant basis.

B. Tier 1: The level of water quality necessary to protect existing uses shall be maintained and protected. No degradation of existing water quality is permitted in a surface water where the existing water quality does not meet the applicable water quality standard.

C. Tier 2: Where existing water quality in a surface water is better than the applicable water quality standard, the existing water quality shall be maintained and protected. The Director may allow limited degradation of existing water quality in the surface water, provided that the Department ~~has held~~ holds a public hearing on whether degradation should be allowed ~~pursuant to~~ under the general public hearing procedures prescribed at R18-1-401 and R18-1-402 and the Director makes all of the following findings:

1. The level of water quality necessary to protect existing uses is fully protected. Water quality shall not be lowered to a level that does not comply with applicable water quality standards.
2. The highest statutory and regulatory requirements for ~~all~~ new and existing point sources ~~as set forth in the Clean Water Act~~ are achieved.
3. All cost-effective and reasonable best management practices for nonpoint source pollution control are implemented.
4. Allowing lower water quality is necessary to accommodate important economic or social development in the area ~~in which~~ where the surface water is located.

D. Tier 3: Existing water quality shall be maintained and protected in a surface water that is classified as a unique water ~~or that the Director has proposed for classification as a unique water pursuant to~~ under R18-11-112. The Director shall not allow limited degradation of a unique water ~~pursuant to~~ under subsection (C) ~~of this Section~~.

E. The Department shall implement this Section in a manner consistent with § 316 of the Clean Water Act [33 U.S.C. § 1326] ~~where~~ if a potential water quality impairment associated with a thermal discharge is involved.

R18-11-108. Narrative Water Quality Standards

A. A surface water shall be free from pollutants in amounts or combinations that:

1. Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life ~~or that impair recreational uses~~;
2. Cause objectionable odor in the area in which the surface water is located;
3. Cause off-taste or odor in drinking water;
4. Cause off-flavor in aquatic organisms ~~or waterfowl~~;
5. Are toxic to humans, animals, plants, or other organisms;
6. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses;
7. Cause or contribute to a violation of an aquifer water quality standard prescribed in R18-11-405 or R18-11-406; or
8. Change the color of the surface water from natural background levels of color.

B. A surface water shall be free from oil, grease, and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank, or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational ~~water craft shall not be considered~~ watercraft is not a violation of this narrative standard.

C. A discharge of suspended solids to a surface water shall not be in quantities or concentrations that either interfere with the treatment processes at the nearest downstream potable water treatment plant or substantially increase the cost of handling solids produced at the nearest downstream potable water treatment plant.

R18-11-109. Numeric Water Quality Standards

~~**A.** The water quality standards prescribed in this Section and in Appendix A apply to surface waters listed in Appendix B and their tributaries. Additional numeric water quality standards for unique waters are prescribed in R18-11-112.~~

~~**B.** The following water quality standards for fecal coliform, expressed in colony forming units per 100 milliliters of water (cfu/100 ml), shall not be exceeded:~~

~~1. **Fecal Coliform**~~	~~**DWS, PBC, A&W1, AgI, AgL**~~
~~30-day geometric mean (5 sample minimum)~~	~~1000~~
~~10% if samples for a 30-day period~~	~~2000~~
~~Single sample maximum~~	~~4000~~

~~2. **Fecal Coliform in effluent dependent waters**~~	~~**All designated areas**~~
~~30-day geometric mean (5 sample minimum)~~	~~200~~
~~10% if samples for a 30-day period~~	~~400~~
~~Single sample maximum~~	~~800~~

~~**C.**~~**A.** The following water quality standards for *Escherichia coli (E. coli)*, expressed in colony forming units per 100 milliliters of water (cfu / 100 ml), shall not be exceeded:

E. coli	**FBC**	PBC
~~30-day geometric mean (5 sample minimum)~~	~~130~~	
Geometric mean (four-sample minimum)	126	126
Single sample maximum	~~580~~ 235	576

~~**D.**~~**B.** The following water quality standards for pH, expressed in standard units, shall not be violated:

pH	**DWS**	**FBC, PBC, A&W**~~2~~ 1	**AgI**	**AgL**
Maximum	9.0	9.0	9.0	9.0
Minimum	5.0	6.5	4.5	6.5
Maximum change due to discharge	NNS	0.5	NNS	NNS

~~**E.**~~**C.** The following maximum allowable increase in ambient water temperature, expressed in degrees Celsius, shall not be exceeded:

Temperature	**A&Ww, A&Wedw**	**A&Wc**
Maximum increase due to a thermal discharge	~~3,4~~ 2,3 3.0	1.0

~~**F.** The following water quality standards for turbidity, expressed as a maximum concentration in nephelometric turbidity units (NTU), shall not be exceeded:~~

~~**Turbidity**~~	~~**A&Ww, A&Wedw**~~	~~**A&Wc**~~
~~Rivers, streams~~		

~~and other flowing waters~~	~~50~~	~~10~~
~~Lakes, reservoirs, tanks and ponds~~	~~25~~	~~10~~

D. The following water quality standard for suspended sediment concentration, expressed as a geometric mean (four-sample minimum) shall not be exceeded. The standard applies to a surface water that is at or near base flow and does not apply to a surface water during or soon after a precipitation event:

A&Wc, A&Ww
80 mg / L

~~C.~~E. The following are the water quality standards for dissolved oxygen, expressed in milligrams per liter (mg/L). The dissolved oxygen concentration in a surface water shall not fall below the following minimum concentrations:

1. **Dissolved oxygen**	**A&Ww**	**A&Wc**
Single sample minimum~~[5]~~ [4]	6.0	7.0

2. **Dissolved oxygen in ~~effluent dependent~~ effluent-dependent waters (single sample minimum)**:

	A&W edw
~~3~~ Three hours after sunrise to sunset	3.0
Sunset to ~~3~~ three hours after sunrise	1.0

3. ~~If the dissolved oxygen (mg/L) of a surface water is less than the water quality standard for dissolved oxygen, but the percent saturation of oxygen is equal to or greater than 90%, then the surface water shall be deemed to be in compliance with the water quality standard for dissolved oxygen~~. A surface water is in compliance with the water quality standard for dissolved oxygen if the percent saturation of dissolved oxygen is equal to or greater than 90%.

~~H.~~F. The following water quality standards for total phosphorus and total nitrogen, expressed in milligrams per liter (mg/L), shall not be exceeded:

		Annual mean	**90th percentile**	**Single Sample Maximum**
1.	Verde River and its tributaries from headwaters to Bartlett Lake:			
	Total phosphorus	0.10	0.30	1.00
	Total nitrogen	1.00	1.50	3.00
2.	Black River, Tonto Creek, and their tributaries that are not located on tribal lands:			
	Total phosphorus	0.10	0.20	0.80
	Total nitrogen	0.50	1.00	2.00
3.	Salt River and its tributaries~~, except Pinal Creek, above Theodore Roosevelt Lake~~ that are not located on tribal lands but not Pinal Creek above Theodore Roosevelt Lake:			
	Total phosphorus	0.12	0.30	1.00
	Total nitrogen	0.60	1.20	2.00
4.	Theodore Roosevelt, Apache, Canyon, and Saguaro Lakes:			
	Total phosphorus	0.03~~[a]~~ [5]	NNS	0.60~~[b]~~ [6]
	Total nitrogen	0.30~~[a]~~ [5]	NNS	1.00~~[b]~~ [6]
5.	Salt River below Stewart Mountain Dam to confluence with the Verde River:			
	Total phosphorus	0.05	NNS	0.20
	Total nitrogen	0.60	NNS	3.00
6.	Little Colorado River and its tributaries above River Reservoir in Greer, South Fork of Little Colorado River above South Fork Campground, Water Canyon Creek above Apache-Sitgreaves National Forest boundary:			
	Total phosphorus	0.08	0.10	0.75
	Total nitrogen	0.60	0.75	1.10
7.	Little Colorado River at the crossing of Apache County Road No. 124:			

Total phosphorus	NNS	NNS	0.75
Total nitrogen	NNS	NNS	1.80

8. Little Colorado River above Lyman Lake to above the Amity Ditch diversion near crossing of Arizona Highway 273 (applies only when in-stream turbidity is less than 50 NTU):

Total phosphorus	0.20	0.30	0.75
Total nitrogen	0.70	1.20	1.50

9. Colorado River, at Northern International Boundary near Morelos Dam:

Total phosphorus	NNS	0.33	NNS
Total nitrogen	NNS	2.50	NNS

10. San Pedro River, from Curtis to Benson:

Total phosphorus	NNS	NNS	NNS
Total nitrate as N	NNS	NNS	10.00

11. The discharge of wastewater to Show Low Creek and tributaries upstream of and including Fools Hollow Lake shall not exceed 0.16 mg/L total phosphates as P.

12. The discharge of wastewater to the San Francisco River and tributaries upstream of Luna Lake Dam shall not exceed 1.0 mg/L total phosphates as P.

~~I.~~**G.** The following water quality standards for radiochemicals shall not be exceeded in surface waters with the domestic water source designated use:

~~1. In all surface waters, the concentration of radio chemicals shall not exceed the limits established by the Arizona Radiation Regulatory Agency in 12 A.A.C. 1, Article 4, Appendix A, Table II, Column 2 (effective June 30, 1977 and no future amendments), which is incorporated by reference and on file with the Office of the Secretary of State and with the Department.~~

~~2. In surface waters that are designated as domestic water sources, the following water quality standards for radiochemicals shall not be exceeded:~~

~~a.~~1. The concentration of gross alpha particle activity, including radium-226, but excluding radon and uranium, shall not exceed 15 picocuries per liter of water.

~~b.~~2. The concentration of combined radium-226 and radium-228 shall not exceed ~~5~~ five picocuries per liter of water.

~~c.~~3. The concentration of strontium-90 shall not exceed 8 eight picocuries per liter of water.

~~d.~~4. The concentration of tritium shall not exceed 20,000 picocuries per liter of water.

~~e.~~5. The average annual concentration of beta particle activity and photon emitters from ~~man-made~~ manmade radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than ~~4~~ four millirems per year.

Footnotes:

~~1~~ ~~Includes A&Wc, A&Ww, and A&We~~

~~2~~ 1 Includes A&Wc, A&Ww, A&Wedw, and A&We.

~~3~~ 2 Does not apply to Cholla Lake.

~~4~~ 3 Does not apply to a wastewater treatment plant discharge to a dry watercourse that creates an ~~effluent-dependent~~ effluent-dependent water or to a stormwater discharge.

~~5~~ 4 The dissolved oxygen water quality standard for a lake shall apply below the surface but not at a depth greater than ~~1~~ one meter.

~~a~~ 5 Means the annual mean of representative composite samples taken from the surface and at ~~2 and 5~~ two and five meter depths.

~~b~~ 6 Means the maximum for any set of representative composite samples taken from the surface and at ~~2 and 5~~ two and five meter depths.

R18-11-110. Salinity ~~of~~ Standards for the Colorado River

A. The flow-weighted average annual salinity in the lower main stem of the Colorado River shall be maintained at or below the following concentrations:

Location	**Total Dissolved Solids**
Below Hoover Dam	723 mg/L
Below Parker Dam	747 mg/L
At Imperial Dam	879 mg/L

B. To preserve the basin-wide approach to salinity control developed by the Colorado River Basin states and to ensure compliance with the numeric criteria for salinity in subsection (A), the Department adopts the plan of implementation contained in the "1999 Review, Water Quality Standards for Salinity, Colorado River System," Colorado River Basin Salinity

Control Forum, 106 West 500 South, Suite 101, Bountiful, Utah 84010-6232 (June, 1999), which is incorporated by reference and on file with the Office of the Secretary of State and the Department. This incorporation by reference contains no future editions or amendments.

R18-11-111 Analytical Methods

A. A person conducting an analysis of a sample taken to determine compliance with a water quality standard shall use an approved analytical method prescribed in 9 A.A.C. 14, Article 6, or an alternative analytical method that is approved by the Director of the Arizona Department of Health Services under ~~R9-14-607(B)~~ R9-16-610(B).

B. A test result from a sample taken to determine compliance with a water quality standard is valid only if the sample ~~has been~~ is analyzed by a laboratory that is licensed by the Arizona Department of Health Services for the analysis performed.

R18-11-112. Unique Waters

A The Director shall ~~use rulemaking to~~ classify a surface water as a unique water by rule. The Director shall consider nominations to classify a surface water as a unique water during the triennial review of water quality standards for surface waters.

B. The Director may adopt, by rule, site-specific water quality standards to maintain and protect existing water quality in a unique water.

C. Any person may nominate a surface water for classification as a unique water by filing a ~~petition for rule adoption~~ nomination with the Department. ~~A petition for rule adoption~~ The nomination to classify a surface water as a unique water shall include:

1. A map and a description of the surface water;
2. A written statement in support of the nomination, including specific reference to the applicable criteria for unique ~~waters~~ water classification ~~as~~ prescribed in subsection (D) ~~of this Section~~;
3. Supporting evidence demonstrating that ~~1 or more of~~ the applicable unique ~~waters~~ water criteria prescribed in subsection (D) ~~of this Section has been~~ are met; and
4. Available water quality data relevant to establishing the baseline water quality of the proposed unique water.

D. The Director may classify a surface water as a unique water upon finding that the surface water is an outstanding state resource water based upon ~~1 of~~ the following criteria:

1. The surface water is a perennial water;
2. The surface water is in a free-flowing condition. For purposes of this subsection, "in a free-flowing condition" means that a surface water does not have an impoundment, diversion, channelization, rip-rapping or other bank armor, or another hydrological modification within the reach nominated for unique water classification;
3. The surface water has good water quality. For purposes of this subsection, "good water quality" means that the surface water has water quality that meets or exceeds applicable surface water quality standards. A surface water that is listed as impaired under § 303(d) of the Clean Water Act [33 U.S.C. § 1313] is ineligible for unique waters classification; and
4. The surface water meets one or both of the following conditions:
   - ~~1.~~a. The surface water is of exceptional recreational or ecological significance because of its unique attributes, including but not limited to, attributes related to the geology, flora, fauna, water quality, aesthetic values, or the wilderness characteristics of the surface water.
   - ~~2.~~b. Threatened or endangered species are known to be associated with the surface water and the existing water quality is essential to the maintenance and propagation of a threatened or endangered species or the surface water provides critical habitat for a threatened or endangered species. Endangered or threatened species are identified ~~on the following lists which are hereby incorporated by reference and on file with the Office of the Secretary of State and the Department:~~ in Endangered and Threatened Wildlife and Plants, 50 CFR § 17.11 and § 17.12 (revised as of October 1, 2000) which is incorporated by reference and on file with the Department and the Office of the Secretary of State. This incorporation by reference contains no future editions or amendments.
     - ~~a. Endangered and Threatened Wildlife and Plants, 50 CFR § 17.11 and 17.12 (revised as of October 1, 1994);~~
     - ~~b. "Threatened Native Wildlife of Arizona," Arizona Game and Fish Department (July 21, 1988);~~
     - ~~c. List of highly safeguarded protected native plants in 3 A.A.C. 4, Article 6, Appendix A(A) (December 20, 1994);~~
     - ~~d. Federally Listed Threatened and Endangered Species of Arizona," U.S. Fish & Wildlife Service (June 6, 1995).~~

E. The following surface waters are classified as unique waters:

1. The West Fork of the Little Colorado River, above Government Springs;
2. Oak Creek, including the West Fork of Oak Creek;
3. Peeples Canyon Creek, tributary to the Santa Maria River;
4. Burro Creek, above its confluence with Boulder Creek;
5. Francis Creek, in Mohave and Yavapai counties;
6. Bonita Creek, tributary to the upper Gila River;
7. Cienega Creek, from ~~I-10 bridge to Del Lago Dam~~ confluence with Gardner Canyon and Spring Water Canyon at R18E T17S to USGS gaging station at 32°02'09" / 110°40'34", in Pima County;

8. Aravaipa Creek, from its confluence ~~of~~ with Stowe Gulch to the downstream boundary of Aravaipa Canyon Wilderness Area;
9. Cave Creek and the South Fork of Cave Creek (Chircahua Mountains), from the headwaters to the Coronado National Forest boundary; ~~and~~
10. Buehman Canyon Creek, from its headwaters (Lat. 32°24'55.5" N, Long. 110°39'43.5"W) to approximately 9.8 miles downstream (Lat. 32°24'31.5" N, Long. 10°32'08" W);
11. Lee Valley Creek, from its headwaters to Lee Valley Reservoir;
12. Bear Wallow Creek, from its headwaters to the boundary of the San Carlos Indian Reservation;
13. North Fork of Bear Wallow Creek, from its headwaters to Bear Wallow Creek;
14. South Fork of Bear Wallow Creek, from its headwaters to Bear Wallow Creek;
15. Snake Creek, from its headwaters to its confluence with Black River;
17. Hay Creek, from its headwaters to its confluence with the West Fork of the Black River;
18. Stinky Creek, from the Fort Apache Indian Reservation boundary to its confluence with the West Fork of the Black River; and
19. KP Creek, from its headwaters to its confluence with the Blue River.

F. The Department shall hold at least one public meeting in the local area of a nominated unique water to solicit public comment on the nomination.

G. The Director may consider the following factors when making a decision whether to classify a nominated surface water as a unique water:

1. Whether there is the ability to manage the unique water and its watershed to maintain and protect existing water quality;
2. The social and economic impact of Tier 3 antidegradation protection;
3. The public comments in support or opposition to a unique waters classification;
4. The support or opposition of federal and state land management and natural resources agencies to a nomination;
5. Agency resource constraints;
6. The timing of the unique water nomination relative to the triennial review of surface water quality standards;
7. The consistency of a unique water classification with applicable water quality management plans (for example, § 208 water quality management plans); and
8. Whether the nominated surface water is located within a national or state park, national monument, national recreation area, wilderness area, riparian conservation area, area of critical environmental concern, or it has another special use designation (for example, Wild and Scenic River designation).

~~F.~~**H.** The following water quality standards apply to the listed unique waters. Water quality standards prescribed in this subsection supplement the water quality standards prescribed ~~pursuant to R18-11-109~~ by this Article.

1. The West Fork of the Little Colorado River, above Government Springs:

Parameter	**Standard**
pH (standard units)	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
Chromium (as Cr)(D)	10 µg/L

2. Oak Creek, including the West Fork of Oak Creek:

Parameter	**Standard**
pH (standard units)	No change due to discharge
Nitrogen (T)	1.00 mg / L (annual mean)
	1.50 mg / L (90th percentile)
	2.50 mg / L (single sample max.)
Phosphorus (T)	0.10 mg/L (annual mean)
	0.25 mg/L (90th percentile)
	0.30 mg/ L (single sample max.)
Chromium (as Cr) (D)	5 µg/L
Turbidity change due to discharge	3 ~~NTU~~ NTUs

3. Peeples Canyon Creek, tributary to the Santa Maria River:

Parameter	**Standard**
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Turbidity change due to discharge	5 ~~NTU~~ NTUs
Arsenic (T)	20 µg/L
Manganese (T)	500 µg/L

4. Burro Creek, above its confluence with Boulder Creek:

Parameter	Standard
Manganese (T)	500 µg/L

5. Francis Creek, in Mohave and Yavapai counties:

Parameter	Standard
Manganese (T)	500 µg/L

6. Cienega Creek, from ~~I-10 bridge~~ its confluence with Gardner Canyon and Spring Water Canyon at R18E T17S to Del Lago Dam, in Pima County:

Parameter	Standard
pH	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
Turbidity	10 ~~NTU~~ NTUs

7. Bonita Creek, tributary to the Upper Gila River:

Parameter	Standard
pH	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
Turbidity	15 ~~NTU~~ NTUs

Abbreviations:
~~(D)~~ "(D)" means dissolved fraction
~~(T)~~ "(T)" means total recoverable
~~NTU~~ "NTUs" means nephelometric turbidity ~~unit~~ units
~~mg / L~~ "mg / L" means milligrams per liter
~~ug / L~~ "µg / L" means micrograms per liter

R18-11-113. ~~Effluent-dependent~~ Effluent-dependent Waters

A. The Director shall ~~use rulemaking to~~ classify a surface water as an ~~effluent-dependent~~ effluent-dependent water by rule.

B. The Director may adopt, by rule, site-specific water quality standards for an ~~effluent-dependent~~ effluent-dependent water.

C. Any person may submit a petition for rule adoption requesting that the Director classify a surface water as an ~~effluent-dependent~~ effluent-dependent water. The petition for rule adoption shall include:
1. A map and a description of the surface water~~.~~ ,
2. Information that demonstrates that the surface water consists ~~primarily~~ of discharges of treated wastewater~~.~~ , and
3. Information that demonstrates that the receiving water is an ephemeral water in the absence of the discharge of treated wastewater.

D. The following surface waters are classified as ~~effluent-dependent~~ effluent-dependent waters:
1. In the Colorado River Main Stem Basin:
   a. Bright Angel Wash from the South Rim Grand Canyon WWTP outfall to its confluence with Coconino Wash~~.~~ ,
   b. Cataract Creek from the Williams WWTP outfall to ~~1~~ one kilometer downstream from the outfall~~.~~ ,
   c. Holy Moses Wash from the Kingman WWTP outfall to ~~3~~ three kilometers downstream from the outfall~~.~~ , and
   d. Transept Canyon from the North Rim Grand Canyon WWTP outfall to ~~1~~ one kilometer downstream from the outfall.
2. In the Little Colorado River Basin:
   a. Dry Lake. ,
   b. Lake Humphreys. ,
   c. Lower Walnut Canyon Lake. ,
   d. Ned Lake. ,
   e. Pintail Lake. ,
   f. Telephone Lake. ,
   g. Rio de Flag from the City of Flagstaff WWTP outfall to its confluence with San Francisco Wash. , and
   h. Whale Lake.
3. In the Middle Gila River Basin:
   a. Unnamed wash from the Town of Prescott Valley WWTP outfall to ~~the~~ its confluence with the Agua Fria River, and the Agua Fria River below ~~the~~ its confluence with the unnamed wash receiving treated wastewater from the Prescott Valley WWTP to State Route 169. ;
   b. Agua Fria river from the El Mirage WWTP outfall to ~~2~~ two kilometers downstream from the outfall. ;
   c. Gila River from the Florence WWTP outfall to Felix Road. ,
   d. Gila River from its confluence with the Salt River to Gillespie Dam. ;

e. Queen Creek from ~~Superior Mining Division discharge~~ the Town of Superior WWTP outfall to its confluence with Potts Canyon. ;
f. Unnamed wash from the Gila Bend WWTP outfall to its confluence with the Gila River. ;
g. Unnamed wash from the Luke AFB WWTP outfall to ~~the~~ its confluence with the Agua Fria River. ; and
h. Unnamed wash from the Queen Valley WWTP outfall to its confluence with Queen Creek.

4. In the Rios de Mexico Basin:
   a. Mule Gulch, from the Bisbee WWTP outfall to ~~confluence with Whitewater Draw.~~ the Highway 80 bridge, and
   b. Unnamed wash from the Bisbee-Douglas International Airport WWTP outfall to Whitewater Draw.
5. In the Salt River Basin:
   a. Unnamed wash from the Globe WWTP outfall to its confluence with Pinal Creek and Pinal Creek from its confluence ~~of~~ with the unnamed wash ~~and Pinal Creek~~ to Radium. , and
   b. Salt River from the 23rd Avenue WWTP outfall to its confluence with the Gila River.
6. In the San Pedro River Basin:
   a. Unnamed wash from the Mt. Lemmon WWTP outfall to 0.25 kilometers downstream, and
   b. Walnut Gulch from the Tombstone WWTP outfall to its confluence with Tombstone Gulch.
7. In the Santa Cruz Basin:
   a. Santa Cruz River from the Nogales International WWTP outfall to Tubac Bridge. ,
   b. Santa Cruz River from the Roger Road WWTP outfall to Baumgartner Road crossing. ,
   c. Unnamed wash from the Oracle WWTP outfall to ~~5~~ five kilometers downstream. , and
   d. Sonoita Creek from the Town of Patagonia WWTP outfall to 750 feet downstream.
8. In the Upper Gila River Basin:
   a. Bennett Wash from the Arizona Department of Corrections-Safford WWTP outfall to the Gila River. and
   b. Unnamed wash from the Arizona Department of Corrections-Globe WWTP outfall to the boundary of the San Carlos Indian Reservation.
9. In the Verde River Basin:
   a. American Gulch from the Northern Gila County Sanitary District WWTP outfall to the East Verde River. ,
   b. Bitter Creek from the Jerome WWTP outfall to 2.5 kilometers downstream from the outfall. , and
   c. Jacks Canyon Wash from the Big Park WWTP outfall to its confluence with Dry Beaver Creek.
10. In the Willcox Playa Basin: Lake Cochise

E. The NPDES permit issuing authority shall use the water quality standards that apply to an ~~effluent-dependent~~ effluent-dependent water to derive discharge limitations for a point source discharge from a wastewater treatment plant to an ephemeral water ~~which~~ that changes that ephemeral water into an ~~effluent-dependent~~ effluent-dependent water.

F. The site-specific standard of 36 µg / L for dissolved copper for the aquatic and wildlife (effluent-dependent water) designated use applies to the Rio de Flag from the City of Flagstaff WWTP outfall to its confluence with the San Francisco Wash.

R18-11-114. Mixing Zones

A. The Director may~~, by order,~~ establish a mixing zone ~~in~~ for a point source discharge to a surface water as a condition of a NPDES permit. Mixing zones are prohibited in ephemeral waters or where there is no water for dilution.

B. The owner or operator of a point source seeking the establishment of a mixing zone shall submit a mixing zone application to the Department on a standard form that is available from the Department. The application shall include:
1. Identification of the pollutant for which the mixing zone is requested;
2. A proposed outfall design;
3. A definition of the boundary of the proposed mixing zone. For purposes of this subsection, the boundary of a mixing zone means the location where the concentration of treated wastewater across a transect of the surface water differs by less than 5%; and
4. A complete and detailed description of the existing physical, biological, and chemical conditions of the receiving water and ~~of~~ the predicted impact ~~on such conditions from~~ of the proposed mixing zone on those conditions.
5. ~~Information which demonstrates that there will be no acute toxicity in the proposed mixing zone.~~

C. The Department shall review the application for a mixing zone to determine whether the application is complete. If the application is incomplete, the Department shall identify in writing the additional information that must be submitted to the Department ~~before the Department can take administrative action on the application for a mixing zone~~ to complete the mixing zone application.

~~D.~~ ~~When the application for a mixing zone is complete, the Department shall make a preliminary determination of whether to establish the mixing zone. The Department shall give public notice and provide an opportunity for a public hearing on whether to establish a mixing zone pursuant to the administrative procedures prescribed in R18-1-401 and R18-1-402.~~

~~E.~~ ~~In making the determination of whether to grant or deny the request for the establishment of a mixing zone, the Director shall consider the following factors: sediment deposition; bioaccumulation; bioconcentration; predicted exposure of biota and the likelihood that resident biota will be adversely affected; whether there will be acute toxicity in the mixing zone; the known or predicted safe exposure levels for the pollutant of concern; the likelihood of adverse human health effects;~~

~~the size of the mixing zone; location of the mixing zone relative to biologically sensitive areas in the surface water; concentration gradient within the mixing zone, the physical habitat, the potential for attraction of aquatic life to the mixing zone, and the cumulative impacts of other mixing zones and other discharges to the surface water.~~

D. The Director shall consider the following factors when deciding whether to grant or deny a request for a mixing zone:

1. The assimilative capacity of the receiving water;
2. The likelihood of adverse human health effects;
3. The location of drinking water plant intakes and public swimming areas;
4. The predicted exposure of biota and the likelihood that resident biota will be adversely affected;
5. Bioaccumulation and bioconcentration;
6. Whether there will be acute toxicity in the mixing zone, and, if so, the size of the area of acute toxicity;
7. The known or predicted safe exposure levels for the pollutant of concern;
8. The size of the mixing zone;
9. The location of the mixing zone relative to biologically sensitive areas in the surface water;
10. The concentration gradient of the pollutant within the mixing zone;
11. Sediment deposition;
12. The potential for attracting aquatic life to the mixing zone; and
13. The cumulative impacts of other mixing zones and other discharges to the surface water.

~~F.~~E. The Director shall deny the request to establish a mixing zone if water quality standards outside the boundaries of the proposed mixing zone will be violated ~~or if concentrations of pollutants within the proposed mixing zone will cause acute toxicity to aquatic life~~. ~~Denials of applications~~ The denial of a request for a mixing zone shall be in writing and shall state the ~~reasons~~ reason for the denial. If the Director determines that a mixing zone should be established, ~~he shall issue an order to~~ the Director shall establish ~~a~~ the mixing zone as a condition of a NPDES permit. The Director may include mixing zone conditions in the ~~order~~ NPDES permit that the Director deems necessary to protect human health and the designated uses of the surface water. ~~A copy of the Director's decision and order shall be sent by certified mail to the applicant~~.

~~G.~~F. Any person who is adversely affected by ~~an order of the Director pertaining to~~ the Director's decision to grant or deny a request for a mixing zone may appeal the ~~director's~~ decision to an administrative law judge ~~pursuant to~~ under A.R.S. § 49-321 and A.R.S. § 41-1092 et seq.

~~H.~~G. The Department shall reevaluate a mixing zone upon issuance, reissuance, or modification of the National Pollutant Discharge Elimination System permit for the point source or a modification of the outfall structure.

~~I.~~H. The length of ~~the~~ a mixing zone shall not exceed 500 meters in ~~flowing streams~~ a stream. The total horizontal area allocated to all mixing zones on a lake shall not exceed 10% of the surface area of the lake. Adjacent mixing zones in a lake shall be no closer than the greatest horizontal dimension of any ~~of the~~ individual mixing ~~zones~~ zone.

~~J.~~I. A mixing zone shall provide for a zone of passage of not less than 50% of the cross-sectional area of a river or stream.

~~K.~~J. The discharge outfall shall be designed to maximize initial dilution of the treated wastewater in a surface water.

K. A mixing zone is prohibited for the following persistent, bioaccumulative pollutants:

1. Chlordane,
2. DDT and its metabolites (DDD and DDE),
3. Dieldrin,
4. Dioxin,
5. Endrin,
6. Endrin aldehyde,
7. Heptachlor,
8. Heptachlor epoxide,
9. Lindane,
10. Mercury,
11. PCBs, and
12. Toxaphene.

R18-11-115. ~~Nutrient Waivers~~ Repealed

~~A.~~ ~~The Department may waive the water quality standards for total phosphorus or total nitrogen on a discharger-specific basis for a discharge to an ephemeral water which is tributary to a surface water for which water quality standards for total nitrogen or total phosphorus are prescribed in R18-11-109(H).~~

~~B.~~ ~~A discharger who seeks a nutrient waiver shall submit an application to the Department on a standard form that is available from the Department. The application shall include:~~

~~1. Identification of the applicant.~~
~~2. Information on the discharging facility, including:~~
~~a. Date the facility was placed in service;~~
~~b. Location of the facility;~~
~~c. Location of the discharge point;~~
~~d. Wastewater treatment method; and~~

~~c. Discharge flow.~~

~~3. Information on the receiving surface water, including:~~

~~a. Name of the receiving water;~~

~~b. Distance in river miles to the nearest downstream surface water; and~~

~~c. Distance from the point of discharge to the point where the flow goes subsurface during an average dry season.~~

~~4. Information which demonstrates that the nearest downstream surface water is free from pollutants in amounts or combinations which cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses.~~

~~5. Water quality data, including:~~

~~a. Monthly average, 90th percentile, and single sample maximum concentrations of total phosphorus and total nitrogen as measured at the point of discharge.~~

~~b. Monthly average, 90th percentile, and single sample maximum concentrations of total phosphorus and total nitrogen as measured at a downstream control point established by the Department; and~~

~~c. Discharge flow at the time of sampling.~~

~~C. The Department shall review the application for completeness and shall notify the applicant in writing whether the application is complete or whether additional information needs to be submitted to the Department.~~

~~D. Once an application for a nutrient waiver is complete, the Department shall make a preliminary determination of whether to grant or deny the nutrient waiver. The Department shall issue public notice and provide an opportunity for a public hearing on whether the request for a nutrient waiver should be granted pursuant to procedures prescribed in A.A.C. R18-1-401 and R18-1-402.~~

~~E. The Director may, by order, grant a nutrient waiver provided the discharge will not cause a violation of a water quality standard for total phosphorus or total nitrogen in any downstream surface water or cause a violation of narrative standards prescribed in R18-11-108. A copy of the Director's decision and order shall be sent by certified mail to the applicant.~~

~~F. Any person who is adversely affected by an order granting or denying a nutrient waiver may appeal the decision to an administrative law judge pursuant to A.R.S. § 49-321.~~

~~G. A nutrient waiver expires after a fixed term not to exceed 5 years. The Department shall reevaluate a nutrient waiver upon issuance, reissuance, or modification of the National Pollutant Discharge Elimination System permit for the point source.~~

R18-11-118. Dams and Flood Control Structures

A. Increases in turbidity that result from the routine physical or mechanical maintenance of ~~dams and flood control structures~~ a dam or flood control structure are not violations of this Article.

~~**B.** Nothing in this Article shall be construed to require a person who operates a dam or flood control structure to operate the structure to cure or mitigate an exceedance of a water quality standard caused by another person.~~

~~**C.**~~**B.** Nothing in this Article shall be construed to require the ~~releases of water from dams~~ release of water from a dam or a flood control structure.

R18-11-120. Enforcement

A. Any person who causes a violation of a water quality standard or any provision of this Article is subject to the enforcement provisions ~~prescribed~~ in A.R.S. Title 49, Chapter 2, Article 4.

B. The Department may establish a numeric water quality standard at a concentration that is below the practical quantitation limit. In such cases, the water quality standard is enforceable at the practical quantitation limit.

C. The Department shall determine compliance with acute aquatic and wildlife criteria from the analytical result of a grab sample. Compliance with chronic aquatic and wildlife criteria shall be determined from the ~~arithmetic~~ geometric mean of the analytical results of ~~grab samples collected over a period of 4 consecutive days at a minimum rate of 1 grab sample per day~~ the last four samples taken at least 24 hours apart.

D. A person is not subject to penalties for violation of a water quality standard provided that the person is in compliance with the provisions of a compliance schedule issued ~~pursuant to~~ under R18-11-121.

R18-11-121. Schedules of Compliance

A. A schedule to bring an existing point source into compliance with a new or revised water quality standard may be established in a National Pollutant Discharge Elimination System permit for ~~the~~ an existing point source. A compliance schedule for an existing point source, other than a storm water discharge, shall require compliance with a discharge limitation based upon a new or revised water quality standard no later than ~~3~~ three years after the effective date of the National Pollutant Discharge Elimination System permit. ~~In order for~~ For a schedule of compliance to be granted, the owner or operator of the existing point source shall demonstrate that all requirements under § 301(b) and § 306 of the Clean Water Act [33 U.S.C. § 1311(b) and § 1316] have been achieved and that the point source cannot comply with a discharge limitation based upon the new or revised water quality standard through the application of existing water pollution control technology, operational changes, or source reduction.

B. A schedule of compliance ~~shall not~~ may be established in a National Pollutant Discharge Elimination System permit for a new point source. The first National Pollutant Discharge Elimination System permit issued to a new point source may contain a schedule of compliance only when necessary to allow a reasonable opportunity to attain compliance with a new

or revised water quality standard that becomes effective after commencement of construction but less than three years before commencement of the discharge. For purposes of this subsection, ~~a new point source means a point source, the construction of which commences after the effective date of a water quality standard. Commencement~~ commencement of construction means that the owner or operator of the point source has obtained the federal, state, and local approvals or permits necessary to begin physical construction of the point source and either:

1. Onsite physical construction ~~program~~ has begun; or
2. The owner or operator has entered into a contract for physical construction of the point source and the contract cannot be cancelled or modified without substantial loss. For purposes of this subsection, "substantial loss" means in excess of 10% of the total cost incurred for physical construction.

C. A schedule of compliance may be established in a National Pollutant Discharge Elimination System permit for a recommencing point source discharge. The first National Pollutant Discharge Elimination System permit issued to a recommencing point source discharge may contain a schedule of compliance only when necessary to allow a reasonable opportunity to attain compliance with a new or revised water quality standard that becomes effective less than three years before recommencement of discharge.

~~C.~~**D.** A schedule to bring a point source discharge of storm water into compliance with a water quality standard may be established in a National Pollutant Discharge Elimination System permit. A compliance schedule for a storm water discharge shall require implementation of all reasonable and cost-effective best management practices to control the discharge of pollutants in storm water.

R18-11-122. Variances

A. The Director may grant a variance from a water quality standard for a point source discharge ~~provided~~ if the discharger demonstrates that treatment more advanced than that required to comply with technology-based effluent limitations is necessary to comply with the water quality standard and:

1. It is not technically feasible to achieve compliance within the next ~~5~~ five years ~~; or~~ ,
2. The cost of the treatment would result in substantial and widespread economic and social impact ~~;~~ , or
3. Human-caused conditions or sources of pollution prevent attainment of the water quality standard and cannot be remedied within the next five years.

B. A variance may be granted only on a pollutant-specific basis. A point source discharge is required to comply with all other applicable water quality standards for which a variance is not granted.

C. A variance applies only to a specific point source discharge. The granting of a variance does not modify a water quality standard. Other point source dischargers to the surface water shall comply with applicable water quality standards, including any water quality standard for which a variance has been granted for a specific point source discharge.

D. A variance is for a fixed term not to exceed ~~5~~ five years. Upon expiration of a variance, a point source discharger shall either comply with the water quality standard or apply for renewal of the variance. ~~In order for a variance to be renewed~~ To renew a variance, the applicant shall demonstrate reasonable progress towards compliance with the water quality standard during the term of the variance.

E. The Department shall reevaluate a variance upon the issuance, reissuance, or modification of the National Pollutant Discharge Elimination System permit for the point source discharge.

F. A person who seeks a variance from a water quality standard shall submit a ~~letter~~ a written request for a variance to the Department ~~requesting a variance~~. A request for a variance shall include the following information:

1. Identification of the specific pollutant and water quality standard for which a variance is sought;
2. Identification of the receiving surface water;
3. For an existing point source discharge, a detailed description of the existing discharge control technologies that are used to achieve compliance with applicable water quality standards. For a new point source discharge, a detailed description of the proposed discharge control technologies that will be used to achieve compliance with applicable water quality standards;
4. Documentation that the existing or proposed discharge control technologies will comply with applicable technology-based effluent limitations and that more advanced treatment technology is necessary to achieve compliance with the water quality standard for which a variance is sought;
5. A detailed discussion of the reasons why compliance with the water quality standard cannot be achieved;
6. A detailed discussion of the discharge control technologies that are available for achieving compliance with the water quality standard for which a variance is sought;
7. Documentation of ~~1 or both~~ one of the following:
   a. That it is not technically feasible to install and operate any of the available discharge control technologies to achieve compliance with the water quality standard for which a variance is sought ~~; or~~ ,
   b. That installation and operation of each of the available discharge technologies to achieve compliance with the water quality standard would result in substantial and widespread economic and social impact ~~;~~ , or
   c. That human-caused conditions or sources of pollution prevent the attainment of the water quality standard for which the variance is sought and it is not possible to remedy the conditions or sources of pollution within the next five years,

8. Documentation that the point source discharger has reduced, to the maximum extent practicable, the discharge of the pollutant for which a variance is sought through implementation of a local pretreatment, source reduction, or waste minimization program~~;~~ , and
9. A detailed description of proposed interim discharge limitations ~~which~~ that represent the highest level of treatment achievable by the point source ~~discharge~~ discharger during the term of the variance. Interim discharge limitations shall not be less stringent than technology-based effluent limitations.

G. In making a decision on whether to grant or deny the request for a variance, the Director shall consider the following factors: ~~bioaccumulation, bioconcentration, predicted exposure of biota and the likelihood that resident biota will be adversely affected, the known or predicted safe exposure levels for the pollutant of concern, and the likelihood of adverse human health effects~~.

1. Bioaccumulation and bioconcentration,
2. The predicted exposure of biota and the likelihood that resident biota will be adversely affected,
3. The known or predicted safe exposure levels for the pollutant of concern, and
4. The likelihood of adverse human health effects.

H. The Department shall issue a public notice and shall provide an opportunity for a public hearing on whether the request for a variance should be granted or denied ~~pursuant to~~ under procedures prescribed in ~~A.A.C~~. R18-1-401 and R18-1-402.

I. Any person who is adversely affected by a decision of the Director to grant or deny a variance may appeal the decision to an administrative law judge ~~pursuant to~~ under A.R.S. § 49-321 and A.R.S. § 41-1092 et seq.

J. The Department shall not grant a variance for a point source discharge to a unique water listed in R18-11-112.

K. A variance is subject to review and approval by the Regional Administrator of the U.S. Environmental Protection Agency.

R18-11-123. Prohibition Against Discharge~~; Sabino Creek~~

A. The discharge of treated wastewater to Sabino Creek is prohibited.

B. The discharge of human body wastes and the wastes from toilets and other receptacles intended to receive or retain those wastes on a vessel to Lake Powell is prohibited.

Appendix A: Numeric Water Quality Criteria Table 1. Human Health and Agricultural Designated ~~Use Numeric Water Quality Criteria~~ Uses							
PARAMETER	**CAS~~1~~ NUMBER**	**DWS~~2~~ (µg/L)**	**FC~~2~~ (µg/L)**	**FBC~~2~~ (µg/L)**	**PBC~~2~~ (µg/L)**	**AgI~~2~~ (µg/L)**	**AgL~~2~~ (µg/L)**
Acenaphthene	83-32-9	420	~~2600~~ 2670	~~8400~~ 84,000	~~8400~~ 84,000	NNS	NNS
Acenaphthylene	208-96-8	NNS	NNS	NNS	NNS	NNS	NNS
Acrolein	107-02-8	~~110~~ 3.5	~~750~~ 25	~~2200~~ 700	~~2200~~ 700	NNS	NNS
Acrylonitrile	107-13-1	~~0.06~~ 0.07	~~0.64~~ 0.7	3	~~NNS~~ 56,000	NNS	NNS
Alachlor	15972-60-8	2	NNS	~~1400~~ 14,000	~~1400~~ 14,000	NNS	NNS
Aldrin	309-00-2	0.002	~~0.0003~~ 0.0001	0.08	~~4.2~~ 42	~~k~~ p	~~k~~ p
Ammonia	7664-41-7	NNS	NNS	NNS	NNS	NNS	NNS
Anthracene	120-12-7	2100	~~6300~~ 1000	~~42000~~ 420,000	~~42000~~ 420,000	NNS	NNS
Antimony (as Sb)	7440-36-0	6 T	~~140~~ T 4,300 T	~~56~~ 560 T	~~56~~ 560 T	NNS	NNS
Arsenic (as As)	7440-38-2	50 T	1450 T	50 T	~~50~~ 420 T	2000 T	200 T
Asbestos	1332-21-4	a	NNS	NNS	NNS	NNS	NNS
Atrazine	1912-24-9	3	NNS	~~4900~~ 49,000	~~4900~~ 49,000	NNS	NNS
Barium (as Ba)	7440-39-3	2000 T	NNS	~~9800 D~~ 98,000	~~9800 D~~ 98,000	NNS	NNS
Benzene	71-43-2	5	~~120~~ 140	~~48~~ 93	~~NNS~~ 93	NNS	NNS
Benzidine	92-87-5	0.0002	~~0.002~~ 0.001	~~0.006~~ 0.01	~~420~~ 4,200	0.01	0.01
Benz (a) anthracene	56-55-3	~~0.003~~ NNS	~~0.00008~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
Benzo (a) pyrene	50-32-8	0.2	~~0.002~~ 0.05	0.2	~~NNS~~ 0.2	NNS	NNS
Benzo (ghi) perylene	191-24-2	NNS	NNS	NNS	NNS	NNS	NNS
Benzo (k) fluoranthene	207-08-9	~~0.003~~ NNS	~~0.00001~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
3,4-Benzofluoranthene	205-99-2	~~0.003~~ NNS	~~0.00004~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
Beryllium (as Be)	7440-41-7	4 T	~~0.21~~ 1,130 T	~~4~~ 2,800 T	~~700~~ 2,800 T	NNS	NNS
Bis (2-chloroethoxy) methane	111-91-1	NNS	NNS	NNS	NNS	NNS	NNS
Bis (2-chloroethyl) ether	111-44-4	0.03	1.4	1.3	~~NNS~~ 1.3	NNS	NNS
Bis (2-chloroisopropyl) ether	108-60-1	280	~~15000~~ 174,400	~~5600~~ 56,000	~~5600~~ 56,000	NNS	NNS
Boron (as B)	7440-42-8	630	NNS	~~12600~~ 126,000	~~12600~~ 126,000	1000 T	NNS
Bromodichloromethane	75-27-4	TTHM	~~22~~ 46	~~100~~ TTHM	~~2800~~ 28,000	NNS	NNS
p-Bromodiphenyl ether	101-55-3	NNS	NNS	NNS	NNS	NNS	NNS
Bromoform~~o~~	75-25-2	TTHM	~~80~~ 360	180	~~2,800~~ 28,000	NNS	NNS
Bromomethane	74-83-9	9.8	~~7500~~ 4020	~~200~~ 2000	~~200~~ 2000	NNS	NNS
Butyl benzyl phthalate	85-68-7	1400	~~5000~~ 5200	~~28000~~ 280,000	~~28000~~ 280,000	NNS	NNS
Cadmium (as Cd)	7440-43-9	5 T	~~41 T~~ 84 T	~~70~~ 700 T	~~70~~ 700 T	50 T	50 T
Carbofuran	1563-66-2	40	NNS	~~700~~ 7,000	~~700~~ 7,000	NNS	NNS
Carbon tetrachloride	56-23-5	5	~~5.5~~ 4	11	~~98~~ 980	NNS	NNS

Chlordane	57-74-9	2	~~0.001~~ 0.002	~~2~~ 4	~~8.4~~ 700	NNS	NNS
Chlorine (total residual)	7782-50-5	~~NNS~~ 700	NNS	~~14000~~ 140,000	~~14000~~ 140,000	NNS	NNS
Chlorobenzene	108-90-7	100	~~500~~ 20,900	~~2800~~ 28,000	~~2800~~ 28,000	NNS	NNS
p-Chloro-m-cresol	59-50-7	NNS	NNS	NNS	NNS	NNS	NNS
2-Chloroethyl vinyl ether	110-75-8	NNS	NNS	NNS	NNS	NNS	NNS
Chloroform~~-o~~	67-66-3	TTHM	~~590~~ 470	230	~~1400~~ 14,000	NNS	NNS
Chloromethane	74-87-3	NNS	NNS	NNS	NNS	NNS	NNS
Chloronapthalene beta	91-58-7	560	~~13000~~ 4,300	~~11000~~ 112,000	~~11000~~ 112,000	NNS	NNS
2-Chlorophenol	95-57-8	35	~~2100~~ 400	~~700~~ 7,000	~~700~~ 7,000	NNS	NNS
4-Chlorophenyl phenyl ether	7005-72-3	NNS	NNS	NNS	NNS	NNS	NNS
Chromium (as Cr III)	16065-83-1	~~NNS~~ 10,500 T	~~67000 T~~ 1,010,000 T	~~140000 T~~ 2,100,000 T	~~140000 T~~ 2,100,000 T	NNS	NNS
Chromium (as Cr VI)	18540-29-9	~~NNS~~ 21 T	~~3400~~ 2,000T	~~700~~ 4,200 T	~~700~~ 4,200 T	NNS	NNS
Chromium (Total as Cr)	7440-47-3	100 T	NNS	~~NNS~~ 100 T	~~NNS~~ 100 T	1000 T	1000 T
Chrysene	218-01-9	~~0.003~~ NNS	~~.0001~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
Copper (as Cu)	7440-50-8	~~1000 D~~ 1,300 T	NNS	~~5200 D~~ 1,300 T	~~5200 D~~ 1,300 T	5000 T	500 T
Cyanide	57-12-5	200 T	~~210000 T~~ 215,000 T	~~2800 T~~ 28,000 T	~~2800 T~~ 28,000 T	NNS	200 T
Dalapon	75-99-0	200	161,500	42,000	42,000	NNS	NNS
Dibenz (ah) anthracene	53-70-3	~~0.003~~ NNS	~~0.00003~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
Dibromochloromethane	124-48-1	TTHM	~~12~~ 34	~~17~~ TTHM	~~2,800~~ 28,000	NNS	NNS
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	NNS	~~NNS~~ 2,800	~~NNS~~ 2,800	NNS	NNS
1,2-Dibromoethane (EDB)	106-93-4	0.05	NNS	~~1.6~~ 0.05	~~NNS~~ 0.05	NNS	NNS
Dibutyl phthalate	84-74-2	700	~~2300~~ 12,100	~~14000~~ 140,000	~~14000~~ 140,000	NNS	NNS
1,2-Dichlorobenzene	95-50-1	600	2800	~~13000~~ 126,000	~~13000~~ 126,000	NNS	NNS
1,3-Dichlorobenzene	541-73-1	~~94~~ NNS	~~2000~~ NNS	~~1880~~ NNS	~~1880~~ NNS	NNS	NNS
1,4-Dichlorobenzene	106-46-7	75	~~1200~~ 77,500	~~1880~~ 560,000	~~1880~~ 560,000	NNS	NNS
3,3'-Dichlorobenzidine	91-94-1	0.08	~~0.09~~ 0.08	3.1	~~NNS~~ 3.1	NNS	NNS
p,p'-Dichlorodiphenyldichloroethane (DDD)	72-54-8	0.15	~~0.0009~~ 0.001	5.8	~~NNS~~ 5.8	0.001	0.001
p,p'-Dichlorodiphenyldichloroethylene (DDE)	72-55-9	0.1	~~0.0006~~ 0.001	4.1	~~NNS~~ 4.1	0.001	0.001
p,p'-Dichlorodiphenyltrichloroethane (DDT)	50-29-3	0.1	~~0.0005~~ 0.0006	4.1	~~70~~ 700	0.001	0.001
1,1-Dichloroethane	75-34-3	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Dichloroethane	107-06-2	5	~~120~~ 100	15	~~NNS~~ 280,000	NNS	NNS
1,1-Dichloroethylene	75-35-4	7	~~4.5~~ 320	~~7~~ 230	~~1300~~ 12,600	NNS	NNS
1,2-cis-Dichloroethylene	156-59-2	70	NNS	~~NNS~~ 70	~~NNS~~ 70	NNS	NNS

1,2-trans-Dichloroethylene	156-60-5	100	~~13000~~ 136,000	~~2800~~ 28,000	~~2800~~ 28,000	NNS	NNS
Dichloromethane	75-09-2	5	~~480~~ 1600	190	~~8400~~ 84,000	NNS	NNS
2,4-Dichlorophenol	120-83-2	21	~~810~~ 800	~~420~~ 4,200	~~420~~ 4,200	NNS	NNS
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70	NNS	~~1400~~ 14,000	~~1400~~ 14,000	NNS	NNS
1,2-Dichloropropane	78-87-5	5	~~NNS~~ 236,000	~~NNS~~ 126,000	~~NNS~~ 126,000	NNS	NNS
1,3-Dichloropropene	542-75-6	~~0.2~~ 2	~~6.6~~ 1,700	~~7.8~~ 420	~~42~~ 420	NNS	NNS
Dieldrin	60-57-1	0.002	0.0001	0.09	~~7~~ 70	~~k~~ p	~~k~~ p
Diethyl phthalate	84-66-2	5600	~~110000~~ 118,000	~~110000~~ 1,120,000	~~110000~~ 1,120,000	NNS	NNS
Di (2-ethylhexyl) adipate	103-23-1	400	NNS	1,200	840,000	NNS	NNS
Di (2-ethylhexyl) phthalate	117-81-7	6	7.4	100	~~2800~~ 28,000	NNS	NNS
2,4-Dimethylphenol	105-67-9	140	~~2200~~ 2300	~~2800~~ 28,000	~~2800~~ 28,000	NNS	NNS
Dimethyl phthalate	131-11-3	~~70000~~ NNS	~~2,800,000~~ NNS	~~1400000~~ NNS	~~1400000~~ NNS	NNS	NNS
4,6-Dinitro-o-cresol	534-52-1	~~2.7~~ 28	~~120~~ 7,800	~~55~~ 5,600	~~55~~ 5,600	NNS	NNS
2,4-Dinitrophenol	51-28-5	14	~~5400~~ 14,400	~~280~~ 2,800	~~280~~ 2,800	NNS	NNS
2,4-Dinitrotoluene	121-14-2	14	~~163~~ 5,700	~~280~~ 2,800	~~280~~ 2,800	NNS	NNS
2,6-Dinitrotoluene	606-20-2	~~NNS~~ 0.05	NNS	~~NNS~~ 2	~~NNS~~ 5,600	NNS	NNS
Di-n-octyl phthalate	117-84-0	~~NNS~~ 2800	NNS	~~NNS~~ 560,000	~~NNS~~ 560,000	NNS	NNS
Dinoseb	88-85-7	7	NNS	1,400	1,400	NNS	NNS
1,2-Diphenylhydrazine	122-66-7	0.04	~~0.25~~ 0.5	1.8	~~NNS~~ 1.8	NNS	NNS
Diquat	85-00-7	20	NNS	3,080	3,080	NNS	NNS
Endosulfan sulfate	1031-07-8	~~0.35~~ NNS	~~0.78~~ NNS	~~7~~ NNS	~~7~~ NNS	NNS	NNS
Endosulfan (Total)	115-29-7	42	~~110~~ 240	~~840~~ 8,400	~~840~~ 8,400	NNS	NNS
Endothall	145-73-3	100	NNS	28,000	28,000	NNS	NNS
Endrin	72-20-8	~~0.2~~ 2	~~1.1~~ 0.8	~~40~~ 420	~~40~~ 420	0.004	0.004
Endrin aldehyde	7421-93-3	~~2.1~~ NNS	~~0.81~~ NNS	~~420~~ NNS	~~420~~ NNS	NNS	NNS
Ethylbenzene	100-41-4	700	~~110000~~ 28,700	~~14000~~ 140,000	~~14000~~ 140,000	NNS	NNS
Ethyl chloride	75-00-3	NNS	NNS	NNS	NNS	NNS	NNS
Fluoranthene	206-44-0	280	~~130~~ 380	~~5600~~ 56,000	~~5600~~ 56,000	NNS	NNS
Fluorene	86-73-7	280	~~580~~ 14,400	~~5600~~ 56,000	~~5600~~ 56,000	NNS	NNS
~~Fluorine~~ Fluoride	7782-41-4	4000	NNS	~~8400~~ 84,000	~~8400~~ 84,000	NNS	NNS
Glyphosate	1071-83-6	700	1,077,000	140,000	140,000	NNS	NNS
Heptachlor	76-44-8	0.4	0.0002	0.4	~~70~~ 700	NNS	NNS
Heptachlor epoxide	1024-57-3	0.2	0.0001	0.2	~~2~~ 18	NNS	NNS
Hexachlorobenzene	118-74-1	1	~~0.002~~ 0.001	1	~~280~~ 1,120	NNS	NNS
Hexachlorobutadiene	87-68-3	0.45	~~0.52~~ 50	18	~~NNS~~ 280	NNS	NNS
Hexachlorocyclohexane alpha	319-84-6	0.006	~~0.03~~ 0.01	0.22	~~NNS~~ 11,200	NNS	NNS
Hexachlorocyclohexane beta	319-85-7	0.02	0.02	0.78	~~NNS~~ 840	NNS	NNS

Hexachlorocyclohexane delta	319-86-8	NNS	NNS	NNS	NNS	NNS	NNS
Hexachlorocyclohexane gamma (lindane)	58-89-9	0.2	~~0.02~~ 25	~~1~~ 420	~~42~~ 420	NNS	NNS
Hexachlorocyclopentadiene	77-47-4	50	~~550~~ 580	~~1000~~ 9,800	~~1000~~ 9,800	NNS	NNS
Hexachloroethane	67-72-1	2.5	~~4.8~~ 9	100	~~140~~ 1,400	NNS	NNS
Indeno (1,2,3-cd) pyrene	193-39-5	~~0.003~~ NNS	~~0.000003~~ NNS	~~0.12~~ NNS	NNS	NNS	NNS
Isophorone	78-59-1	~~36.8~~ 37	~~2300~~ 2,600	~~1500~~ 1,500	~~28000~~ 280,000	NNS	NNS
Lead (as Pb)	7439-97-1	~~50 T~~ 15 T	NNS	~~NNS~~ 15	~~NNS~~ 15	10000 T	100 T
Manganese (as Mn)	7439-96-5	~~4900~~ 980 T	NNS	~~19600 T~~ 196,000 T	~~19600 T~~ 196,000 T	10000	NNS
Mercury (as Hg)	7439-97-6	2 T	0.6 T	~~42~~ 420 T	~~42~~ 420 T	NNS	10 T
Methoxychlor	72-43-5	40	NNS	~~700~~ 7,000	~~700~~ 7,000	NNS	NNS
Naphthalene	91-20-3	~~NNS~~ 140	~~NNS~~ 20,500	~~NNS~~ 28,000	~~NNS~~ 28,000	NNS	NNS
Nickel (as Ni)	7440-02-0	~~100 T~~ 140 T	~~730 T~~ 4,600 T	~~2800~~ 28,000 T	~~2800~~ 28,000 T	NNS	NNS
Nitrate (as N)	14797-55-8	10000	NNS	~~224000~~ 2,240,000	~~224000~~ 2,240,000	NNS	NNS
Nitrite (as N)	14797-65-0	1000	NNS	~~14000~~ 140,000	~~14000~~ 140,000	NNS	NNS
Nitrate/Nitrite (as Total N)		10000	NNS	NNS	NNS	NNS	NNS
Nitrobenzene	98-95-3	3.5	~~600~~ 1,900	~~70~~ 700	~~70~~ 700	NNS	NNS
o-Nitrophenol	88-75-5	NNS	NNS	NNS	NNS	NNS	NNS
p-Nitrophenol	100-02-7	NNS	NNS	NNS	NNS	NNS	NNS
N-nitrosodimethylamine	62-75-9	~~0.0007~~ 0.001	~~2.1~~ 8	0.03	~~NNS~~ 0.03	NNS	NNS
N-nitrosodiphenylamine	86-30-6	7.1	~~14~~ 16	290	~~NNS~~ 290	NNS	NNS
N-nitrosodi-n-propylamine	621-64-7	0.005	~~0.51~~ 1.4	0.2	~~NNS~~ 133,000	NNS	NNS
Oxamyl	23135-22-0	200	NNS	35,000	35,000	NNS	NNS
Pentachlorophenol	87-86-5	1	~~8.2~~ 1000	~~11.7~~ 12	~~2000~~ 42,000	NNS	NNS
Phenanthrene	85-01-8	NNS	NNS	NNS	NNS	NNS	NNS
Phenol	108-95-2	4200	~~6,500,000~~ 1,000	~~84000~~ 840,000	~~84000~~ 840,000	NNS	NNS
Picloram	1918-02-1	500	24,300	98,000	98,000	NNS	NNS
Polychlorinatedbiphenyls (PCBs)	1336-36-3	0.5	~~0.00009~~ 0.007	~~0.5~~ 28	~~NNS~~ 28	0.001	0.001
Pyrene	129-00-0	210	~~1100~~ 10,800	~~4200~~ 42,000	~~4200~~ 42,000	NNS	NNS
Selenium (as Se)	7782-49-2	50 T	9000 T	~~700~~ 7,000 T	~~700~~ 7,000 T	20 T	50 T
Silver (as Ag)	7440-22-4	~~NNS~~ 35	~~NNS~~ 107,700 T	~~NNS~~ 7,000 T	~~NNS~~ 7,000 T	NNS	NNS
Simazine	112-34-9	4	NNS	7,000	7,000	NNS	NNS
Styrene	100-42-5	100	NNS	~~28000~~ 280,000	~~28000~~ 280,000	NNS	NNS
Sulfides		NNS	NNS	NNS	NNS	NNS	NNS
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	1746-01-6	~~0.0000003~~ 0.00003	~~0.000000004~~ 0.002	~~0.00009~~ 1.4	~~NNS~~ 1.4	NNS	NNS
1,1,2,2-Tetrachloroethane	79-34-5	0.17	11	7	~~NNS~~ 56,000	NNS	NNS

Tetrachloroethylene	127-18-4	5	~~11~~ 3,500	~~35~~ 14,000	~~1400~~ 14,000	NNS	NNS
Thallium (as Tl)	7440-28-0	2 T	~~41 T~~ 7.2	~~12 T~~ 112	~~12 T~~ 112	NNS	NNS
Toluene	108-88-3	1000	~~90000~~ 201,000	~~28000~~ 280,000	~~28000~~ 280,000	NNS	NNS
Toxaphene	8001-35-2	3	~~0.0008~~ 0.001	~~3~~ 1.3	~~NNS~~ 1400	0.005	0.005
1,2,4-Trichlorobenzene	120-82-1	70	~~155~~ 950	~~1400~~ 14,000	~~1400~~ 14,000	NNS	NNS
1,1,1-Trichloroethane	71-55-6	200	NNS	~~NNS~~ 200	~~NNS~~ 200	~~NNS~~ 1000	NNS
1,1,2-Trichloroethane	79-00-5	5	~~31~~ 42	25	~~560~~ 5,600	NNS	NNS
Trichloroethylene	79-01-6	5	~~NNS~~ 203,200	~~NNS~~ 280,000	~~NNS~~ 280,000	NNS	NNS
2,4,6-Trichlorophenol	88-06-2	3.2	~~4.9~~ 6.5	130	~~NNS~~ 130	NNS	NNS
2-(2,4,5-Trichlorophenoxy) propri-onic acid (2,4,5-TP)	93-72-1	50	NNS	~~1120~~ 11,200	~~1120~~ 11,200	NNS	NNS
Trihalomethanes, Total		100	NNS	NNS	NNS	NNS	NNS
Uranium (as Ur)	7440-61-1	35 D	NNS	NNS	NNS	NNS	NNS
Vinyl chloride	75-01-4	2	~~620~~ 13	~~80~~ 2	~~NNS~~ 4,200	NNS	NNS
Xylenes (Total)	1330-20-7	10000	NNS	~~280000~~ 2,800,000	~~280000~~ 2,800,000	NNS	NNS
Zinc (as Zn)	7440-66-6	2100 T	~~22,000 T~~ 69,000 T	~~42000 T~~ 420,000 T	~~42000 T~~ 420,000 T	10000 T	25000 T

Appendix A: Numeric Water Quality Criteria
Table 2. Aquatic & Wildlife Designated ~~Use Numeric Water Quality Criteria~~ Uses

PARAMETER	CAS[1] NUMBER	A&Wc Acute[3] (µg/L)	A&Wc Chronic[4] (µg/L)	A&Ww Acute[3] (µg/L)	A&Ww Chronic[4] (µg/L)	A&Wedw Acute[3] (µg/L)	A&Wedw Chronic[4] (µg/L)	A&We Acute[3] (µg/L)	~~A&We Chronic[4] (µg/L)~~
Acenaphthene	83-32-9	850	550	850	550	850	550	NNS	~~NNS~~
Acenaphthylene	208-96-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Acrolein	107-02-8	34	30	34	30	34	30	NNS	~~NNS~~
Acrylonitrile	107-13-1	3800	250	3800	250	3800	250	NNS	~~NNS~~
Alachlor	15972-60-8	~~NNS~~ 2500	~~NNS~~ 170	~~NNS~~ 2500	~~NNS~~ 170	~~NNS~~ 2500	~~NNS~~ 170	NNS	~~NNS~~
Aldrin	309-00-2	2.0	NNS	2.0	NNS	2.0	NNS	4.5	~~NNS~~
Ammonia	7664-41-7	b	b	b	b	NNS	NNS	NNS	~~NNS~~
Anthracene	120-12-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Antimony (as Sb)	7440-36-0	88 D	30 D	88 D	30 D	1000 D	600 D	NNS	~~NNS~~
Arsenic (as As)	7440-38-2	360 D	190 D	360 D	190 D	360 D	190 D	440 D	~~230 D~~
Asbestos	1332-21-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Atrazine	1912-24-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Barium (as Ba)	7440-39-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Benzene	71-43-2	2700	180	2700	180	~~11000~~ 8800	~~700~~ 560	NNS	~~NNS~~
Benzidine	92-87-5	1300	89	1300	89	1300	89	10000	~~640~~
Benz (a) anthracene	56-55-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Benzo (a) pyrene	50-32-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Benzo (ghi) perylene	191-24-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Benzo (k) fluoranthene	207-08-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
3,4-Benzofluoranthene	205-99-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Beryllium (as Be)	7440-41-7	65 D	5.3 D	65 D	5.3 D	65 D	5.3 D	NNS	~~NNS~~
Bis (2-chloroethoxy) methane	111-91-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Bis (2-chloroethyl) ether	111-44-4	120000	6700	120000	6700	120000	6700	NNS	~~NNS~~
Bis (2-chloroisopropyl) ether	108-60-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Boron (as B)	7440-42-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Bromodichloromethane	75-27-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
p-Bromodiphenyl ether	101-55-3	180	14	180	14	180	14	NNS	~~NNS~~
Bromoform	75-25-2	15000	10000	15000	10000	15000	10000	NNS	~~NNS~~
Bromomethane	74-83-9	5500	360	5500	360	5500	360	NNS	~~NNS~~
Butyl benzyl phthalate	85-68-7	1700	130	1700	130	1700	130	NNS	~~NNS~~
Cadmium (as Cd)	7440-43-9	c D	c D	c D	c D	c D	c D	c D	~~c D~~
Carbofuran	1563-66-2	~~NNS~~ 650	~~NNS~~ 50	~~NNS~~ 650	~~NNS~~ 50	~~NNS~~ 650	~~NNS~~ 50	NNS	~~NNS~~
Carbon tetrachloride	56-23-5	18000	1100	18000	1100	18000	1100	NNS	~~NNS~~
Chlordane	57-74-9	2.4	0.004	2.4	0.21	2.4	0.21	3.2	~~0.45~~
Chlorine (total residual)	7782-50-5	11	5.0	11	5.0	11	5.0	NNS	~~NNS~~
Chlorobenzene	108-90-7	~~9800~~ 3800	~~620~~ 260	~~9800~~ 3800	~~620~~ 260	~~NNS~~ 3800	~~NNS~~ 260	NNS	~~NNS~~

p-Chloro-m-cresol	59-50-7	15	4.7	15	4.7	15	4.7	48000	~~15000~~
2-Chloroethyl vinyl ether	110-75-8	180000	9800	180000	9800	180000	9800	NNS	~~NNS~~
Chloroform	67-66-3	14000	900	14000	900	14000	900	NNS	~~NNS~~
Chloromethane	74-87-3	270000	15000	270000	15000	270000	15000	NNS	~~NNS~~
Chloronaptha-lene beta	91-58-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
2-Chlorophenol	95-57-8	2200	150	2200	150	2200	150	NNS	~~NNS~~
4-Chlorophenyl phenyl ether	7005-72-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Chromium (as Cr III)	16065-83-1	c D	c D	c D	c D	c D	c D	c D	~~d D~~
Chromium (as Cr VI)	18540-29-9	16 D	11 D	16 D	11 D	16 D	11 D	34 D	~~23 D~~
Chromium (Total as Cr)	7440-47-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Chrysene	218-01-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Copper (as Cu)	7440-50-8	c D	c D	c D	c D	c D	c D	c D	~~e D~~
Cyanide	57-12-5	22 T	5.2 T	41 T	9.7 T	41 T	9.7 T	84 T	~~19 T~~
Dibenz (ah) anthracene	53-70-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Dibromochlo-romethane	124-48-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-Dibromoet-hane (EDB)	106-93-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Dibutyl phthalate	84-74-2	470	35	470	35	470	35	1100	~~84~~
1,2-Dichloroben-zene	95-50-1	790	300	1200	470	1200	470	5900	~~2300~~
1,3-Dichloroben-zene	541-73-1	2500	970	2500	970	2500	970	NNS	~~NNS~~
1,4-Dichloroben-zene	106-46-7	560	210	2000	780	2000	780	6500	~~2500~~
3,3'-Dichlo-robenzidine	91-94-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
p,p'-Dichlo-rodiphenyldi-chloroethane (DDD)	72-54-8	1.1	0.001	1.1	0.02	1.1	0.02	1.1	~~0.02~~
p,p'-Dichlo-rodiphenyldi-chloroethylene (DDE)	72-55-9	1.1	0.001	1.1	0.02	1.1	0.02	1.1	~~0.03~~
p,p'-Dichlo-rodiphenyl-trichloroethane (DDT)	50-29-3	1.1	0.001	1.1	0.001	1.1	0.001	1.1	~~0.006~~
1,1-Dichloroet-hane	75-34-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-Dichloroet-hane	107-06-2	59000	41000	59000	41000	59000	41000	NNS	~~NNS~~
1,1-Dichloroeth-ylene	75-35-4	15000	950	15000	950	15000	950	NNS	~~NNS~~
1,2-cis-Dichloro-ethylene	156-59-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-trans-Dichlo-roethylene	156-60-5	68000	3900	68000	3900	68000	3900	NNS	~~NNS~~
Dichloromethane	75-09-2	97000	5500	97000	5500	97000	5500	NNS	~~NNS~~

2,4-Dichlorophenol	120-83-2	1000	88	1000	88	1000	88	NNS	~~NNS~~
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-Dichloropropane	78-87-5	26000	9200	26000	9200	26000	9200	NNS	~~NNS~~
1,3-Dichloropropene	542-75-6	3000	1100	3000	1100	3000	1100	NNS	~~NNS~~
Dieldrin	60-57-1	2.5	0.002	2.5	0.002	2.5	0.005	4	~~0.9~~
Diethyl phthalate	84-66-2	26000	1600	26000	1600	26000	1600	NNS	~~NNS~~
Di(2-ethylhexyl) phthalate	117-81-7	400	360	400	360	400	360	3100	~~360~~
2,4-Dimethylphenol	105-67-9	1000	310	1000	310	1100	310	150000	~~43000~~
Dimethyl phthalate	131-11-3	17000	1000	17000	1000	17000	1000	NNS	~~NNS~~
4,6-Dinitro-o-cresol	534-52-1	310	24	310	24	310	24	NNS	~~NNS~~
2,4-Dinitrophenol	51-28-5	110	9.2	110	9.2	110	9.2	NNS	~~NNS~~
2,4-Dinitrotoluene	121-14-2	~~15000~~ 14000	~~970~~ 860	~~15000~~ 14000	~~970~~ 860	~~15000~~ 14000	~~970~~ 860	NNS	~~NNS~~
2,6-Dinitrotoluene	606-20-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
-Di-n-octyl phthalate	117-84-0	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
1,2-Diphenylhydrazine	122-66-7	130	11	130	11	130	11	NNS	~~NNS~~
Endosulfan sulfate	1031-07-8	0.22	0.06	0.22	0.06	0.22	0.06	3.0	~~1.5~~
Endosulfan (Total)	115-29-7	0.22	0.06	0.22	0.06	0.22	0.06	3.0	~~1.5~~
Endrin	72-20-8	0.18	0.002	0.2	0.08	0.2	0.08	0.7	~~0.3~~
Endrin aldehyde	7421-93-3	0.18	0.002	0.2	0.08	0.2	0.08	0.7	~~0.3~~
Ethylbenzene	100-41-4	23000	1400	23000	1400	23000	1400	NNS	~~NNS~~
Ethyl chloride	75-00-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Fluoranthene	206-44-0	2000	1600	2000	1600	2000	1600	NNS	~~NNS~~
Fluorene	86-73-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Fluorine	7782-41-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Heptachlor	76-44-8	0.52	0.004	0.52	0.004	0.58	0.013	0.9	~~0.1~~
Heptachlor epoxide	1024-57-3	0.52	0.004	0.52	0.004	0.58	0.013	0.9	~~0.1~~
Hexachlorobenzene	118-74-1	6.0	3.7	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Hexachlorobutadiene	87-68-3	45	8.2	45	8.2	45	8.2	NNS	~~NNS~~
Hexachlorocyclohexane alpha	319-84-6	1600	130	1600	130	1600	130	1600	~~130~~
Hexachlorocyclohexane beta	319-85-7	1600	130	1600	130	1600	130	1600	~~130~~
Hexachlorocyclohexane delta	319-86-8	1600	130	1600	130	1600	130	1600	~~130~~
Hexachlorocyclohexane gamma (lindane)	58-89-9	2.0	0.08	3.4	0.28	7.6	0.61	11	~~0.9~~
Hexachlorocyclopentadiene	77-47-4	3.5	0.3	3.5	0.3	3.5	0.3	NNS	~~NNS~~
Hexachloroethane	67-72-1	490	350	490	350	490	350	850	~~610~~

Indeno (1,2,3-cd) pyrene	193-39-5	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Isophorone	78-59-1	59000	43000	59000	43000	59000	43000	NNS	~~NNS~~
Lead (as Pb)	7439-97-1	c D	c D	c D	c D	c D	c D	c D	~~f D~~
Manganese (as Mn)	7439-96-5	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Mercury (as Hg)	7439-97-6	2.4 D	0.01 D	2.4 D	0.01 D	2.6 D	0.2 D	5.0 D	~~2.7 D~~
Methoxychlor	72-43-5	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Naphthalene	91-20-3	1100	210	~~3300~~ 3200	~~600~~ 580	~~3300~~ 3200	~~600~~ 580	NNS	~~NNS~~
Nickel (as Ni)	7440-02-0	c D	c D	c D	c D	c D	c D	c D	~~g D~~
Nitrate (as N)	14797-55-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Nitrite (as N)	14797-65-0	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Nitrate/Nitrite (as Total N)		NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Nitrobenzene	98-95-3	1300	850	1300	850	1300	850	NNS	~~NNS~~
o-Nitrophenol	88-75-5	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
p-Nitrophenol	100-02-7	4100	3000	4100	3000	4100	3000	NNS	~~NNS~~
N-nitrosodimeth-ylamine	62-75-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
N-nitrosodiphe-nylamine	86-30-6	2900	200	2900	200	2900	200	NNS	~~NNS~~
N-nitrosodi-n-propylamine	621-64-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Pentachlorophe-nol	87-86-5	c	c	c	c	c	c	c	~~h~~
Phenanthrene	85-01-8	30	6.3	30	6.3	54	6.3	NNS	~~NNS~~
Phenol	108-95-2	5100	730	7000	1000	7000	1000	180000	~~26000~~
Polychlorinated-biphenyls (PCBs)	1336-36-3	2.0	0.01	2.0	0.02	2.0	0.02	11	~~2.5~~
Pyrene	129-00-0	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Selenium (as Se)	7782-49-2	20 T	2.0 T	20 T	2.0 T	50 T	2.0 T	33 T	~~2.0 T~~
Silver (as Ag)	7440-22-4	c D	NNS	c D	NNS	c D	NNS	c D	~~NNS~~
Styrene	100-42-5	~~NNS~~ 5600	~~NNS~~ 370	~~NNS~~ 5600	~~NNS~~ 370	~~NNS~~ 5600	~~NNS~~ 370	NNS	~~NNS~~
Sulfides [n]		100	NNS	100	NNS	100	NNS	100	~~NNS~~
2,3,7,8-Tetra-chlorodibenzo-p-dioxin (2,3,7,8-TCDD)	1746-01-6	0.01	0.005	0.01	0.005	0.12	0.01	0.1	~~0.01 NNS~~
1,1,2,2-Tetra-chloroethane	79-34-5	4700	3200	4700	3200	4700	3200	NNS	~~NNS~~
Tetrachloroethyl-ene	127-18-4	2600	280	6500	680	6500	680	15000	~~1600~~
Thallium (as Tl)	7440-28-0	700 D	150 D	700 D	150 D	700 D	150 D	NNS	~~NNS~~
Toluene	108-88-3	8700	180	8700	180	8700	180	NNS	~~NNS~~
Toxaphene	8001-35-2	0.73	0.0002	0.73	0.02	0.73	0.02	11	~~1.5~~
1,2,4-Trichlo-robenzene	120-82-1	750	130	1700	300	NNS	NNS	NNS	~~NNS~~
1,1,1-Trichloro-ethane	71-55-6	2600	1600	2600	1600	2600	1600	NNS	~~NNS~~
1,1,2-Trichloro-ethane	79-00-5	18000	12000	18000	12000	18000	12000	NNS	~~NNS~~
Trichloroethyl-ene	79-01-6	20000	1300	20000	1300	20000	1300	NNS	~~NNS~~
2,4,6-Trichlo-rophenol	88-06-2	160	25	160	25	160	25	3000	~~460~~

2-(2,4,5-Trichlorophenoxy) propionic acid (2,4,5-TP)	93-72-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Trihalomethanes, Total		NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Uranium (as Ur)	7440-61-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Vinyl chloride	75-01-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Xylenes (Total)	1330-20-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS	~~NNS~~
Zinc (as Zn)	7440-66-6	c D	c D	c D	c D	c D	c D	c D	~~j D~~

Footnotes

a - The standard to protect this use is 7 million fibers (longer than 10 micrometers) per liter.
b - Values for ammonia are contained in separate tables located at the end of Appendix A.

~~c - Cadmium~~ ~~A&We acute standard: e$^{(1.128 [ln(Hardness)] - 3.828)}$~~
~~A&We chronic standard: e$^{(0.7852 [ln(Hardness)] - 3.490)}$~~
~~A&Ww acute standard: e$^{(1.128 [ln(Hardness)] - 2.0149)}$~~
~~A&Ww chronic standard: e$^{(0.7852 [ln(Hardness)] - 3.490)}$~~
~~A&Wedw acute standard: e$^{(1.128 [ln(Hardness)] - 2.0149)}$~~
~~A&Wedw chronic standard: e$^{(0.7852 [ln(Hardness)] - 3.490)}$~~
~~A&We acute standard: e$^{(1.128 [ln(Hardness)] - 0.9691)}$~~
~~A&We chronic standard: e$^{(0.7852 [ln(Hardness)] - 3.490)}$~~
~~(See Footnote 5)~~

~~d - Chromium III~~ ~~A&We acute standard: e$^{(0.8190 [ln(Hardness)] + 3.688)}$~~
~~A&We chronic standard: e$^{(0.8190 [ln(Hardness)] + 1.561)}$~~
~~A&Ww acute standard: e$^{(0.8190 [ln(Hardness)] + 3.688)}$~~
~~A&Ww chronic standard: e$^{(0.8190 [ln(Hardness)] + 1.561)}$~~
~~A&Wedw acute standard: e$^{(0.8190 [ln(Hardness)] + 4.9361)}$~~
~~A&Wedw chronic standard: e$^{(0.8190 [ln(Hardness)] + 1.561)}$~~
~~A&We acute standard: e$^{(0.8190 [ln(Hardness)] + 3.688)}$~~
~~A&We chronic standard: e$^{(0.8190 [ln(Hardness)] + 1.561)}$~~
~~(See Footnote 5)~~

~~e - Copper~~ ~~A&We acute standard: e$^{(0.9422 [ln(Hardness)] - 1.464)}$~~
~~A&We chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.465)}$~~
~~A&Ww acute standard: e$^{(0.9422 [ln(Hardness)] - 1.464)}$~~
~~A&Ww chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.465)}$~~
~~A&Wedw acute standard: e$^{(0.9422 [ln(Hardness)] - 1.464)}$~~
~~A&Wedw chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.465)}$~~
~~A&We acute standard: e$^{(0.9422 [ln(Hardness)] - 1.1514)}$~~
~~A&We chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.1448)}$~~
~~(See Footnote 5)~~

~~f - Lead~~ ~~A&We acute standard: e$^{(1.2730 [ln(Hardness)] - 1.460)}$~~
~~A&We chronic standard: e$^{(1.2730 [ln(Hardness)] - 4.705)}$~~
~~A&Ww acute standard: e$^{(1.2730 [ln(Hardness)] - 1.460)}$~~
~~A&Ww chronic standard: e$^{(1.2730 [ln(Hardness)] - 4.705)}$~~
~~A&Wedw acute standard: e$^{(1.2730 [ln(Hardness)] - 1.460)}$~~
~~A&Wedw chronic standard: e$^{(1.2730 [ln(Hardness)] - 4.705)}$~~
~~A&We acute standard: e$^{(1.2730 [ln(Hardness)] - 0.7131)}$~~
~~A&We chronic standard: e$^{(1.2730 [ln(Hardness)] - 3.9518)}$~~
~~(See Footnote 5)~~

~~g - Nickel~~ ~~A&We acute standard: e$^{(0.8460 [ln(Hardness)] + 3.3611)}$~~
~~A&We chronic standard: e$^{(0.8460 [ln(Hardness)] + 1.1644)}$~~
~~A&Ww acute standard: e$^{(0.8460 [ln(Hardness)] + 3.3611)}$~~
~~A&Ww chronic standard: e$^{(0.8460 [ln(Hardness)] + 1.1644)}$~~
~~A&Wedw acute standard: e$^{(0.8460 [ln(Hardness)] + 3.3611)}$~~
~~A&Wedw chronic standard: e(e$^{(0.8460 [ln(Hardness)] + 1.1644)}$~~
~~A&We acute standard: e$^{(0.8460 [ln(Hardness)] + 4.4389)}$~~
~~A&We chronic standard: e$^{(0.8460 [ln(Hardness)] + 2.2417)}$~~
~~(See Footnote 5)~~

~~h - Pentachlorophenol~~ ~~A&We acute standard: e$^{(1.005 (pH) - 4.830)}$~~
~~A&We chronic standard: e$^{(1.005 (pH) - 5.290)}$~~
~~A&Ww acute standard: e$^{(1.005 (pH) - 4.830)}$~~

~~A&Ww chronic standard: e$^{(1.005 (pH) - 5.290)}$~~
~~A&Wedw acute standard: e$^{(1.005 (pH) - 4.830)}$~~
~~A&Wedw chronic standard: e$^{(1.005 (pH) - 5.290)}$~~
~~A&We acute standard: e$^{(1.005 (pH) - 3.4306)}$~~
~~A&We chronic standard: e$^{(1.005 (pH) - 3.9006)}$~~
~~(See Footnote 6)~~

~~i - Silver~~ ~~A&Wc acute standard: e$^{(1.72 [ln(Hardness)] - 6.52)}$~~
~~A&Ww acute standard: e$^{(1.72 [ln(Hardness)] - 6.52)}$~~
~~A&Wedw acute standard: e$^{(1.72 [ln(Hardness)] - 6.52)}$~~
~~A&We acute standard: e$^{(1.72 [ln(Hardness)] - 6.52)}$~~
~~(See Footnote 5)~~

~~j - Zinc~~ ~~A&Wc acute standard: e$^{(0.8473 [ln(Hardness)] + 0.860)}$~~
~~A&Wc chronic standard: e$^{(0.8473 [ln(Hardness)] + 0.761)}$~~
~~A&Ww acute standard: e$^{(0.8473 [ln(Hardness)] + 0.860)}$~~
~~A&Ww chronic standard: e$^{(0.8473 [ln(Hardness)] + 0.761)}$~~
~~A&Wedw acute standard: e$^{(0.8473 [ln(Hardness)] + 0.860)}$~~
~~A&Wedw chronic standard: e$^{(0.8473 [ln(Hardness)] + 0.761)}$~~
~~A&We acute standard: e$^{(0.8473 [ln(Hardness)] + 3.1342)}$~~
~~A&We chronic standard: e$^{(0.8473 [ln(Hardness)] + 3.0484)}$~~
~~(See Footnote 5)~~

~~k - The standard to protect this use is 0.003 ug/l aldrin/dieldrin.~~

~~1 - Chemical Abstract System (CAS) number is a unique identification number given to each chemical.~~

~~2 - The numeric standards to protect this use shall not be exceeded.~~

~~3 - Determination of compliance with acute standards shall be as prescribed in R18-11-120.C.~~

~~4 - Determination of compliance with chronic standards shall be as prescribed in R18-11-120.C.~~

c - Cadmium

A&Wc acute standard: e$^{(1.128 [ln(Hardness)] - 3.6867)*(1.136672-ln(hardness)*0.041838)}$
A&Wc chronic standard: e$^{(0.7852 [ln(Hardness)] - 2.715)*(1.101672-ln(hardness)*0.041838)}$
A&Ww acute standard: e$^{(1.128 [ln(Hardness)] - 3.6867)*(1.136672-ln(hardness)*0.041838)}$
A&Ww chronic standard: e$^{(0.7852 [ln(Hardness)] - 2.715)*(1.101672-ln(hardness)*0.041838}$
A&Wedw acute standard: e$^{(1.128 [ln(Hardness)] - 3.6867)*(1.136672-ln(hardness)*0.041838)}$
A&Wedw chronic standard: e$^{(0.7852 [ln(Hardness)] - 2.715)*(1.101672-ln(hardness)*0.041838}$
A&We acute standard: e$^{(1.128 [ln(Hardness)] - 0.9691)*(1.136672-ln(hardness)* 0.041838}$
(See Footnote k)

d - Chromium III

A&Wc acute standard: e$^{(0.8190 [ln(Hardness)] + 3.7256)*(0.316)}$
A&Wc chronic standard: e$^{(0.8190 [ln(Hardness)] + 0.6848)*(0.86)}$
A&Ww acute standard: e $^{(0.8190 [ln(Hardness)] + 3.7256)*(0.316)}$
A&Ww chronic standard: e$^{(0.8190 [ln(Hardness)] + 0.6848)*(0.86)}$
A&Wedw acute standard: e $^{(0.8190 [ln(Hardness)] + 3.7256)*(0.316)}$
A&Wedw chronic standard: e $^{(0.8190 [ln(Hardness)] + 0.6848)*(0.86)}$
A&We acute standard: e$^{(0.8190 [ln(Hardness)] + 4.9361)*(0.316)}$
(See Footnote k)

e - Copper

A&Wc acute standard: e$^{(0.9422 [ln(Hardness)] - 1.7)*(0.96)}$
A&Wc chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.702)*(0.96)}$
A&Ww acute standard: e$^{(0.9422 [ln(Hardness)] - 1.7)*(0.96)}$
A&Ww chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.702)*(0.96)}$
A&Wedw acute standard: e$^{(0.9422 [ln(Hardness)] - 1.7)*(0.96)}$
A&Wedw chronic standard: e$^{(0.8545 [ln(Hardness)] - 1.702)*(0.96)}$
A&We acute standard: e$^{(0.9422 [ln(Hardness)] - 1.1514)*(0.96)}$
(See Footnote k)

f - Lead

A&Wc acute standard: e$^{(1.2730 [ln(Hardness)] - 1.460)*(1.46203-ln(hardness)*(0.145712)}$
A&Wc chronic standard: e$^{(1.2730 [ln(Hardness)] - 4.705)*(1.46203-ln(hardness)*(0.145712)}$
A&Ww acute standard: e$^{(1.2730 [ln(Hardness)] - 1.460)*(1.46203-ln(hardness)*(0.145712)}$

A&Ww chronic standard: $e^{(1.2730\ [\ln(\text{Hardness})] - 4.705)*(1.46203-\ln(\text{hardness})*(0.145712)}$
A&Wedw acute standard: $e^{(1.2730\ [\ln(\text{Hardness})] - 1.460)*(1.46203-\ln(\text{hardness})*(0.145712)}$
A&Wedw chronic standard: $e^{(1.2730\ [\ln(\text{Hardness})] - 4.705)*(1.46203-\ln(\text{hardness})*(0.145712)}$
A&We acute standard: $e^{(1.2730\ [\ln(\text{Hardness})] - 0.7131)*(1.46203-\ln(\text{hardness})*(0.145712)}$
(See Footnote k)

g - Nickel
A&Wc acute standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 2.255)*(0.998)}$
A&Wc chronic standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 0.0584)*(0.997)}$
A&Ww acute standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 2.255)*(0.998)}$
A&Ww chronic standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 0.0584)*(0.997)}$
A&Wedw acute standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 2.255)*(0.998)}$
A&Wedw chronic standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 0.0584)*(0.997)}$
A&We acute standard: $e^{(0.8460\ [\ln(\text{Hardness})] + 4.4389)*(0.998)}$
(See Footnote k)

h - Pentachlorophenol
A&Wc acute standard: $e^{(1.005\ (\text{pH}) - 4.830)}$
A&Wc chronic standard: $e^{(1.005\ (\text{pH}) - 5.290)}$
A&Ww acute standard: $e^{(1.005\ (\text{pH}) - 4.830)}$
A&Ww chronic standard: $e^{(1.005\ (\text{pH}) - 5.290)}$
A&Wedw acute standard: $e^{(1.005\ (\text{pH}) - 4.830)}$
A&Wedw chronic standard: $e^{(1.005\ (\text{pH}) - 5.290)}$
A&We acute standard: $e^{(1.005\ (\text{pH}) - 3.4306)}$
(See Footnote l)

i - Silver
A&Wc acute standard: $e^{(1.72\ [\ln(\text{Hardness})] - 6.52)*(0.85)}$
A&Ww acute standard: $e^{(1.72\ [\ln(\text{Hardness})] - 6.52)*(0.85)}$
A&Wedw acute standard: $e^{(1.72\ [\ln(\text{Hardness})] - 6.52)*(0.85)}$
A&We acute standard: $e^{(1.72\ [\ln(\text{Hardness})] - 6.52)*(0.85)}$
(See Footnote k)

j - Zinc
A&Wc acute standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 0.884)*(0.978)}$
A&Wc chronic standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 0.884)*(0.986)}$
A&Ww acute standard: $e^{(0.8473\ [\ln(\text{Hardness})] +0.532)*(0.978)}$
A&Ww chronic standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 0.433)*(0.986)}$
A&Wedw acute standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 0.532)*(0.978)}$
A&Wedw chronic standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 0.433)*(0.986)}$
A&We acute standard: $e^{(0.8473\ [\ln(\text{Hardness})] + 3.1342)*(0.978)}$
(See Footnote k)

~~5.~~k. Hardness, expressed as mg / L $CaCO_3$, is inserted into the equation where it says "Hardness." Hardness is determined according to the following criteria:
~~a.~~1. If the receiving water body has an A&Wc or A&Ww designated use, then hardness is based on the hardness of the receiving water body from a sample taken at the same time that the sample for the metal is taken, except that the hardness may not exceed 400 mg / L $CaCO_3$.
~~b.~~2. If the receiving water has an A&Wedw or A&We designated use, then the hardness is based on the hardness of the effluent from a sample taken at the same time that the sample for the metal is taken, except that the hardness may not exceed 400 mg / L $CaCO_3$.

~~6.~~l. The pH is inserted into the equation where it says "pH". pH is determined according to the following criteria:
~~a.~~1. If the receiving water has an A&Wc or A&Ww designated use, then pH is based on the pH of the receiving water body from a sample taken at the same time that the sample for pentachlorophenol is taken.
~~b.~~2. If the receiving water body has an A&Wedw or A&We designated use, then the pH is based on the pH of the

effluent from a sample taken at the same time that the sample for pentachlorophenol is taken.

m. The mathematical equations for the pH-dependent and hardness-dependent parameters represent the water quality standards. Criteria for the hardness-dependent and pH-dependent parameters have been calculated and are presented in separate tables at the end of Appendix A for the convenience of the user.

n. In lakes, the acute criteria for sulfide apply only to water samples taken from the epilimnion, or the upper layer of a lake or reservoir.

o. Bromoform, chloroform, chlorodibromomethane, and dichlorobromomethane are trihalomethanes regulated by the total trihalomethane numeric standard. The total trihalomethane standard is exceeded when the sum of these four compounds exceeds 100 µg / L.

µg / L- micrograms per liter
NNS - No numeric standard
D - Dissolved
T - Total recoverable
TTHM - indicates that the chemical is a trihalomethane. See Trihalomethanes, Total for DWS standard.

Acute Water Quality Standards for dissolved Cadmium
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	24.56	81	51.39	121	79.40	161	108.18	201	137.55	241	167.40	281	197.64	321	228.24	361	259.14
2	NA	42	25.21	82	52.08	122	80.11	162	108.90	202	138.29	242	168.15	282	198.40	322	229.01	362	259.91
3	NA	43	25.86	83	52.77	123	80.82	163	109.63	203	139.03	243	168.90	283	199.17	323	229.78	363	260.69
4	NA	44	26.51	84	53.46	124	81.53	164	110.36	204	139.77	244	169.65	284	199.93	324	230.54	364	261.46
5	NA	45	27.17	85	54.15	125	82.24	165	111.09	205	140.51	245	170.40	285	200.69	325	231.31	365	262.24
6	NA	46	27.82	86	54.84	126	82.96	166	111.82	206	141.25	246	171.16	286	201.45	326	232.08	366	263.02
7	NA	47	28.48	87	55.53	127	83.67	167	112.55	207	142.00	247	171.91	287	202.21	327	232.85	367	263.79
8	NA	48	29.14	88	56.22	128	84.38	168	113.28	208	142.74	248	172.66	288	202.97	328	233.62	368	264.57
9	NA	49	29.80	89	56.92	129	85.10	169	114.01	209	143.48	249	173.41	289	203.74	329	234.39	369	265.35
10	NA	50	30.46	90	57.61	130	85.81	170	114.74	210	144.22	250	174.17	290	204.50	330	235.16	370	266.13
11	NA	51	31.12	91	58.31	131	86.53	171	115.47	211	144.97	251	174.92	291	205.26	331	235.93	371	266.90
12	NA	52	31.78	92	59.00	132	87.24	172	116.20	212	145.71	252	175.68	292	206.02	332	236.71	372	267.68
13	NA	53	32.44	93	59.70	133	87.96	173	116.93	213	146.46	253	176.43	293	206.79	333	237.48	373	268.46
14	NA	54	33.11	94	60.39	134	88.68	174	117.66	214	147.20	254	177.18	294	207.55	334	238.25	374	269.24
15	NA	55	33.77	95	61.09	135	89.39	175	118.40	215	147.94	255	177.94	295	208.31	335	239.02	375	270.02
16	NA	56	34.44	96	61.79	136	90.11	176	119.13	216	148.69	256	178.69	296	209.08	336	239.79	376	270.79
17	NA	57	35.11	97	62.48	137	90.83	177	119.86	217	149.43	257	179.45	297	209.84	337	240.56	377	271.57
18	NA	58	35.78	98	63.18	138	91.55	178	120.59	218	150.18	258	180.21	298	210.61	338	241.33	378	272.35
19	NA	59	36.45	99	63.88	139	92.26	179	121.33	219	150.93	259	180.96	299	211.37	339	242.11	379	273.13
20	NA	60	37.12	100	64.58	140	92.98	180	122.06	220	151.67	260	181.72	300	212.13	340	242.88	380	273.91
21	NA	61	37.79	101	65.28	141	93.70	181	122.80	221	152.42	261	182.47	301	212.90	341	243.65	381	274.69
22	NA	62	38.46	102	65.98	142	94.42	182	123.53	222	153.16	262	183.23	302	213.66	342	244.42	382	275.47
23	NA	63	39.13	103	66.68	143	95.14	183	124.27	223	153.91	263	183.99	303	214.43	343	245.20	383	276.25
24	NA	64	39.81	104	67.38	144	95.86	184	125.00	224	154.66	264	184.74	304	215.20	344	245.97	384	277.03
25	14.35	65	40.48	105	68.09	145	96.58	185	125.74	225	155.40	265	185.50	305	215.96	345	246.74	385	277.81
26	14.98	66	41.16	106	68.79	146	97.31	186	126.47	226	156.15	266	186.26	306	216.73	346	247.51	386	278.59
27	15.60	67	41.84	107	69.49	147	98.03	187	127.21	227	156.90	267	187.01	307	217.49	347	248.29	387	279.37
28	16.23	68	42.51	108	70.20	148	98.75	188	127.95	228	157.65	268	187.77	308	218.26	348	249.06	388	280.15
29	16.86	69	43.19	109	70.90	149	99.47	189	128.68	229	158.40	269	188.53	309	219.03	349	249.84	389	280.93
30	17.49	70	43.87	110	71.61	150	100.20	190	129.42	230	159.14	270	189.29	310	219.79	350	250.61	390	281.71
31	18.13	71	44.55	111	72.31	151	100.92	191	130.16	231	159.89	271	190.05	311	220.56	351	251.38	391	282.49
32	18.76	72	45.23	112	73.02	152	101.64	192	130.89	232	160.64	272	190.81	312	221.33	352	252.16	392	283.27
33	19.40	73	45.91	113	73.72	153	102.37	193	131.63	233	161.39	273	191.56	313	222.09	353	252.93	393	284.05
34	20.04	74	46.60	114	74.43	154	103.09	194	132.37	234	162.14	274	192.32	314	222.86	354	253.71	394	284.83
35	20.68	75	47.28	115	75.14	155	103.82	195	133.11	235	162.89	275	193.08	315	223.63	355	254.48	395	285.61
36	21.32	76	47.96	116	75.85	156	104.54	196	133.85	236	163.64	276	193.84	316	224.40	356	255.26	396	286.40
37	21.97	77	48.65	117	76.56	157	105.27	197	134.59	237	164.39	277	194.60	317	225.16	357	256.03	397	287.18
38	22.61	78	49.33	118	77.27	158	106.00	198	135.33	238	165.14	278	195.36	318	225.93	358	256.81	398	287.96
39	23.26	79	50.02	119	77.97	159	106.72	199	136.07	239	165.89	279	196.12	319	226.70	359	257.58	399	288.74
40	23.91	80	50.71	120	78.68	160	107.45	200	136.81	240	166.64	280	196.88	320	227.47	360	258.36	400	289.52

Acute Water Quality Standards for dissolved Cadmium
"Aquatic and Wildlife coldwater, warmwater, edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	1.62	81	3.39	121	5.24	161	7.14	201	9.08	241	11.05	281	13.05	321	15.07	361	17.11
2	NA	42	1.66	82	3.44	122	5.29	162	7.19	202	9.13	242	11.10	282	13.10	322	15.12	362	17.16
3	NA	43	1.71	83	3.48	123	5.34	163	7.24	203	9.18	243	11.15	283	13.15	323	15.17	363	17.21
4	NA	44	1.75	84	3.53	124	5.38	164	7.29	204	9.23	244	11.20	284	13.20	324	15.22	364	17.27
5	NA	45	1.79	85	3.58	125	5.43	165	7.34	205	9.28	245	11.25	285	13.25	325	15.27	365	17.32
6	NA	46	1.84	86	3.62	126	5.48	166	7.38	206	9.33	246	11.30	286	13.30	326	15.33	366	17.37
7	NA	47	1.88	87	3.67	127	5.52	167	7.43	207	9.38	247	11.35	287	13.35	327	15.38	367	17.42
8	NA	48	1.92	88	3.71	128	5.57	168	7.48	208	9.43	248	11.40	288	13.40	328	15.43	368	17.47
9	NA	49	1.97	89	3.76	129	5.62	169	7.53	209	9.47	249	11.45	289	13.45	329	15.48	369	17.52
10	NA	50	2.01	90	3.80	130	5.67	170	7.58	210	9.52	250	11.50	290	13.50	330	15.53	370	17.57
11	NA	51	2.05	91	3.85	131	5.71	171	7.62	211	9.57	251	11.55	291	13.55	331	15.58	371	17.62
12	NA	52	2.10	92	3.90	132	5.76	172	7.67	212	9.62	252	11.60	292	13.60	332	15.63	372	17.68
13	NA	53	2.14	93	3.94	133	5.81	173	7.72	213	9.67	253	11.65	293	13.65	333	15.68	373	17.73
14	NA	54	2.19	94	3.99	134	5.86	174	7.77	214	9.72	254	11.70	294	13.71	334	15.73	374	17.78
15	NA	55	2.23	95	4.03	135	5.90	175	7.82	215	9.77	255	11.75	295	13.76	335	15.78	375	17.83
16	NA	56	2.27	96	4.08	136	5.95	176	7.87	216	9.82	256	11.80	296	13.81	336	15.83	376	17.88
17	NA	57	2.32	97	4.13	137	6.00	177	7.91	217	9.87	257	11.85	297	13.86	337	15.89	377	17.93
18	NA	58	2.36	98	4.17	138	6.05	178	7.96	218	9.92	258	11.90	298	13.91	338	15.94	378	17.98
19	NA	59	2.41	99	4.22	139	6.09	179	8.01	219	9.97	259	11.95	299	13.96	339	15.99	379	18.04
20	NA	60	2.45	100	4.26	140	6.14	180	8.06	220	10.02	260	12.00	300	14.01	340	16.04	380	18.09
21	NA	61	2.50	101	4.31	141	6.19	181	8.11	221	10.06	261	12.05	301	14.06	341	16.09	381	18.14
22	NA	62	2.54	102	4.36	142	6.24	182	8.16	222	10.11	262	12.10	302	14.11	342	16.14	382	18.19
23	NA	63	2.58	103	4.40	143	6.28	183	8.21	223	10.16	263	12.15	303	14.16	343	16.19	383	18.24
24	NA	64	2.63	104	4.45	144	6.33	184	8.25	224	10.21	264	12.20	304	14.21	344	16.24	384	18.29
25	0.95	65	2.67	105	4.50	145	6.38	185	8.30	225	10.26	265	12.25	305	14.26	345	16.29	385	18.34
26	0.99	66	2.72	106	4.54	146	6.43	186	8.35	226	10.31	266	12.30	306	14.31	346	16.34	386	18.40
27	1.03	67	2.76	107	4.59	147	6.47	187	8.40	227	10.36	267	12.35	307	14.36	347	16.40	387	18.45
28	1.07	68	2.81	108	4.64	148	6.52	188	8.45	228	10.41	268	12.40	308	14.41	348	16.45	388	18.50
29	1.11	69	2.85	109	4.68	149	6.57	189	8.50	229	10.46	269	12.45	309	14.46	349	16.50	389	18.55
30	1.16	70	2.90	110	4.73	150	6.62	190	8.55	230	10.51	270	12.50	310	14.51	350	16.55	390	18.60
31	1.20	71	2.94	111	4.77	151	6.66	191	8.59	231	10.56	271	12.55	311	14.56	351	16.60	391	18.65
32	1.24	72	2.99	112	4.82	152	6.71	192	8.64	232	10.61	272	12.60	312	14.61	352	16.65	392	18.71
33	1.28	73	3.03	113	4.87	153	6.76	193	8.69	233	10.66	273	12.65	313	14.67	353	16.70	393	18.76
34	1.32	74	3.08	114	4.91	154	6.81	194	8.74	234	10.71	274	12.70	314	14.72	354	16.75	394	18.81
35	1.37	75	3.12	115	4.96	155	6.86	195	8.79	235	10.76	275	12.75	315	14.77	355	16.80	395	18.86
36	1.41	76	3.17	116	5.01	156	6.90	196	8.84	236	10.81	276	12.80	316	14.82	356	16.86	396	18.91
37	1.45	77	3.21	117	5.06	157	6.95	197	8.89	237	10.86	277	12.85	317	14.87	357	16.91	397	18.96
38	1.49	78	3.26	118	5.10	158	7.00	198	8.94	238	10.90	278	12.90	318	14.92	358	16.96	398	19.01
39	1.54	79	3.30	119	5.15	159	7.05	199	8.98	239	10.95	279	12.95	319	14.97	359	17.01	399	19.07
40	1.58	80	3.35	120	5.20	160	7.10	200	9.03	240	11.00	280	13.00	320	15.02	360	17.06	400	19.12

Chronic Water Quality Standards for dissolved Cadmium
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	1.16	81	1.92	121	2.58	161	3.18	201	3.75	241	4.28	281	4.80	321	5.29	361	5.77
2	NA	42	1.18	82	1.93	122	2.59	162	3.20	202	3.76	242	4.30	282	4.81	322	5.30	362	5.78
3	NA	43	1.20	83	1.95	123	2.61	163	3.21	203	3.77	243	4.31	283	4.82	323	5.32	363	5.79
4	NA	44	1.22	84	1.97	124	2.62	164	3.23	204	3.79	244	4.32	284	4.84	324	5.33	364	5.81
5	NA	45	1.24	85	1.98	125	2.64	165	3.24	205	3.80	245	4.34	285	4.85	325	5.34	365	5.82
6	NA	46	1.26	86	2.00	126	2.65	166	3.25	206	3.82	246	4.35	286	4.86	326	5.35	366	5.83
7	NA	47	1.28	87	2.02	127	2.67	167	3.27	207	3.83	247	4.36	287	4.87	327	5.36	367	5.84
8	NA	48	1.30	88	2.04	128	2.69	168	3.28	208	3.84	248	4.38	288	4.89	328	5.38	368	5.85
9	NA	49	1.32	89	2.05	129	2.70	169	3.30	209	3.86	249	4.39	289	4.90	329	5.39	369	5.86
10	NA	50	1.34	90	2.07	130	2.72	170	3.31	210	3.87	250	4.40	290	4.91	330	5.40	370	5.88
11	NA	51	1.36	91	2.09	131	2.73	171	3.33	211	3.88	251	4.41	291	4.92	331	5.41	371	5.89
12	NA	52	1.38	92	2.10	132	2.75	172	3.34	212	3.90	252	4.43	292	4.94	332	5.42	372	5.90
13	NA	53	1.40	93	2.12	133	2.76	173	3.35	213	3.91	253	4.44	293	4.95	333	5.44	373	5.91
14	NA	54	1.42	94	2.14	134	2.78	174	3.37	214	3.92	254	4.45	294	4.96	334	5.45	374	5.92
15	NA	55	1.44	95	2.15	135	2.79	175	3.38	215	3.94	255	4.47	295	4.97	335	5.46	375	5.93
16	NA	56	1.46	96	2.17	136	2.81	176	3.40	216	3.95	256	4.48	296	4.98	336	5.47	376	5.95
17	NA	57	1.48	97	2.19	137	2.82	177	3.41	217	3.97	257	4.49	297	5.00	337	5.48	377	5.96
18	NA	58	1.50	98	2.20	138	2.84	178	3.43	218	3.98	258	4.50	298	5.01	338	5.50	378	5.97
19	NA	59	1.51	99	2.22	139	2.85	179	3.44	219	3.99	259	4.52	299	5.02	339	5.51	379	5.98
20	NA	60	1.53	100	2.24	140	2.87	180	3.45	220	4.01	260	4.53	300	5.03	340	5.52	380	5.99
21	NA	61	1.55	101	2.25	141	2.88	181	3.47	221	4.02	261	4.54	301	5.05	341	5.53	381	6.00
22	NA	62	1.57	102	2.27	142	2.90	182	3.48	222	4.03	262	4.56	302	5.06	342	5.54	382	6.02
23	NA	63	1.59	103	2.29	143	2.91	183	3.50	223	4.05	263	4.57	303	5.07	343	5.56	383	6.03
24	NA	64	1.61	104	2.30	144	2.93	184	3.51	224	4.06	264	4.58	304	5.08	344	5.57	384	6.04
25	0.80	65	1.63	105	2.32	145	2.94	185	3.53	225	4.07	265	4.59	305	5.10	345	5.58	385	6.05
26	0.83	66	1.65	106	2.34	146	2.96	186	3.54	226	4.09	266	4.61	306	5.11	346	5.59	386	6.06
27	0.85	67	1.66	107	2.35	147	2.97	187	3.55	227	4.10	267	4.62	307	5.12	347	5.60	387	6.07
28	0.87	68	1.68	108	2.37	148	2.99	188	3.57	228	4.11	268	4.63	308	5.13	348	5.62	388	6.08
29	0.89	69	1.70	109	2.39	149	3.00	189	3.58	229	4.13	269	4.65	309	5.15	349	5.63	389	6.10
30	0.92	70	1.72	110	2.40	150	3.02	190	3.60	230	4.14	270	4.66	310	5.16	350	5.64	390	6.11
31	0.94	71	1.74	111	2.42	151	3.03	191	3.61	231	4.15	271	4.67	311	5.17	351	5.65	391	6.12
32	0.96	72	1.76	112	2.43	152	3.05	192	3.62	232	4.17	272	4.68	312	5.18	352	5.66	392	6.13
33	0.98	73	1.77	113	2.45	153	3.06	193	3.64	233	4.18	273	4.70	313	5.19	353	5.68	393	6.14
34	1.01	74	1.79	114	2.47	154	3.08	194	3.65	234	4.19	274	4.71	314	5.21	354	5.69	394	6.15
35	1.03	75	1.81	115	2.48	155	3.09	195	3.66	235	4.21	275	4.72	315	5.22	355	5.70	395	6.17
36	1.05	76	1.83	116	2.50	156	3.11	196	3.68	236	4.22	276	4.73	316	5.23	356	5.71	396	6.18
37	1.07	77	1.84	117	2.51	157	3.12	197	3.69	237	4.23	277	4.75	317	5.24	357	5.72	397	6.19
38	1.09	78	1.86	118	2.53	158	3.14	198	3.71	238	4.24	278	4.76	318	5.26	358	5.73	398	6.20
39	1.11	79	1.88	119	2.54	159	3.15	199	3.72	239	4.26	279	4.77	319	5.27	359	5.75	399	6.21
40	1.14	80	1.90	120	2.56	160	3.17	200	3.73	240	4.27	280	4.78	320	5.28	360	5.76	400	6.22

Acute Water Quality Standards for dissolved Chromium III
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	921	81	1609	121	2235	161	2824	201	3386	241	3929	281	4456	321	4969	361	5470
2	NA	42	939	82	1625	122	2250	162	2838	202	3400	242	3942	282	4469	322	4981	362	5483
3	NA	43	958	83	1641	123	2265	163	2852	203	3414	243	3956	283	4481	323	4994	363	5495
4	NA	44	976	84	1657	124	2280	164	2867	204	3428	244	3969	284	4494	324	5007	364	5507
5	NA	45	994	85	1673	125	2295	165	2881	205	3441	245	3982	285	4507	325	5019	365	5520
6	NA	46	1012	86	1690	126	2310	166	2895	206	3455	246	3996	286	4520	326	5032	366	5532
7	NA	47	1030	87	1706	127	2325	167	2909	207	3469	247	4009	287	4533	327	5045	367	5545
8	NA	48	1048	88	1722	128	2340	168	2924	208	3483	248	4022	288	4546	328	5057	368	5557
9	NA	49	1066	89	1738	129	2355	169	2938	209	3496	249	4035	289	4559	329	5070	369	5569
10	NA	50	1084	90	1754	130	2370	170	2952	210	3510	250	4049	290	4572	330	5082	370	5582
11	NA	51	1101	91	1770	131	2385	171	2966	211	3524	251	4062	291	4585	331	5095	371	5594
12	NA	52	1119	92	1785	132	2400	172	2981	212	3537	252	4075	292	4598	332	5108	372	5606
13	NA	53	1137	93	1801	133	2415	173	2995	213	3551	253	4088	293	4611	333	5120	373	5619
14	NA	54	1154	94	1817	134	2429	174	3009	214	3565	254	4102	294	4624	334	5133	374	5631
15	NA	55	1172	95	1833	135	2444	175	3023	215	3578	255	4115	295	4637	335	5145	375	5643
16	NA	56	1189	96	1849	136	2459	176	3037	216	3592	256	4128	296	4649	336	5158	376	5656
17	NA	57	1206	97	1865	137	2474	177	3051	217	3606	257	4141	297	4662	337	5171	377	5668
18	NA	58	1224	98	1880	138	2489	178	3066	218	3619	258	4155	298	4675	338	5183	378	5680
19	NA	59	1241	99	1896	139	2503	179	3080	219	3633	259	4168	299	4688	339	5196	379	5693
20	NA	60	1258	100	1912	140	2518	180	3094	220	3646	260	4181	300	4701	340	5208	380	5705
21	NA	61	1275	101	1927	141	2533	181	3108	221	3660	261	4194	301	4714	341	5221	381	5717
22	NA	62	1292	102	1943	142	2548	182	3122	222	3673	262	4207	302	4726	342	5233	382	5730
23	NA	63	1309	103	1958	143	2562	183	3136	223	3687	263	4220	303	4739	343	5246	383	5742
24	NA	64	1326	104	1974	144	2577	184	3150	224	3701	264	4234	304	4752	344	5258	384	5754
25	614	65	1343	105	1990	145	2592	185	3164	225	3714	265	4247	305	4765	345	5271	385	5766
26	634	66	1360	106	2005	146	2606	186	3178	226	3728	266	4260	306	4778	346	5283	386	5779
27	654	67	1377	107	2021	147	2621	187	3192	227	3741	267	4273	307	4790	347	5296	387	5791
28	674	68	1394	108	2036	148	2635	188	3206	228	3755	268	4286	308	4803	348	5308	388	5803
29	694	69	1411	109	2051	149	2650	189	3220	229	3768	269	4299	309	4816	349	5321	389	5815
30	713	70	1427	110	2067	150	2665	190	3234	230	3781	270	4312	310	4829	350	5333	390	5828
31	733	71	1444	111	2082	151	2679	191	3248	231	3795	271	4325	311	4841	351	5346	391	5840
32	752	72	1461	112	2098	152	2694	192	3262	232	3808	272	4338	312	4854	352	5358	392	5852
33	771	73	1477	113	2113	153	2708	193	3276	233	3822	273	4351	313	4867	353	5371	393	5864
34	790	74	1494	114	2128	154	2723	194	3289	234	3835	274	4364	314	4880	354	5383	394	5877
35	809	75	1510	115	2143	155	2737	195	3303	235	3849	275	4377	315	4892	355	5396	395	5889
36	828	76	1527	116	2159	156	2752	196	3317	236	3862	276	4390	316	4905	356	5408	396	5901
37	847	77	1543	117	2174	157	2766	197	3331	237	3875	277	4404	317	4918	357	5421	397	5913
38	865	78	1560	118	2189	158	2780	198	3345	238	3889	278	4417	318	4931	358	5433	398	5925
39	884	79	1576	119	2204	159	2795	199	3359	239	3902	279	4430	319	4943	359	5445	399	5938
40	903	80	1592	120	2220	160	2809	200	3372	240	3916	280	4443	320	4956	360	5458	400	5950

Acute Water Quality Standards for dissolved Chromium III
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	275	81	479	121	666	161	842	201	1009	241	1171	281	1328	321	1481	361	1630
2	NA	42	280	82	484	122	671	162	846	202	1013	242	1175	282	1332	322	1485	362	1634
3	NA	43	285	83	489	123	675	163	850	203	1017	243	1179	283	1336	323	1488	363	1638
4	NA	44	291	84	494	124	680	164	854	204	1022	244	1183	284	1340	324	1492	364	1641
5	NA	45	296	85	499	125	684	165	859	205	1026	245	1187	285	1343	325	1496	365	1645
6	NA	46	302	86	504	126	688	166	863	206	1030	246	1191	286	1347	326	1500	366	1649
7	NA	47	307	87	508	127	693	167	867	207	1034	247	1195	287	1351	327	1504	367	1653
8	NA	48	312	88	513	128	697	168	871	208	1038	248	1199	288	1355	328	1507	368	1656
9	NA	49	318	89	518	129	702	169	876	209	1042	249	1203	289	1359	329	1511	369	1660
10	NA	50	323	90	523	130	706	170	880	210	1046	250	1207	290	1363	330	1515	370	1664
11	NA	51	328	91	527	131	711	171	884	211	1050	251	1211	291	1367	331	1519	371	1667
12	NA	52	334	92	532	132	715	172	888	212	1054	252	1215	292	1370	332	1522	372	1671
13	NA	53	339	93	537	133	720	173	893	213	1058	253	1219	293	1374	333	1526	373	1675
14	NA	54	344	94	542	134	724	174	897	214	1062	254	1223	294	1378	334	1530	374	1678
15	NA	55	349	95	546	135	729	175	901	215	1067	255	1226	295	1382	335	1534	375	1682
16	NA	56	354	96	551	136	733	176	905	216	1071	256	1230	296	1386	336	1537	376	1686
17	NA	57	360	97	556	137	737	177	909	217	1075	257	1234	297	1390	337	1541	377	1689
18	NA	58	365	98	560	138	742	178	914	218	1079	258	1238	298	1393	338	1545	378	1693
19	NA	59	370	99	565	139	746	179	918	219	1083	259	1242	299	1397	339	1549	379	1697
20	NA	60	375	100	570	140	751	180	922	220	1087	260	1246	300	1401	340	1552	380	1700
21	NA	61	380	101	574	141	755	181	926	221	1091	261	1250	301	1405	341	1556	381	1704
22	NA	62	385	102	579	142	759	182	930	222	1095	262	1254	302	1409	342	1560	382	1708
23	NA	63	390	103	584	143	764	183	935	223	1099	263	1258	303	1413	343	1564	383	1711
24	NA	64	395	104	588	144	768	184	939	224	1103	264	1262	304	1416	344	1567	384	1715
25	183	65	400	105	593	145	772	185	943	225	1107	265	1266	305	1420	345	1571	385	1719
26	189	66	405	106	598	146	777	186	947	226	1111	266	1270	306	1424	346	1575	386	1722
27	195	67	410	107	602	147	781	187	951	227	1115	267	1274	307	1428	347	1578	387	1726
28	201	68	415	108	607	148	785	188	955	228	1119	268	1277	308	1432	348	1582	388	1730
29	207	69	420	109	611	149	790	189	960	229	1123	269	1281	309	1435	349	1586	389	1733
30	213	70	425	110	616	150	794	190	964	230	1127	270	1285	310	1439	350	1590	390	1737
31	218	71	430	111	621	151	799	191	968	231	1131	271	1289	311	1443	351	1593	391	1741
32	224	72	435	112	625	152	803	192	972	232	1135	272	1293	312	1447	352	1597	392	1744
33	230	73	440	113	630	153	807	193	976	233	1139	273	1297	313	1451	353	1601	393	1748
34	235	74	445	114	634	154	811	194	980	234	1143	274	1301	314	1454	354	1604	394	1751
35	241	75	450	115	639	155	816	195	985	235	1147	275	1305	315	1458	355	1608	395	1755
36	247	76	455	116	643	156	820	196	989	236	1151	276	1309	316	1462	356	1612	396	1759
37	252	77	460	117	648	157	824	197	993	237	1155	277	1312	317	1466	357	1616	397	1762
38	258	78	465	118	652	158	829	198	997	238	1159	278	1316	318	1470	358	1619	398	1766
39	263	79	470	119	657	159	833	199	1001	239	1163	279	1320	319	1473	359	1623	399	1770
40	269	80	475	120	662	160	837	200	1005	240	1167	280	1324	320	1477	360	1627	400	1773

Chronic Water Quality Standards for dissolved Chromium III
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	35.71	81	62.37	121	86.64	161	109.47	201	131.29	241	152.33	281	172.74	321	192.63	361	212.08
2	NA	42	36.42	82	63.00	122	87.22	162	110.03	202	131.82	242	152.84	282	173.24	322	193.12	362	212.56
3	NA	43	37.13	83	63.63	123	87.81	163	110.58	203	132.36	243	153.36	283	173.75	323	193.62	363	213.04
4	NA	44	37.83	84	64.25	124	88.39	164	111.14	204	132.89	244	153.88	284	174.25	324	194.11	364	213.52
5	NA	45	38.54	85	64.88	125	88.98	165	111.69	205	133.42	245	154.39	285	174.75	325	194.60	365	214.00
6	NA	46	39.24	86	65.50	126	89.56	166	112.25	206	133.96	246	154.91	286	175.25	326	195.09	366	214.48
7	NA	47	39.93	87	66.13	127	90.14	167	112.80	207	134.49	247	155.43	287	175.76	327	195.58	367	214.96
8	NA	48	40.63	88	66.75	128	90.72	168	113.35	208	135.02	248	155.94	288	176.26	328	196.07	368	215.44
9	NA	49	41.32	89	67.37	129	91.30	169	113.90	209	135.55	249	156.46	289	176.76	329	196.56	369	215.92
10	NA	50	42.01	90	67.99	130	91.88	170	114.46	210	136.08	250	156.97	290	177.26	330	197.05	370	216.40
11	NA	51	42.70	91	68.61	131	92.46	171	115.01	211	136.61	251	157.48	291	177.76	331	197.53	371	216.88
12	NA	52	43.38	92	69.22	132	93.04	172	115.56	212	137.14	252	158.00	292	178.26	332	198.02	372	217.36
13	NA	53	44.06	93	69.84	133	93.61	173	116.11	213	137.67	253	158.51	293	178.76	333	198.51	373	217.84
14	NA	54	44.74	94	70.45	134	94.19	174	116.66	214	138.20	254	159.02	294	179.26	334	199.00	374	218.32
15	NA	55	45.42	95	71.07	135	94.76	175	117.21	215	138.73	255	159.54	295	179.76	335	199.49	375	218.79
16	NA	56	46.10	96	71.68	136	95.34	176	117.75	216	139.26	256	160.05	296	180.26	336	199.97	376	219.27
17	NA	57	46.77	97	72.29	137	95.91	177	118.30	217	139.79	257	160.56	297	180.76	337	200.46	377	219.75
18	NA	58	47.44	98	72.90	138	96.49	178	118.85	218	140.31	258	161.07	298	181.25	338	200.95	378	220.23
19	NA	59	48.11	99	73.51	139	97.06	179	119.40	219	140.84	259	161.58	299	181.75	339	201.44	379	220.70
20	NA	60	48.78	100	74.11	140	97.63	180	119.94	220	141.37	260	162.09	300	182.25	340	201.92	380	221.18
21	NA	61	49.44	101	74.72	141	98.20	181	120.49	221	141.89	261	162.60	301	182.75	341	202.41	381	221.66
22	NA	62	50.10	102	75.33	142	98.77	182	121.03	222	142.42	262	163.11	302	183.24	342	202.89	382	222.13
23	NA	63	50.76	103	75.93	143	99.34	183	121.58	223	142.94	263	163.62	303	183.74	343	203.38	383	222.61
24	NA	64	51.42	104	76.53	144	99.91	184	122.12	224	143.47	264	164.13	304	184.24	344	203.87	384	223.09
25	23.81	65	52.08	105	77.14	145	100.48	185	122.66	225	143.99	265	164.64	305	184.73	345	204.35	385	223.56
26	24.59	66	52.74	106	77.74	146	101.04	186	123.21	226	144.52	266	165.15	306	185.23	346	204.84	386	224.04
27	25.36	67	53.39	107	78.34	147	101.61	187	123.75	227	145.04	267	165.66	307	185.72	347	205.32	387	224.51
28	26.13	68	54.04	108	78.94	148	102.18	188	124.29	228	145.56	268	166.17	308	186.22	348	205.81	388	224.99
29	26.89	69	54.69	109	79.53	149	102.74	189	124.83	229	146.09	269	166.67	309	186.72	349	206.29	389	225.46
30	27.65	70	55.34	110	80.13	150	103.31	190	125.37	230	146.61	270	167.18	310	187.21	350	206.77	390	225.94
31	28.40	71	55.99	111	80.73	151	103.87	191	125.91	231	147.13	271	167.69	311	187.70	351	207.26	391	226.41
32	29.15	72	56.63	112	81.32	152	104.43	192	126.45	232	147.65	272	168.20	312	188.20	352	207.74	392	226.88
33	29.89	73	57.27	113	81.92	153	104.99	193	126.99	233	148.17	273	168.70	313	188.69	353	208.22	393	227.36
34	30.63	74	57.92	114	82.51	154	105.56	194	127.53	234	148.69	274	169.21	314	189.19	354	208.71	394	227.83
35	31.37	75	58.56	115	83.10	155	106.12	195	128.07	235	149.21	275	169.71	315	189.68	355	209.19	395	228.31
36	32.10	76	59.20	116	83.69	156	106.68	196	128.61	236	149.73	276	170.22	316	190.17	356	209.67	396	228.78
37	32.83	77	59.83	117	84.28	157	107.24	197	129.14	237	150.25	277	170.72	317	190.66	357	210.15	397	229.25
38	33.55	78	60.47	118	84.87	158	107.80	198	129.68	238	150.77	278	171.23	318	191.16	358	210.64	398	229.72
39	34.28	79	61.10	119	85.46	159	108.35	199	130.22	239	151.29	279	171.73	319	191.65	359	211.12	399	230.20
40	34.99	80	61.74	120	86.05	160	108.91	200	130.75	240	151.81	280	172.24	320	192.14	360	211.60	400	230.67

Chronic Water Quality Standards for dissolved Copper
"Aquatic and Wildlife coldwater, warmwater and edw "

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	4.18	81	7.48	121	10.54	161	13.45	201	16.26	241	18.99	281	21.65	321	24.26	361	26.82
2	NA	42	4.27	82	7.56	122	10.61	162	13.52	202	16.33	242	19.06	282	21.72	322	24.33	362	26.89
3	NA	43	4.35	83	7.64	123	10.69	163	13.60	203	16.40	243	19.13	283	21.78	323	24.39	363	26.95
4	NA	44	4.44	84	7.72	124	10.76	164	13.67	204	16.47	244	19.19	284	21.85	324	24.45	364	27.01
5	NA	45	4.53	85	7.79	125	10.84	165	13.74	205	16.54	245	19.26	285	21.92	325	24.52	365	27.08
6	NA	46	4.61	86	7.87	126	10.91	166	13.81	206	16.61	246	19.33	286	21.98	326	24.58	366	27.14
7	NA	47	4.70	87	7.95	127	10.99	167	13.88	207	16.68	247	19.39	287	22.05	327	24.65	367	27.20
8	NA	48	4.78	88	8.03	128	11.06	168	13.95	208	16.75	248	19.46	288	22.11	328	24.71	368	27.27
9	NA	49	4.87	89	8.11	129	11.13	169	14.02	209	16.81	249	19.53	289	22.18	329	24.78	369	27.33
10	NA	50	4.95	90	8.18	130	11.21	170	14.09	210	16.88	250	19.59	290	22.24	330	24.84	370	27.39
11	NA	51	5.04	91	8.26	131	11.28	171	14.16	211	16.95	251	19.66	291	22.31	331	24.91	371	27.46
12	NA	52	5.12	92	8.34	132	11.35	172	14.24	212	17.02	252	19.73	292	22.38	332	24.97	372	27.52
13	NA	53	5.21	93	8.42	133	11.43	173	14.31	213	17.09	253	19.80	293	22.44	333	25.03	373	27.58
14	NA	54	5.29	94	8.49	134	11.50	174	14.38	214	17.16	254	19.86	294	22.51	334	25.10	374	27.65
15	NA	55	5.37	95	8.57	135	11.57	175	14.45	215	17.23	255	19.93	295	22.57	335	25.16	375	27.71
16	NA	56	5.46	96	8.65	136	11.65	176	14.52	216	17.29	256	20.00	296	22.64	336	25.23	376	27.77
17	NA	57	5.54	97	8.73	137	11.72	177	14.59	217	17.36	257	20.06	297	22.70	337	25.29	377	27.83
18	NA	58	5.62	98	8.80	138	11.79	178	14.66	218	17.43	258	20.13	298	22.77	338	25.35	378	27.90
19	NA	59	5.71	99	8.88	139	11.87	179	14.73	219	17.50	259	20.20	299	22.83	339	25.42	379	27.96
20	NA	60	5.79	100	8.96	140	11.94	180	14.80	220	17.57	260	20.26	300	22.90	340	25.48	380	28.02
21	NA	61	5.87	101	9.03	141	12.01	181	14.87	221	17.64	261	20.33	301	22.96	341	25.55	381	28.09
22	NA	62	5.95	102	9.11	142	12.08	182	14.94	222	17.70	262	20.40	302	23.03	342	25.61	382	28.15
23	NA	63	6.03	103	9.18	143	12.16	183	15.01	223	17.77	263	20.46	303	23.09	343	25.68	383	28.21
24	NA	64	6.12	104	9.26	144	12.23	184	15.08	224	17.84	264	20.53	304	23.16	344	25.74	384	28.28
25	2.74	65	6.20	105	9.34	145	12.30	185	15.15	225	17.91	265	20.60	305	23.22	345	25.80	385	28.34
26	2.83	66	6.28	106	9.41	146	12.37	186	15.22	226	17.98	266	20.66	306	23.29	346	25.87	386	28.40
27	2.93	67	6.36	107	9.49	147	12.45	187	15.29	227	18.04	267	20.73	307	23.35	347	25.93	387	28.46
28	3.02	68	6.44	108	9.56	148	12.52	188	15.36	228	18.11	268	20.79	308	23.42	348	25.99	388	28.53
29	3.11	69	6.52	109	9.64	149	12.59	189	15.43	229	18.18	269	20.86	309	23.48	349	26.06	389	28.59
30	3.20	70	6.60	110	9.72	150	12.66	190	15.50	230	18.25	270	20.93	310	23.55	350	26.12	390	28.65
31	3.29	71	6.68	111	9.79	151	12.74	191	15.57	231	18.32	271	20.99	311	23.61	351	26.19	391	28.72
32	3.38	72	6.76	112	9.87	152	12.81	192	15.64	232	18.38	272	21.06	312	23.68	352	26.25	392	28.78
33	3.47	73	6.84	113	9.94	153	12.88	193	15.71	233	18.45	273	21.13	313	23.74	353	26.31	393	28.84
34	3.56	74	6.92	114	10.02	154	12.95	194	15.78	234	18.52	274	21.19	314	23.81	354	26.38	394	28.90
35	3.65	75	7.00	115	10.09	155	13.02	195	15.85	235	18.59	275	21.26	315	23.87	355	26.44	395	28.97
36	3.74	76	7.08	116	10.17	156	13.10	196	15.92	236	18.65	276	21.32	316	23.94	356	26.50	396	29.03
37	3.83	77	7.16	117	10.24	157	13.17	197	15.99	237	18.72	277	21.39	317	24.00	357	26.57	397	29.09
38	3.92	78	7.24	118	10.32	158	13.24	198	16.05	238	18.79	278	21.46	318	24.07	358	26.63	398	29.15
39	4.01	79	7.32	119	10.39	159	13.31	199	16.12	239	18.86	279	21.52	319	24.13	359	26.70	399	29.22
40	4.09	80	7.40	120	10.47	160	13.38	200	16.19	240	18.92	280	21.59	320	24.20	360	26.76	400	29.28

Acute Water Quality Standards for dissolved Copper
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	10.04	81	19.07	121	27.84	161	36.43	201	44.91	241	53.28	281	61.57	321	69.80	361	77.97
2	NA	42	10.27	82	19.29	122	28.05	162	36.65	202	45.12	242	53.49	282	61.78	322	70.00	362	78.17
3	NA	43	10.50	83	19.52	123	28.27	163	36.86	203	45.33	243	53.70	283	61.99	323	70.21	363	78.37
4	NA	44	10.73	84	19.74	124	28.49	164	37.07	204	45.54	244	53.90	284	62.19	324	70.41	364	78.58
5	NA	45	10.96	85	19.96	125	28.70	165	37.29	205	45.75	245	54.11	285	62.40	325	70.62	365	78.78
6	NA	46	11.19	86	20.18	126	28.92	166	37.50	206	45.96	246	54.32	286	62.61	326	70.82	366	78.98
7	NA	47	11.42	87	20.40	127	29.14	167	37.71	207	46.17	247	54.53	287	62.81	327	71.03	367	79.19
8	NA	48	11.65	88	20.62	128	29.35	168	37.92	208	46.38	248	54.74	288	63.02	328	71.23	368	79.39
9	NA	49	11.88	89	20.84	129	29.57	169	38.14	209	46.59	249	54.94	289	63.22	329	71.44	369	79.59
10	NA	50	12.11	90	21.06	130	29.78	170	38.35	210	46.80	250	55.15	290	63.43	330	71.64	370	79.80
11	NA	51	12.33	91	21.28	131	30.00	171	38.56	211	47.01	251	55.36	291	63.64	331	71.85	371	80.00
12	NA	52	12.56	92	21.50	132	30.22	172	38.77	212	47.22	252	55.57	292	63.84	332	72.05	372	80.20
13	NA	53	12.79	93	21.72	133	30.43	173	38.99	213	47.43	253	55.78	293	64.05	333	72.26	373	80.41
14	NA	54	13.02	94	21.94	134	30.65	174	39.20	214	47.64	254	55.98	294	64.25	334	72.46	374	80.61
15	NA	55	13.24	95	22.16	135	30.86	175	39.41	215	47.85	255	56.19	295	64.46	335	72.66	375	80.81
16	NA	56	13.47	96	22.38	136	31.08	176	39.62	216	48.06	256	56.40	296	64.67	336	72.87	376	81.02
17	NA	57	13.70	97	22.60	137	31.29	177	39.84	217	48.27	257	56.61	297	64.87	337	73.07	377	81.22
18	NA	58	13.92	98	22.82	138	31.51	178	40.05	218	48.48	258	56.81	298	65.08	338	73.28	378	81.42
19	NA	59	14.15	99	23.04	139	31.72	179	40.26	219	48.68	259	57.02	299	65.28	339	73.48	379	81.62
20	NA	60	14.37	100	23.26	140	31.94	180	40.47	220	48.89	260	57.23	300	65.49	340	73.69	380	81.83
21	NA	61	14.60	101	23.48	141	32.15	181	40.68	221	49.10	261	57.44	301	65.69	341	73.89	381	82.03
22	NA	62	14.83	102	23.70	142	32.37	182	40.89	222	49.31	262	57.64	302	65.90	342	74.09	382	82.23
23	NA	63	15.05	103	23.92	143	32.58	183	41.11	223	49.52	263	57.85	303	66.11	343	74.30	383	82.44
24	NA	64	15.28	104	24.14	144	32.80	184	41.32	224	49.73	264	58.06	304	66.31	344	74.50	384	82.64
25	6.30	65	15.50	105	24.36	145	33.01	185	41.53	225	49.94	265	58.26	305	66.52	345	74.71	385	82.84
26	6.54	66	15.73	106	24.57	146	33.23	186	41.74	226	50.15	266	58.47	306	66.72	346	74.91	386	83.04
27	6.77	67	15.95	107	24.79	147	33.44	187	41.95	227	50.36	267	58.68	307	66.93	347	75.11	387	83.25
28	7.01	68	16.17	108	25.01	148	33.65	188	42.16	228	50.57	268	58.89	308	67.13	348	75.32	388	83.45
29	7.25	69	16.40	109	25.23	149	33.87	189	42.37	229	50.78	269	59.09	309	67.34	349	75.52	389	83.65
30	7.48	70	16.62	110	25.45	150	34.08	190	42.59	230	50.99	270	59.30	310	67.54	350	75.73	390	83.85
31	7.72	71	16.85	111	25.66	151	34.30	191	42.80	231	51.19	271	59.51	311	67.75	351	75.93	391	84.06
32	7.95	72	17.07	112	25.88	152	34.51	192	43.01	232	51.40	272	59.71	312	67.95	352	76.13	392	84.26
33	8.18	73	17.29	113	26.10	153	34.72	193	43.22	233	51.61	273	59.92	313	68.16	353	76.34	393	84.46
34	8.42	74	17.52	114	26.32	154	34.94	194	43.43	234	51.82	274	60.13	314	68.36	354	76.54	394	84.66
35	8.65	75	17.74	115	26.53	155	35.15	195	43.64	235	52.03	275	60.33	315	68.57	355	76.74	395	84.87
36	8.88	76	17.96	116	26.75	156	35.37	196	43.85	236	52.24	276	60.54	316	68.77	356	76.95	396	85.07
37	9.12	77	18.18	117	26.97	157	35.58	197	44.06	237	52.45	277	60.75	317	68.98	357	77.15	397	85.27
38	9.35	78	18.41	118	27.19	158	35.79	198	44.27	238	52.65	278	60.95	318	69.18	358	77.36	398	85.47
39	9.58	79	18.63	119	27.40	159	36.01	199	44.48	239	52.86	279	61.16	319	69.39	359	77.56	399	85.68
40	9.81	80	18.85	120	27.62	160	36.22	200	44.69	240	53.07	280	61.37	320	69.59	360	77.76	400	85.88

Acute Water Quality Standards for dissolved Copper
"Aquatic and Wildlife coldwater, warmwater and edw "

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	5.80	81	11.02	121	16.08	161	21.05	201	25.94	241	30.78	281	35.57	321	40.33	361	45.05
2	NA	42	5.93	82	11.15	122	16.21	162	21.17	202	26.07	242	30.90	282	35.69	322	40.45	362	45.16
3	NA	43	6.07	83	11.28	123	16.33	163	21.30	203	26.19	243	31.02	283	35.81	323	40.56	363	45.28
4	NA	44	6.20	84	11.40	124	16.46	164	21.42	204	26.31	244	31.14	284	35.93	324	40.68	364	45.40
5	NA	45	6.33	85	11.53	125	16.58	165	21.54	205	26.43	245	31.26	285	36.05	325	40.80	365	45.52
6	NA	46	6.47	86	11.66	126	16.71	166	21.66	206	26.55	246	31.38	286	36.17	326	40.92	366	45.63
7	NA	47	6.60	87	11.79	127	16.83	167	21.79	207	26.67	247	31.50	287	36.29	327	41.04	367	45.75
8	NA	48	6.73	88	11.91	128	16.96	168	21.91	208	26.79	248	31.62	288	36.41	328	41.16	368	45.87
9	NA	49	6.86	89	12.04	129	17.08	169	22.03	209	26.92	249	31.74	289	36.53	329	41.27	369	45.99
10	NA	50	6.99	90	12.17	130	17.21	170	22.16	210	27.04	250	31.86	290	36.65	330	41.39	370	46.10
11	NA	51	7.13	91	12.30	131	17.33	171	22.28	211	27.16	251	31.98	291	36.77	331	41.51	371	46.22
12	NA	52	7.26	92	12.42	132	17.46	172	22.40	212	27.28	252	32.10	292	36.89	332	41.63	372	46.34
13	NA	53	7.39	93	12.55	133	17.58	173	22.52	213	27.40	253	32.22	293	37.00	333	41.75	373	46.46
14	NA	54	7.52	94	12.68	134	17.71	174	22.65	214	27.52	254	32.34	294	37.12	334	41.86	374	46.57
15	NA	55	7.65	95	12.81	135	17.83	175	22.77	215	27.64	255	32.46	295	37.24	335	41.98	375	46.69
16	NA	56	7.78	96	12.93	136	17.96	176	22.89	216	27.76	256	32.58	296	37.36	336	42.10	376	46.81
17	NA	57	7.91	97	13.06	137	18.08	177	23.02	217	27.89	257	32.70	297	37.48	337	42.22	377	46.92
18	NA	58	8.04	98	13.19	138	18.20	178	23.14	218	28.01	258	32.82	298	37.60	338	42.34	378	47.04
19	NA	59	8.17	99	13.31	139	18.33	179	23.26	219	28.13	259	32.94	299	37.72	339	42.45	379	47.16
20	NA	60	8.31	100	13.44	140	18.45	180	23.38	220	28.25	260	33.06	300	37.84	340	42.57	380	47.28
21	NA	61	8.44	101	13.57	141	18.58	181	23.50	221	28.37	261	33.18	301	37.96	341	42.69	381	47.39
22	NA	62	8.57	102	13.69	142	18.70	182	23.63	222	28.49	262	33.30	302	38.07	342	42.81	382	47.51
23	NA	63	8.70	103	13.82	143	18.82	183	23.75	223	28.61	263	33.42	303	38.19	343	42.93	383	47.63
24	NA	64	8.83	104	13.95	144	18.95	184	23.87	224	28.73	264	33.54	304	38.31	344	43.04	384	47.74
25	3.64	65	8.96	105	14.07	145	19.07	185	23.99	225	28.85	265	33.66	305	38.43	345	43.16	385	47.86
26	3.78	66	9.09	106	14.20	146	19.20	186	24.12	226	28.97	266	33.78	306	38.55	346	43.28	386	47.98
27	3.91	67	9.22	107	14.32	147	19.32	187	24.24	227	29.09	267	33.90	307	38.67	347	43.40	387	48.10
28	4.05	68	9.34	108	14.45	148	19.44	188	24.36	228	29.22	268	34.02	308	38.79	348	43.52	388	48.21
29	4.19	69	9.47	109	14.58	149	19.57	189	24.48	229	29.34	269	34.14	309	38.91	349	43.63	389	48.33
30	4.32	70	9.60	110	14.70	150	19.69	190	24.60	230	29.46	270	34.26	310	39.02	350	43.75	390	48.45
31	4.46	71	9.73	111	14.83	151	19.82	191	24.73	231	29.58	271	34.38	311	39.14	351	43.87	391	48.56
32	4.59	72	9.86	112	14.95	152	19.94	192	24.85	232	29.70	272	34.50	312	39.26	352	43.99	392	48.68
33	4.73	73	9.99	113	15.08	153	20.06	193	24.97	233	29.82	273	34.62	313	39.38	353	44.10	393	48.80
34	4.86	74	10.12	114	15.20	154	20.19	194	25.09	234	29.94	274	34.74	314	39.50	354	44.22	394	48.92
35	5.00	75	10.25	115	15.33	155	20.31	195	25.21	235	30.06	275	34.86	315	39.62	355	44.34	395	49.03
36	5.13	76	10.38	116	15.46	156	20.43	196	25.34	236	30.18	276	34.98	316	39.74	356	44.46	396	49.15
37	5.27	77	10.51	117	15.58	157	20.56	197	25.46	237	30.30	277	35.10	317	39.85	357	44.58	397	49.27
38	5.40	78	10.63	118	15.71	158	20.68	198	25.58	238	30.42	278	35.22	318	39.97	358	44.69	398	49.38
39	5.53	79	10.76	119	15.83	159	20.80	199	25.70	239	30.54	279	35.34	319	40.09	359	44.81	399	49.50
40	5.67	80	10.89	120	15.96	160	20.93	200	25.82	240	30.66	280	35.46	320	40.21	360	44.93	400	49.62

Acute Water Quality Standards for dissolved Nickel
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	1956	81	3479	121	4886	161	6221	201	7506	241	8752	281	9966	321	11154	361	12319
2	NA	42	1996	82	3516	122	4920	162	6254	202	7538	242	8783	282	9996	322	11183	362	12348
3	NA	43	2036	83	3552	123	4954	163	6287	203	7569	243	8813	283	10026	323	11213	363	12377
4	NA	44	2076	84	3588	124	4988	164	6319	204	7601	244	8844	284	10056	324	11242	364	12405
5	NA	45	2116	85	3624	125	5022	165	6352	205	7632	245	8875	285	10086	325	11271	365	12434
6	NA	46	2156	86	3660	126	5056	166	6385	206	7664	246	8905	286	10116	326	11301	366	12463
7	NA	47	2195	87	3696	127	5090	167	6417	207	7695	247	8936	287	10146	327	11330	367	12492
8	NA	48	2235	88	3732	128	5124	168	6450	208	7727	248	8967	288	10176	328	11359	368	12521
9	NA	49	2274	89	3768	129	5158	169	6482	209	7758	249	8997	289	10206	329	11389	369	12549
10	NA	50	2313	90	3804	130	5192	170	6514	210	7790	250	9028	290	10235	330	11418	370	12578
11	NA	51	2352	91	3839	131	5226	171	6547	211	7821	251	9058	291	10265	331	11447	371	12607
12	NA	52	2391	92	3875	132	5259	172	6579	212	7852	252	9089	292	10295	332	11476	372	12636
13	NA	53	2430	93	3911	133	5293	173	6612	213	7884	253	9119	293	10325	333	11506	373	12664
14	NA	54	2469	94	3946	134	5327	174	6644	214	7915	254	9150	294	10355	334	11535	374	12693
15	NA	55	2508	95	3982	135	5360	175	6676	215	7946	255	9180	295	10385	335	11564	375	12722
16	NA	56	2546	96	4017	136	5394	176	6708	216	7978	256	9211	296	10414	336	11593	376	12751
17	NA	57	2585	97	4053	137	5427	177	6741	217	8009	257	9241	297	10444	337	11622	377	12779
18	NA	58	2623	98	4088	138	5461	178	6773	218	8040	258	9272	298	10474	338	11652	378	12808
19	NA	59	2661	99	4123	139	5494	179	6805	219	8071	259	9302	299	10504	339	11681	379	12837
20	NA	60	2699	100	4158	140	5528	180	6837	220	8102	260	9332	300	10533	340	11710	380	12865
21	NA	61	2737	101	4193	141	5561	181	6869	221	8133	261	9363	301	10563	341	11739	381	12894
22	NA	62	2775	102	4229	142	5594	182	6901	222	8165	262	9393	302	10593	342	11768	382	12922
23	NA	63	2813	103	4264	143	5628	183	6934	223	8196	263	9423	303	10622	343	11797	383	12951
24	NA	64	2851	104	4299	144	5661	184	6966	224	8227	264	9454	304	10652	344	11826	384	12980
25	1287	65	2888	105	4334	145	5694	185	6998	225	8258	265	9484	305	10682	345	11855	385	13008
26	1330	66	2926	106	4368	146	5727	186	7030	226	8289	266	9514	306	10711	346	11884	386	13037
27	1374	67	2963	107	4403	147	5761	187	7062	227	8320	267	9544	307	10741	347	11913	387	13065
28	1416	68	3001	108	4438	148	5794	188	7093	228	8351	268	9575	308	10770	348	11943	388	13094
29	1459	69	3038	109	4473	149	5827	189	7125	229	8382	269	9605	309	10800	349	11972	389	13123
30	1502	70	3075	110	4508	150	5860	190	7157	230	8413	270	9635	310	10830	350	12001	390	13151
31	1544	71	3112	111	4542	151	5893	191	7189	231	8444	271	9665	311	10859	351	12030	391	13180
32	1586	72	3149	112	4577	152	5926	192	7221	232	8475	272	9695	312	10889	352	12059	392	13208
33	1628	73	3186	113	4611	153	5959	193	7253	233	8506	273	9726	313	10918	353	12088	393	13237
34	1669	74	3223	114	4646	154	5992	194	7285	234	8536	274	9756	314	10948	354	12116	394	13265
35	1711	75	3260	115	4680	155	6025	195	7316	235	8567	275	9786	315	10977	355	12145	395	13294
36	1752	76	3297	116	4715	156	6058	196	7348	236	8598	276	9816	316	11007	356	12174	396	13322
37	1793	77	3333	117	4749	157	6090	197	7380	237	8629	277	9846	317	11036	357	12203	397	13350
38	1834	78	3370	118	4783	158	6123	198	7411	238	8660	278	9876	318	11066	358	12232	398	13379
39	1875	79	3407	119	4818	159	6156	199	7443	239	8691	279	9906	319	11095	359	12261	399	13407
40	1915	80	3443	120	4852	160	6189	200	7475	240	8721	280	9936	320	11124	360	12290	400	13436

Acute Water Quality Standards for dissolved Lead
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	51.00	81	108.27	121	167.63	161	227.98	201	288.85	241	349.96	281	411.15	321	472.30	361	533.35
2	NA	42	52.39	82	109.74	122	169.13	162	229.50	202	290.37	242	351.49	282	412.68	322	473.83	362	534.87
3	NA	43	53.78	83	111.21	123	170.63	163	231.01	203	291.90	243	353.02	283	414.21	323	475.36	363	536.40
4	NA	44	55.18	84	112.67	124	172.13	164	232.53	204	293.42	244	354.54	284	415.73	324	476.89	364	537.92
5	NA	45	56.57	85	114.14	125	173.63	165	234.05	205	294.95	245	356.07	285	417.26	325	478.41	365	539.45
6	NA	46	57.97	86	115.61	126	175.13	166	235.57	206	296.48	246	357.60	286	418.79	326	479.94	366	540.97
7	NA	47	59.38	87	117.08	127	176.63	167	237.08	207	298.00	247	359.13	287	420.32	327	481.47	367	542.49
8	NA	48	60.78	88	118.55	128	178.13	168	238.60	208	299.53	248	360.66	288	421.85	328	483.00	368	544.02
9	NA	49	62.19	89	120.03	129	179.64	169	240.12	209	301.05	249	362.19	289	423.38	329	484.52	369	545.54
10	NA	50	63.60	90	121.50	130	181.14	170	241.64	210	302.58	250	363.72	290	424.91	330	486.05	370	547.06
11	NA	51	65.01	91	122.98	131	182.65	171	243.16	211	304.11	251	365.25	291	426.44	331	487.58	371	548.59
12	NA	52	66.43	92	124.45	132	184.15	172	244.68	212	305.64	252	366.78	292	427.97	332	489.10	372	550.11
13	NA	53	67.85	93	125.93	133	185.66	173	246.20	213	307.16	253	368.31	293	429.50	333	490.63	373	551.63
14	NA	54	69.26	94	127.41	134	187.16	174	247.72	214	308.69	254	369.84	294	431.03	334	492.16	374	553.16
15	NA	55	70.69	95	128.89	135	188.67	175	249.24	215	310.22	255	371.37	295	432.56	335	493.68	375	554.68
16	NA	56	72.11	96	130.37	136	190.17	176	250.76	216	311.74	256	372.90	296	434.09	336	495.21	376	556.20
17	NA	57	73.54	97	131.85	137	191.68	177	252.28	217	313.27	257	374.43	297	435.62	337	496.74	377	557.72
18	NA	58	74.96	98	133.33	138	193.19	178	253.80	218	314.80	258	375.96	298	437.15	338	498.26	378	559.25
19	NA	59	76.39	99	134.81	139	194.70	179	255.32	219	316.33	259	377.49	299	438.68	339	499.79	379	560.77
20	NA	60	77.83	100	136.30	140	196.21	180	256.85	220	317.85	260	379.02	300	440.20	340	501.32	380	562.29
21	NA	61	79.26	101	137.78	141	197.72	181	258.37	221	319.38	261	380.55	301	441.73	341	502.84	381	563.81
22	NA	62	80.70	102	139.27	142	199.23	182	259.89	222	320.91	262	382.08	302	443.26	342	504.37	382	565.34
23	NA	63	82.13	103	140.75	143	200.74	183	261.41	223	322.44	263	383.61	303	444.79	343	505.90	383	566.86
24	NA	64	83.57	104	142.24	144	202.25	184	262.93	224	323.97	264	385.14	304	446.32	344	507.42	384	568.38
25	29.30	65	85.01	105	143.73	145	203.76	185	264.46	225	325.49	265	386.67	305	447.85	345	508.95	385	569.90
26	30.62	66	86.46	106	145.21	146	205.27	186	265.98	226	327.02	266	388.20	306	449.38	346	510.47	386	571.42
27	31.95	67	87.90	107	146.70	147	206.78	187	267.50	227	328.55	267	389.73	307	450.91	347	512.00	387	572.94
28	33.28	68	89.35	108	148.19	148	208.29	188	269.03	228	330.08	268	391.26	308	452.44	348	513.53	388	574.47
29	34.62	69	90.79	109	149.68	149	209.80	189	270.55	229	331.61	269	392.79	309	453.96	349	515.05	389	575.99
30	35.96	70	92.24	110	151.18	150	211.32	190	272.07	230	333.14	270	394.32	310	455.49	350	516.58	390	577.51
31	37.31	71	93.69	111	152.67	151	212.83	191	273.60	231	334.67	271	395.85	311	457.02	351	518.10	391	579.03
32	38.66	72	95.14	112	154.16	152	214.34	192	275.12	232	336.19	272	397.38	312	458.55	352	519.63	392	580.55
33	40.02	73	96.60	113	155.65	153	215.86	193	276.65	233	337.72	273	398.91	313	460.08	353	521.15	393	582.07
34	41.38	74	98.05	114	157.15	154	217.37	194	278.17	234	339.25	274	400.44	314	461.61	354	522.68	394	583.59
35	42.74	75	99.51	115	158.64	155	218.89	195	279.69	235	340.78	275	401.97	315	463.13	355	524.20	395	585.11
36	44.11	76	100.97	116	160.14	156	220.40	196	281.22	236	342.31	276	403.50	316	464.66	356	525.73	396	586.63
37	45.48	77	102.43	117	161.64	157	221.92	197	282.74	237	343.84	277	405.03	317	466.19	357	527.25	397	588.15
38	46.86	78	103.89	118	163.13	158	223.43	198	284.27	238	345.37	278	406.56	318	467.72	358	528.78	398	589.67
39	48.24	79	105.35	119	164.63	159	224.95	199	285.79	239	346.90	279	408.09	319	469.25	359	530.30	399	591.19
40	49.62	80	106.81	120	166.13	160	226.46	200	287.32	240	348.43	280	409.62	320	470.77	360	531.83	400	592.71

Acute Water Quality Standards for dissolved Lead
"Aquatic and Wildlife coldwater, warmwater and edw "

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	24.17	81	51.30	121	79.43	161	108.02	201	136.86	241	165.82	281	194.81	321	223.79	361	252.72
2	NA	42	24.82	82	52.00	122	80.14	162	108.74	202	137.59	242	166.55	282	195.54	322	224.52	362	253.44
3	NA	43	25.48	83	52.69	123	80.85	163	109.46	203	138.31	243	167.27	283	196.26	323	225.24	363	254.16
4	NA	44	26.14	84	53.39	124	81.56	164	110.18	204	139.03	244	167.99	284	196.99	324	225.96	364	254.89
5	NA	45	26.81	85	54.08	125	82.27	165	110.90	205	139.76	245	168.72	285	197.71	325	226.69	365	255.61
6	NA	46	27.47	86	54.78	126	82.98	166	111.62	206	140.48	246	169.44	286	198.44	326	227.41	366	256.33
7	NA	47	28.13	87	55.48	127	83.69	167	112.34	207	141.20	247	170.17	287	199.16	327	228.14	367	257.05
8	NA	48	28.80	88	56.17	128	84.41	168	113.06	208	141.93	248	170.89	288	199.89	328	228.86	368	257.77
9	NA	49	29.47	89	56.87	129	85.12	169	113.78	209	142.65	249	171.62	289	200.61	329	229.58	369	258.50
10	NA	50	30.14	90	57.57	130	85.83	170	114.50	210	143.37	250	172.34	290	201.34	330	230.31	370	259.22
11	NA	51	30.81	91	58.27	131	86.54	171	115.22	211	144.10	251	173.07	291	202.06	331	231.03	371	259.94
12	NA	52	31.48	92	58.97	132	87.26	172	115.94	212	144.82	252	173.79	292	202.79	332	231.75	372	260.66
13	NA	53	32.15	93	59.67	133	87.97	173	116.66	213	145.54	253	174.52	293	203.51	333	232.48	373	261.38
14	NA	54	32.82	94	60.37	134	88.68	174	117.38	214	146.27	254	175.24	294	204.24	334	233.20	374	262.10
15	NA	55	33.49	95	61.07	135	89.40	175	118.10	215	146.99	255	175.97	295	204.96	335	233.92	375	262.83
16	NA	56	34.17	96	61.77	136	90.11	176	118.82	216	147.71	256	176.69	296	205.69	336	234.65	376	263.55
17	NA	57	34.84	97	62.47	137	90.83	177	119.54	217	148.44	257	177.42	297	206.41	337	235.37	377	264.27
18	NA	58	35.52	98	63.18	138	91.54	178	120.26	218	149.16	258	178.14	298	207.13	338	236.09	378	264.99
19	NA	59	36.20	99	63.88	139	92.25	179	120.98	219	149.89	259	178.87	299	207.86	339	236.82	379	265.71
20	NA	60	36.88	100	64.58	140	92.97	180	121.70	220	150.61	260	179.59	300	208.58	340	237.54	380	266.43
21	NA	61	37.56	101	65.28	141	93.68	181	122.42	221	151.33	261	180.32	301	209.31	341	238.26	381	267.15
22	NA	62	38.24	102	65.99	142	94.40	182	123.14	222	152.06	262	181.04	302	210.03	342	238.99	382	267.88
23	NA	63	38.92	103	66.69	143	95.12	183	123.87	223	152.78	263	181.77	303	210.76	343	239.71	383	268.60
24	NA	64	39.60	104	67.40	144	95.83	184	124.59	224	153.51	264	182.49	304	211.48	344	240.43	384	269.32
25	13.88	65	40.28	105	68.10	145	96.55	185	125.31	225	154.23	265	183.22	305	212.21	345	241.16	385	270.04
26	14.51	66	40.97	106	68.81	146	97.26	186	126.03	226	154.95	266	183.94	306	212.93	346	241.88	386	270.76
27	15.14	67	41.65	107	69.51	147	97.98	187	126.75	227	155.68	267	184.67	307	213.65	347	242.60	387	271.48
28	15.77	68	42.33	108	70.22	148	98.70	188	127.47	228	156.40	268	185.39	308	214.38	348	243.33	388	272.20
29	16.40	69	43.02	109	70.93	149	99.41	189	128.20	229	157.13	269	186.12	309	215.10	349	244.05	389	272.92
30	17.04	70	43.71	110	71.63	150	100.13	190	128.92	230	157.85	270	186.84	310	215.83	350	244.77	390	273.64
31	17.68	71	44.39	111	72.34	151	100.85	191	129.64	231	158.58	271	187.57	311	216.55	351	245.49	391	274.36
32	18.32	72	45.08	112	73.05	152	101.56	192	130.36	232	159.30	272	188.29	312	217.28	352	246.22	392	275.08
33	18.96	73	45.77	113	73.75	153	102.28	193	131.08	233	160.02	273	189.02	313	218.00	353	246.94	393	275.80
34	19.61	74	46.46	114	74.46	154	103.00	194	131.81	234	160.75	274	189.74	314	218.72	354	247.66	394	276.52
35	20.25	75	47.15	115	75.17	155	103.72	195	132.53	235	161.47	275	190.47	315	219.45	355	248.38	395	277.25
36	20.90	76	47.84	116	75.88	156	104.43	196	133.25	236	162.20	276	191.19	316	220.17	356	249.11	396	277.97
37	21.55	77	48.53	117	76.59	157	105.15	197	133.97	237	162.92	277	191.92	317	220.90	357	249.83	397	278.69
38	22.20	78	49.22	118	77.30	158	105.87	198	134.70	238	163.65	278	192.64	318	221.62	358	250.55	398	279.41
39	22.86	79	49.92	119	78.01	159	106.59	199	135.42	239	164.37	279	193.36	319	222.34	359	251.27	399	280.13
40	23.51	80	50.61	120	78.72	160	107.31	200	136.14	240	165.10	280	194.09	320	223.07	360	252.00	400	280.85

Chronic Water Quality Standards for dissolved Lead
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	0.94	81	2.00	121	3.10	161	4.21	201	5.33	241	6.46	281	7.59	321	8.72	361	9.85
2	NA	42	0.97	82	2.03	122	3.12	162	4.24	202	5.36	242	6.49	282	7.62	322	8.75	362	9.88
3	NA	43	0.99	83	2.05	123	3.15	163	4.27	203	5.39	243	6.52	283	7.65	323	8.78	363	9.90
4	NA	44	1.02	84	2.08	124	3.18	164	4.29	204	5.42	244	6.55	284	7.68	324	8.81	364	9.93
5	NA	45	1.04	85	2.11	125	3.21	165	4.32	205	5.45	245	6.57	285	7.70	325	8.83	365	9.96
6	NA	46	1.07	86	2.13	126	3.23	166	4.35	206	5.47	246	6.60	286	7.73	326	8.86	366	9.99
7	NA	47	1.10	87	2.16	127	3.26	167	4.38	207	5.50	247	6.63	287	7.76	327	8.89	367	10.02
8	NA	48	1.12	88	2.19	128	3.29	168	4.41	208	5.53	248	6.66	288	7.79	328	8.92	368	10.05
9	NA	49	1.15	89	2.22	129	3.32	169	4.43	209	5.56	249	6.69	289	7.82	329	8.95	369	10.07
10	NA	50	1.17	90	2.24	130	3.34	170	4.46	210	5.59	250	6.72	290	7.85	330	8.97	370	10.10
11	NA	51	1.20	91	2.27	131	3.37	171	4.49	211	5.62	251	6.74	291	7.87	331	9.00	371	10.13
12	NA	52	1.23	92	2.30	132	3.40	172	4.52	212	5.64	252	6.77	292	7.90	332	9.03	372	10.16
13	NA	53	1.25	93	2.33	133	3.43	173	4.55	213	5.67	253	6.80	293	7.93	333	9.06	373	10.19
14	NA	54	1.28	94	2.35	134	3.46	174	4.57	214	5.70	254	6.83	294	7.96	334	9.09	374	10.21
15	NA	55	1.31	95	2.38	135	3.48	175	4.60	215	5.73	255	6.86	295	7.99	335	9.12	375	10.24
16	NA	56	1.33	96	2.41	136	3.51	176	4.63	216	5.76	256	6.89	296	8.02	336	9.14	376	10.27
17	NA	57	1.36	97	2.43	137	3.54	177	4.66	217	5.78	257	6.91	297	8.04	337	9.17	377	10.30
18	NA	58	1.38	98	2.46	138	3.57	178	4.69	218	5.81	258	6.94	298	8.07	338	9.20	378	10.33
19	NA	59	1.41	99	2.49	139	3.60	179	4.71	219	5.84	259	6.97	299	8.10	339	9.23	379	10.35
20	NA	60	1.44	100	2.52	140	3.62	180	4.74	220	5.87	260	7.00	300	8.13	340	9.26	380	10.38
21	NA	61	1.46	101	2.54	141	3.65	181	4.77	221	5.90	261	7.03	301	8.16	341	9.28	381	10.41
22	NA	62	1.49	102	2.57	142	3.68	182	4.80	222	5.93	262	7.05	302	8.18	342	9.31	382	10.44
23	NA	63	1.52	103	2.60	143	3.71	183	4.83	223	5.95	263	7.08	303	8.21	343	9.34	383	10.47
24	NA	64	1.54	104	2.63	144	3.73	184	4.85	224	5.98	264	7.11	304	8.24	344	9.37	384	10.49
25	0.54	65	1.57	105	2.65	145	3.76	185	4.88	225	6.01	265	7.14	305	8.27	345	9.40	385	10.52
26	0.57	66	1.60	106	2.68	146	3.79	186	4.91	226	6.04	266	7.17	306	8.30	346	9.43	386	10.55
27	0.59	67	1.62	107	2.71	147	3.82	187	4.94	227	6.07	267	7.20	307	8.33	347	9.45	387	10.58
28	0.61	68	1.65	108	2.74	148	3.85	188	4.97	228	6.09	268	7.22	308	8.35	348	9.48	388	10.61
29	0.64	69	1.68	109	2.76	149	3.87	189	5.00	229	6.12	269	7.25	309	8.38	349	9.51	389	10.64
30	0.66	70	1.70	110	2.79	150	3.90	190	5.02	230	6.15	270	7.28	310	8.41	350	9.54	390	10.66
31	0.69	71	1.73	111	2.82	151	3.93	191	5.05	231	6.18	271	7.31	311	8.44	351	9.57	391	10.69
32	0.71	72	1.76	112	2.85	152	3.96	192	5.08	232	6.21	272	7.34	312	8.47	352	9.59	392	10.72
33	0.74	73	1.78	113	2.87	153	3.99	193	5.11	233	6.24	273	7.37	313	8.50	353	9.62	393	10.75
34	0.76	74	1.81	114	2.90	154	4.01	194	5.14	234	6.26	274	7.39	314	8.52	354	9.65	394	10.78
35	0.79	75	1.84	115	2.93	155	4.04	195	5.16	235	6.29	275	7.42	315	8.55	355	9.68	395	10.80
36	0.81	76	1.86	116	2.96	156	4.07	196	5.19	236	6.32	276	7.45	316	8.58	356	9.71	396	10.83
37	0.84	77	1.89	117	2.98	157	4.10	197	5.22	237	6.35	277	7.48	317	8.61	357	9.74	397	10.86
38	0.87	78	1.92	118	3.01	158	4.13	198	5.25	238	6.38	278	7.51	318	8.64	358	9.76	398	10.89
39	0.89	79	1.95	119	3.04	159	4.15	199	5.28	239	6.41	279	7.54	319	8.66	359	9.79	399	10.92
40	0.92	80	1.97	120	3.07	160	4.18	200	5.31	240	6.43	280	7.56	320	8.69	360	9.82	400	10.94

Acute Water Quality Standards for dissolved Nickel
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	220	81	392	121	550	161	701	201	845	241	985	281	1122	321	1256	361	1387
2	NA	42	225	82	396	122	554	162	704	202	849	242	989	282	1126	322	1259	362	1390
3	NA	43	229	83	400	123	558	163	708	203	852	243	992	283	1129	323	1263	363	1394
4	NA	44	234	84	404	124	562	164	712	204	856	244	996	284	1132	324	1266	364	1397
5	NA	45	238	85	408	125	566	165	715	205	859	245	999	285	1136	325	1269	365	1400
6	NA	46	243	86	412	126	569	166	719	206	863	246	1003	286	1139	326	1272	366	1403
7	NA	47	247	87	416	127	573	167	723	207	867	247	1006	287	1142	327	1276	367	1407
8	NA	48	252	88	420	128	577	168	726	208	870	248	1010	288	1146	328	1279	368	1410
9	NA	49	256	89	424	129	581	169	730	209	874	249	1013	289	1149	329	1282	369	1413
10	NA	50	260	90	428	130	585	170	734	210	877	250	1017	290	1153	330	1286	370	1416
11	NA	51	265	91	432	131	588	171	737	211	881	251	1020	291	1156	331	1289	371	1420
12	NA	52	269	92	436	132	592	172	741	212	884	252	1023	292	1159	332	1292	372	1423
13	NA	53	274	93	440	133	596	173	744	213	888	253	1027	293	1163	333	1296	373	1426
14	NA	54	278	94	444	134	600	174	748	214	891	254	1030	294	1166	334	1299	374	1429
15	NA	55	282	95	448	135	604	175	752	215	895	255	1034	295	1169	335	1302	375	1433
16	NA	56	287	96	452	136	607	176	755	216	898	256	1037	296	1173	336	1305	376	1436
17	NA	57	291	97	456	137	611	177	759	217	902	257	1041	297	1176	337	1309	377	1439
18	NA	58	295	98	460	138	615	178	763	218	905	258	1044	298	1179	338	1312	378	1442
19	NA	59	300	99	464	139	619	179	766	219	909	259	1047	299	1183	339	1315	379	1445
20	NA	60	304	100	468	140	622	180	770	220	912	260	1051	300	1186	340	1319	380	1449
21	NA	61	308	101	472	141	626	181	774	221	916	261	1054	301	1189	341	1322	381	1452
22	NA	62	312	102	476	142	630	182	777	222	919	262	1058	302	1193	342	1325	382	1455
23	NA	63	317	103	480	143	634	183	781	223	923	263	1061	303	1196	343	1328	383	1458
24	NA	64	321	104	484	144	637	184	784	224	926	264	1064	304	1199	344	1332	384	1462
25	145	65	325	105	488	145	641	185	788	225	930	265	1068	305	1203	345	1335	385	1465
26	150	66	329	106	492	146	645	186	792	226	933	266	1071	306	1206	346	1338	386	1468
27	155	67	334	107	496	147	649	187	795	227	937	267	1075	307	1209	347	1341	387	1471
28	159	68	338	108	500	148	652	188	799	228	940	268	1078	308	1213	348	1345	388	1474
29	164	69	342	109	504	149	656	189	802	229	944	269	1082	309	1216	349	1348	389	1478
30	169	70	346	110	508	150	660	190	806	230	947	270	1085	310	1219	350	1351	390	1481
31	174	71	350	111	511	151	664	191	810	231	951	271	1088	311	1223	351	1355	391	1484
32	179	72	355	112	515	152	667	192	813	232	954	272	1092	312	1226	352	1358	392	1487
33	183	73	359	113	519	153	671	193	817	233	958	273	1095	313	1229	353	1361	393	1490
34	188	74	363	114	523	154	675	194	820	234	961	274	1099	314	1233	354	1364	394	1494
35	193	75	367	115	527	155	678	195	824	235	965	275	1102	315	1236	355	1368	395	1497
36	197	76	371	116	531	156	682	196	827	236	968	276	1105	316	1239	356	1371	396	1500
37	202	77	375	117	535	157	686	197	831	237	972	277	1109	317	1243	357	1374	397	1503
38	207	78	379	118	539	158	689	198	835	238	975	278	1112	318	1246	358	1377	398	1506
39	211	79	384	119	542	159	693	199	838	239	979	279	1115	319	1249	359	1381	399	1510
40	216	80	388	120	546	160	697	200	842	240	982	280	1119	320	1253	360	1384	400	1513

Chronic Water Quality Standards for dissolved Nickel
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	24.46	81	43.51	121	61.11	161	77.81	201	93.88	241	109.46	281	124.64	321	139.50	361	154.07
2	NA	42	24.96	82	43.97	122	61.53	162	78.22	202	94.27	242	109.84	282	125.02	322	139.86	362	154.43
3	NA	43	25.47	83	44.42	123	61.96	163	78.63	203	94.67	243	110.23	283	125.39	323	140.23	363	154.79
4	NA	44	25.97	84	44.87	124	62.39	164	79.03	204	95.06	244	110.61	284	125.77	324	140.60	364	155.15
5	NA	45	26.47	85	45.33	125	62.81	165	79.44	205	95.46	245	110.99	285	126.14	325	140.96	365	155.51
6	NA	46	26.96	86	45.78	126	63.24	166	79.85	206	95.85	246	111.38	286	126.52	326	141.33	366	155.87
7	NA	47	27.46	87	46.23	127	63.66	167	80.26	207	96.24	247	111.76	287	126.89	327	141.70	367	156.23
8	NA	48	27.95	88	46.68	128	64.09	168	80.66	208	96.64	248	112.14	288	127.26	328	142.07	368	156.59
9	NA	49	28.44	89	47.12	129	64.51	169	81.07	209	97.03	249	112.52	289	127.64	329	142.43	369	156.95
10	NA	50	28.93	90	47.57	130	64.93	170	81.47	210	97.42	250	112.91	290	128.01	330	142.80	370	157.31
11	NA	51	29.42	91	48.02	131	65.35	171	81.88	211	97.81	251	113.29	291	128.38	331	143.16	371	157.67
12	NA	52	29.91	92	48.46	132	65.78	172	82.28	212	98.21	252	113.67	292	128.76	332	143.53	372	158.03
13	NA	53	30.39	93	48.91	133	66.20	173	82.69	213	98.60	253	114.05	293	129.13	333	143.90	373	158.39
14	NA	54	30.88	94	49.35	134	66.62	174	83.09	214	98.99	254	114.43	294	129.50	334	144.26	374	158.75
15	NA	55	31.36	95	49.80	135	67.04	175	83.50	215	99.38	255	114.81	295	129.88	335	144.63	375	159.11
16	NA	56	31.84	96	50.24	136	67.46	176	83.90	216	99.77	256	115.19	296	130.25	336	144.99	376	159.47
17	NA	57	32.32	97	50.68	137	67.88	177	84.30	217	100.16	257	115.57	297	130.62	337	145.36	377	159.82
18	NA	58	32.80	98	51.13	138	68.30	178	84.71	218	100.55	258	115.95	298	130.99	338	145.72	378	160.18
19	NA	59	33.28	99	51.57	139	68.71	179	85.11	219	100.94	259	116.33	299	131.36	339	146.09	379	160.54
20	NA	60	33.76	100	52.01	140	69.13	180	85.51	220	101.33	260	116.71	300	131.74	340	146.45	380	160.90
21	NA	61	34.23	101	52.45	141	69.55	181	85.91	221	101.72	261	117.09	301	132.11	341	146.81	381	161.26
22	NA	62	34.71	102	52.89	142	69.97	182	86.31	222	102.11	262	117.47	302	132.48	342	147.18	382	161.62
23	NA	63	35.18	103	53.32	143	70.38	183	86.71	223	102.50	263	117.85	303	132.85	343	147.54	383	161.97
24	NA	64	35.65	104	53.76	144	70.80	184	87.12	224	102.89	264	118.23	304	133.22	344	147.91	384	162.33
25	16.10	65	36.12	105	54.20	145	71.22	185	87.52	225	103.28	265	118.61	305	133.59	345	148.27	385	162.69
26	16.64	66	36.59	106	54.63	146	71.63	186	87.92	226	103.67	266	118.99	306	133.96	346	148.63	386	163.05
27	17.18	67	37.06	107	55.07	147	72.05	187	88.32	227	104.05	267	119.37	307	134.33	347	149.00	387	163.40
28	17.72	68	37.53	108	55.51	148	72.46	188	88.71	228	104.44	268	119.75	308	134.70	348	149.36	388	163.76
29	18.25	69	37.99	109	55.94	149	72.87	189	89.11	229	104.83	269	120.12	309	135.07	349	149.72	389	164.12
30	18.78	70	38.46	110	56.37	150	73.29	190	89.51	230	105.22	270	120.50	310	135.44	350	150.09	390	164.47
31	19.31	71	38.92	111	56.81	151	73.70	191	89.91	231	105.60	271	120.88	311	135.81	351	150.45	391	164.83
32	19.83	72	39.39	112	57.24	152	74.11	192	90.31	232	105.99	272	121.26	312	136.18	352	150.81	392	165.19
33	20.36	73	39.85	113	57.67	153	74.53	193	90.71	233	106.38	273	121.63	313	136.55	353	151.17	393	165.54
34	20.88	74	40.31	114	58.10	154	74.94	194	91.10	234	106.76	274	122.01	314	136.92	354	151.54	394	165.90
35	21.40	75	40.77	115	58.53	155	75.35	195	91.50	235	107.15	275	122.39	315	137.29	355	151.90	395	166.26
36	21.91	76	41.23	116	58.96	156	75.76	196	91.90	236	107.53	276	122.76	316	137.66	356	152.26	396	166.61
37	22.43	77	41.69	117	59.39	157	76.17	197	92.29	237	107.92	277	123.14	317	138.02	357	152.62	397	166.97
38	22.94	78	42.15	118	59.82	158	76.58	198	92.69	238	108.30	278	123.52	318	138.39	358	152.98	398	167.32
39	23.45	79	42.60	119	60.25	159	76.99	199	93.09	239	108.69	279	123.89	319	138.76	359	153.34	399	167.68
40	23.96	80	43.06	120	60.68	160	77.40	200	93.48	240	109.07	280	124.27	320	139.13	360	153.71	400	168.04

Water Quality Standards for dissolved Silver
"Aquatic and Wildlife coldwater, warmwater, edw and ephemeral"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	0.74	81	2.40	121	4.79	161	7.83	201	11.46	241	15.66	281	20.40	321	25.65	361	31.39
2	NA	42	0.78	82	2.45	122	4.86	162	7.91	202	11.56	242	15.78	282	20.52	322	25.78	362	31.54
3	NA	43	0.81	83	2.50	123	4.93	163	7.99	203	11.66	243	15.89	283	20.65	323	25.92	363	31.69
4	NA	44	0.84	84	2.56	124	4.99	164	8.08	204	11.76	244	16.00	284	20.77	324	26.06	364	31.84
5	NA	45	0.87	85	2.61	125	5.06	165	8.16	205	11.86	245	16.11	285	20.90	325	26.20	365	31.99
6	NA	46	0.91	86	2.66	126	5.13	166	8.25	206	11.96	246	16.23	286	21.03	326	26.34	366	32.14
7	NA	47	0.94	87	2.72	127	5.20	167	8.33	207	12.06	247	16.34	287	21.15	327	26.48	367	32.29
8	NA	48	0.98	88	2.77	128	5.27	168	8.42	208	12.16	248	16.45	288	21.28	328	26.61	368	32.44
9	NA	49	1.01	89	2.82	129	5.35	169	8.51	209	12.26	249	16.57	289	21.41	329	26.75	369	32.59
10	NA	50	1.05	90	2.88	130	5.42	170	8.59	210	12.36	250	16.68	290	21.53	330	26.89	370	32.74
11	NA	51	1.08	91	2.93	131	5.49	171	8.68	211	12.46	251	16.80	291	21.66	331	27.03	371	32.90
12	NA	52	1.12	92	2.99	132	5.56	172	8.77	212	12.56	252	16.91	292	21.79	332	27.18	372	33.05
13	NA	53	1.16	93	3.05	133	5.63	173	8.86	213	12.67	253	17.03	293	21.92	333	27.32	373	33.20
14	NA	54	1.20	94	3.10	134	5.71	174	8.94	214	12.77	254	17.14	294	22.05	334	27.46	374	33.35
15	NA	55	1.23	95	3.16	135	5.78	175	9.03	215	12.87	255	17.26	295	22.18	335	27.60	375	33.51
16	NA	56	1.27	96	3.22	136	5.85	176	9.12	216	12.97	256	17.38	296	22.31	336	27.74	376	33.66
17	NA	57	1.31	97	3.27	137	5.93	177	9.21	217	13.08	257	17.49	297	22.44	337	27.88	377	33.82
18	NA	58	1.35	98	3.33	138	6.00	178	9.30	218	13.18	258	17.61	298	22.57	338	28.03	378	33.97
19	NA	59	1.39	99	3.39	139	6.08	179	9.39	219	13.29	259	17.73	299	22.70	339	28.17	379	34.13
20	NA	60	1.43	100	3.45	140	6.15	180	9.48	220	13.39	260	17.85	300	22.83	340	28.31	380	34.28
21	NA	61	1.47	101	3.51	141	6.23	181	9.57	221	13.50	261	17.97	301	22.96	341	28.45	381	34.44
22	NA	62	1.52	102	3.57	142	6.31	182	9.66	222	13.60	262	18.08	302	23.09	342	28.60	382	34.59
23	NA	63	1.56	103	3.63	143	6.38	183	9.76	223	13.71	263	18.20	303	23.22	343	28.74	383	34.75
24	NA	64	1.60	104	3.69	144	6.46	184	9.85	224	13.81	264	18.32	304	23.35	344	28.89	384	34.90
25	0.32	65	1.64	105	3.75	145	6.54	185	9.94	225	13.92	265	18.44	305	23.49	345	29.03	385	35.06
26	0.34	66	1.69	106	3.81	146	6.61	186	10.03	226	14.02	266	18.56	306	23.62	346	29.18	386	35.22
27	0.36	67	1.73	107	3.88	147	6.69	187	10.12	227	14.13	267	18.68	307	23.75	347	29.32	387	35.37
28	0.39	68	1.78	108	3.94	148	6.77	188	10.22	228	14.24	268	18.80	308	23.89	348	29.47	388	35.53
29	0.41	69	1.82	109	4.00	149	6.85	189	10.31	229	14.35	269	18.92	309	24.02	349	29.61	389	35.69
30	0.43	70	1.87	110	4.06	150	6.93	190	10.41	230	14.45	270	19.04	310	24.15	350	29.76	390	35.85
31	0.46	71	1.91	111	4.13	151	7.01	191	10.50	231	14.56	271	19.17	311	24.29	351	29.91	391	36.01
32	0.49	72	1.96	112	4.19	152	7.09	192	10.59	232	14.67	272	19.29	312	24.42	352	30.05	392	36.16
33	0.51	73	2.01	113	4.26	153	7.17	193	10.69	233	14.78	273	19.41	313	24.56	353	30.20	393	36.32
34	0.54	74	2.06	114	4.32	154	7.25	194	10.79	234	14.89	274	19.53	314	24.69	354	30.35	394	36.48
35	0.57	75	2.10	115	4.39	155	7.33	195	10.88	235	15.00	275	19.65	315	24.83	355	30.49	395	36.64
36	0.60	76	2.15	116	4.45	156	7.41	196	10.98	236	15.11	276	19.78	316	24.96	356	30.64	396	36.80
37	0.62	77	2.20	117	4.52	157	7.49	197	11.07	237	15.22	277	19.90	317	25.10	357	30.79	397	36.96
38	0.65	78	2.25	118	4.59	158	7.58	198	11.17	238	15.33	278	20.03	318	25.23	358	30.94	398	37.12
39	0.68	79	2.30	119	4.65	159	7.66	199	11.27	239	15.44	279	20.15	319	25.37	359	31.09	399	37.28
40	0.71	80	2.35	120	4.72	160	7.74	200	11.37	240	15.55	280	20.27	320	25.51	360	31.24	400	37.44

Acute Water Quality Standards for dissolved Zinc
Aquatic and Wildlife ephemeral

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	522	81	930	121	1307	161	1665	201	2009	241	2343	281	2669	321	2987	361	3300
2	NA	42	533	82	940	122	1316	162	1674	202	2018	242	2351	282	2677	322	2995	362	3307
3	NA	43	544	83	950	123	1325	163	1682	203	2026	243	2360	283	2685	323	3003	363	3315
4	NA	44	555	84	959	124	1334	164	1691	204	2034	244	2368	284	2693	324	3011	364	3323
5	NA	45	565	85	969	125	1343	165	1700	205	2043	245	2376	285	2701	325	3019	365	3331
6	NA	46	576	86	979	126	1353	166	1708	206	2051	246	2384	286	2709	326	3027	366	3338
7	NA	47	587	87	988	127	1362	167	1717	207	2060	247	2392	287	2717	327	3034	367	3346
8	NA	48	597	88	998	128	1371	168	1726	208	2068	248	2401	288	2725	328	3042	368	3354
9	NA	49	608	89	1007	129	1380	169	1735	209	2077	249	2409	289	2733	329	3050	369	3362
10	NA	50	618	90	1017	130	1389	170	1743	210	2085	250	2417	290	2741	330	3058	370	3369
11	NA	51	629	91	1027	131	1398	171	1752	211	2093	251	2425	291	2749	331	3066	371	3377
12	NA	52	639	92	1036	132	1407	172	1761	212	2102	252	2433	292	2757	332	3074	372	3385
13	NA	53	649	93	1046	133	1416	173	1769	213	2110	253	2442	293	2765	333	3082	373	3392
14	NA	54	660	94	1055	134	1425	174	1778	214	2119	254	2450	294	2773	334	3089	374	3400
15	NA	55	670	95	1065	135	1434	175	1787	215	2127	255	2458	295	2781	335	3097	375	3408
16	NA	56	680	96	1074	136	1443	176	1795	216	2135	256	2466	296	2789	336	3105	376	3416
17	NA	57	691	97	1084	137	1452	177	1804	217	2144	257	2474	297	2797	337	3113	377	3423
18	NA	58	701	98	1093	138	1461	178	1813	218	2152	258	2482	298	2805	338	3121	378	3431
19	NA	59	711	99	1103	139	1470	179	1821	219	2161	259	2491	299	2813	339	3129	379	3439
20	NA	60	721	100	1112	140	1479	180	1830	220	2169	260	2499	300	2821	340	3136	380	3446
21	NA	61	732	101	1121	141	1488	181	1838	221	2177	261	2507	301	2829	341	3144	381	3454
22	NA	62	742	102	1131	142	1497	182	1847	222	2186	262	2515	302	2837	342	3152	382	3462
23	NA	63	752	103	1140	143	1506	183	1856	223	2194	263	2523	303	2845	343	3160	383	3469
24	NA	64	762	104	1150	144	1515	184	1864	224	2202	264	2531	304	2853	344	3168	384	3477
25	344	65	772	105	1159	145	1523	185	1873	225	2211	265	2539	305	2861	345	3175	385	3485
26	355	66	782	106	1168	146	1532	186	1881	226	2219	266	2547	306	2869	346	3183	386	3492
27	367	67	792	107	1178	147	1541	187	1890	227	2227	267	2556	307	2876	347	3191	387	3500
28	378	68	802	108	1187	148	1550	188	1898	228	2236	268	2564	308	2884	348	3199	388	3508
29	390	69	812	109	1196	149	1559	189	1907	229	2244	269	2572	309	2892	349	3207	389	3515
30	401	70	822	110	1206	150	1568	190	1916	230	2252	270	2580	310	2900	350	3214	390	3523
31	412	71	832	111	1215	151	1577	191	1924	231	2260	271	2588	311	2908	351	3222	391	3531
32	423	72	842	112	1224	152	1586	192	1933	232	2269	272	2596	312	2916	352	3230	392	3538
33	435	73	852	113	1233	153	1594	193	1941	233	2277	273	2604	313	2924	353	3238	393	3546
34	446	74	862	114	1243	154	1603	194	1950	234	2285	274	2612	314	2932	354	3245	394	3554
35	457	75	871	115	1252	155	1612	195	1958	235	2294	275	2620	315	2940	355	3253	395	3561
36	468	76	881	116	1261	156	1621	196	1967	236	2302	276	2628	316	2948	356	3261	396	3569
37	479	77	891	117	1270	157	1630	197	1975	237	2310	277	2636	317	2956	357	3269	397	3577
38	490	78	901	118	1279	158	1638	198	1984	238	2318	278	2645	318	2964	358	3276	398	3584
39	501	79	911	119	1289	159	1647	199	1992	239	2327	279	2653	319	2971	359	3284	399	3592
40	512	80	920	120	1298	160	1656	200	2001	240	2335	280	2661	320	2979	360	3292	400	3599

Acute Water Quality Standards for dissolved Zinc
"Aquatic and Wildlife coldwater, warmwater and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	55.1	81	98.0	121	137.7	161	175.4	201	211.7	241	246.9	281	281.2	321	314.8	361	347.7
2	NA	42	56.2	82	99.0	122	138.7	162	176.4	202	212.6	242	247.8	282	282.1	322	315.6	362	348.5
3	NA	43	57.3	83	100.1	123	139.6	163	177.3	203	213.5	243	248.6	283	282.9	323	316.4	363	349.4
4	NA	44	58.4	84	101.1	124	140.6	164	178.2	204	214.4	244	249.5	284	283.8	324	317.3	364	350.2
5	NA	45	59.6	85	102.1	125	141.6	165	179.1	205	215.3	245	250.4	285	284.6	325	318.1	365	351.0
6	NA	46	60.7	86	103.1	126	142.5	166	180.0	206	216.2	246	251.2	286	285.5	326	318.9	366	351.8
7	NA	47	61.8	87	104.1	127	143.5	167	181.0	207	217.1	247	252.1	287	286.3	327	319.8	367	352.6
8	NA	48	62.9	88	105.2	128	144.4	168	181.9	208	217.9	248	253.0	288	287.1	328	320.6	368	353.4
9	NA	49	64.0	89	106.2	129	145.4	169	182.8	209	218.8	249	253.8	289	288.0	329	321.4	369	354.2
10	NA	50	65.1	90	107.2	130	146.4	170	183.7	210	219.7	250	254.7	290	288.8	330	322.2	370	355.1
11	NA	51	66.2	91	108.2	131	147.3	171	184.6	211	220.6	251	255.6	291	289.7	331	323.1	371	355.9
12	NA	52	67.3	92	109.2	132	148.3	172	185.5	212	221.5	252	256.4	292	290.5	332	323.9	372	356.7
13	NA	53	68.4	93	110.2	133	149.2	173	186.4	213	222.4	253	257.3	293	291.4	333	324.7	373	357.5
14	NA	54	69.5	94	111.2	134	150.2	174	187.4	214	223.3	254	258.1	294	292.2	334	325.6	374	358.3
15	NA	55	70.6	95	112.2	135	151.1	175	188.3	215	224.1	255	259.0	295	293.0	335	326.4	375	359.1
16	NA	56	71.7	96	113.2	136	152.1	176	189.2	216	225.0	256	259.9	296	293.9	336	327.2	376	359.9
17	NA	57	72.8	97	114.2	137	153.0	177	190.1	217	225.9	257	260.7	297	294.7	337	328.0	377	360.7
18	NA	58	73.9	98	115.2	138	153.9	178	191.0	218	226.8	258	261.6	298	295.6	338	328.9	378	361.5
19	NA	59	74.9	99	116.2	139	154.9	179	191.9	219	227.7	259	262.4	299	296.4	339	329.7	379	362.4
20	NA	60	76.0	100	117.2	140	155.8	180	192.8	220	228.6	260	263.3	300	297.2	340	330.5	380	363.2
21	NA	61	77.1	101	118.2	141	156.8	181	193.7	221	229.4	261	264.2	301	298.1	341	331.3	381	364.0
22	NA	62	78.2	102	119.2	142	157.7	182	194.6	222	230.3	262	265.0	302	298.9	342	332.2	382	364.8
23	NA	63	79.2	103	120.2	143	158.7	183	195.5	223	231.2	263	265.9	303	299.8	343	333.0	383	365.6
24	NA	64	80.3	104	121.1	144	159.6	184	196.4	224	232.1	264	266.7	304	300.6	344	333.8	384	366.4
25	36.2	65	81.3	105	122.1	145	160.5	185	197.3	225	232.9	265	267.6	305	301.4	345	334.6	385	367.2
26	37.4	66	82.4	106	123.1	146	161.5	186	198.3	226	233.8	266	268.4	306	302.3	346	335.4	386	368.0
27	38.6	67	83.5	107	124.1	147	162.4	187	199.2	227	234.7	267	269.3	307	303.1	347	336.3	387	368.8
28	39.9	68	84.5	108	125.1	148	163.3	188	200.1	228	235.6	268	270.2	308	304.0	348	337.1	388	369.6
29	41.1	69	85.6	109	126.1	149	164.3	189	201.0	229	236.5	269	271.0	309	304.8	349	337.9	389	370.4
30	42.2	70	86.6	110	127.0	150	165.2	190	201.9	230	237.3	270	271.9	310	305.6	350	338.7	390	371.2
31	43.4	71	87.7	111	128.0	151	166.2	191	202.8	231	238.2	271	272.7	311	306.5	351	339.5	391	372.1
32	44.6	72	88.7	112	129.0	152	167.1	192	203.7	232	239.1	272	273.6	312	307.3	352	340.4	392	372.9
33	45.8	73	89.8	113	130.0	153	168.0	193	204.6	233	239.9	273	274.4	313	308.1	353	341.2	393	373.7
34	47.0	74	90.8	114	130.9	154	168.9	194	205.5	234	240.8	274	275.3	314	309.0	354	342.0	394	374.5
35	48.1	75	91.8	115	131.9	155	169.9	195	206.3	235	241.7	275	276.1	315	309.8	355	342.8	395	375.3
36	49.3	76	92.9	116	132.9	156	170.8	196	207.2	236	242.6	276	277.0	316	310.6	356	343.6	396	376.1
37	50.5	77	93.9	117	133.9	157	171.7	197	208.1	237	243.4	277	277.8	317	311.5	357	344.5	397	376.9
38	51.6	78	94.9	118	134.8	158	172.7	198	209.0	238	244.3	278	278.7	318	312.3	358	345.3	398	377.7
39	52.8	79	96.0	119	135.8	159	173.6	199	209.9	239	245.2	279	279.5	319	313.1	359	346.1	399	378.5
40	53.9	80	97.0	120	136.8	160	174.5	200	210.8	240	246.0	280	280.4	320	314.0	360	346.9	400	379.3

Chronic Water Quality Standards for dissolved Zinc
"Aquatic and Wildlife coldwater, warmwater, and edw"

Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L	Hard. mg/L	Std. ug/L
1	NA	41	55.50	81	98.82	121	138.85	161	176.86	201	213.45	241	248.93	281	283.52	321	317.36	361	350.57
2	NA	42	56.65	82	99.85	122	139.82	162	177.79	202	214.35	242	249.80	282	284.37	322	318.20	362	351.39
3	NA	43	57.79	83	100.89	123	140.79	163	178.72	203	215.25	243	250.68	283	285.23	323	319.04	363	352.21
4	NA	44	58.92	84	101.91	124	141.76	164	179.65	204	216.14	244	251.55	284	286.08	324	319.87	364	353.03
5	NA	45	60.06	85	102.94	125	142.73	165	180.58	205	217.04	245	252.43	285	286.93	325	320.71	365	353.85
6	NA	46	61.19	86	103.97	126	143.69	166	181.51	206	217.94	246	253.30	286	287.79	326	321.55	366	354.68
7	NA	47	62.31	87	104.99	127	144.66	167	182.43	207	218.83	247	254.17	287	288.64	327	322.38	367	355.50
8	NA	48	63.43	88	106.01	128	145.62	168	183.36	208	219.73	248	255.04	288	289.49	328	323.22	368	356.32
9	NA	49	64.55	89	107.03	129	146.59	169	184.28	209	220.62	249	255.91	289	290.34	329	324.05	369	357.14
10	NA	50	65.66	90	108.05	130	147.55	170	185.20	210	221.52	250	256.78	290	291.19	330	324.89	370	357.96
11	NA	51	66.78	91	109.07	131	148.51	171	186.13	211	222.41	251	257.65	291	292.04	331	325.72	371	358.78
12	NA	52	67.88	92	110.08	132	149.47	172	187.05	212	223.30	252	258.52	292	292.90	332	326.55	372	359.60
13	NA	53	68.99	93	111.09	133	150.43	173	187.97	213	224.20	253	259.39	293	293.74	333	327.39	373	360.41
14	NA	54	70.09	94	112.10	134	151.39	174	188.89	214	225.09	254	260.26	294	294.59	334	328.22	374	361.23
15	NA	55	71.19	95	113.11	135	152.34	175	189.81	215	225.98	255	261.13	295	295.44	335	329.05	375	362.05
16	NA	56	72.28	96	114.12	136	153.30	176	190.73	216	226.87	256	262.00	296	296.29	336	329.88	376	362.87
17	NA	57	73.37	97	115.13	137	154.25	177	191.65	217	227.76	257	262.86	297	297.14	337	330.72	377	363.69
18	NA	58	74.46	98	116.13	138	155.21	178	192.56	218	228.65	258	263.73	298	297.99	338	331.55	378	364.50
19	NA	59	75.55	99	117.14	139	156.16	179	193.48	219	229.54	259	264.60	299	298.83	339	332.38	379	365.32
20	NA	60	76.63	100	118.14	140	157.11	180	194.40	220	230.42	260	265.46	300	299.68	340	333.21	380	366.14
21	NA	61	77.71	101	119.14	141	158.06	181	195.31	221	231.31	261	266.33	301	300.53	341	334.04	381	366.95
22	NA	62	78.79	102	120.14	142	159.01	182	196.22	222	232.20	262	267.19	302	301.37	342	334.87	382	367.77
23	NA	63	79.87	103	121.14	143	159.96	183	197.14	223	233.08	263	268.05	303	302.22	343	335.70	383	368.58
24	NA	64	80.94	104	122.13	144	160.91	184	198.05	224	233.97	264	268.92	304	303.06	344	336.53	384	369.40
25	36.50	65	82.01	105	123.13	145	161.85	185	198.96	225	234.85	265	269.78	305	303.91	345	337.36	385	370.22
26	37.73	66	83.08	106	124.12	146	162.80	186	199.87	226	235.74	266	270.64	306	304.75	346	338.18	386	371.03
27	38.96	67	84.14	107	125.11	147	163.74	187	200.78	227	236.62	267	271.50	307	305.59	347	339.01	387	371.84
28	40.18	68	85.21	108	126.10	148	164.69	188	201.69	228	237.50	268	272.37	308	306.44	348	339.84	388	372.66
29	41.39	69	86.27	109	127.09	149	165.63	189	202.60	229	238.39	269	273.23	309	307.28	349	340.67	389	373.47
30	42.59	70	87.33	110	128.08	150	166.57	190	203.51	230	239.27	270	274.09	310	308.12	350	341.49	390	374.28
31	43.79	71	88.38	111	129.06	151	167.51	191	204.42	231	240.15	271	274.95	311	308.96	351	342.32	391	375.10
32	44.99	72	89.44	112	130.05	152	168.45	192	205.32	232	241.03	272	275.81	312	309.81	352	343.15	392	375.91
33	46.18	73	90.49	113	131.03	153	169.39	193	206.23	233	241.91	273	276.66	313	310.65	353	343.97	393	376.72
34	47.36	74	91.54	114	132.01	154	170.33	194	207.13	234	242.79	274	277.52	314	311.49	354	344.80	394	377.53
35	48.54	75	92.58	115	132.99	155	171.26	195	208.04	235	243.67	275	278.38	315	312.33	355	345.62	395	378.35
36	49.71	76	93.63	116	133.97	156	172.20	196	208.94	236	244.55	276	279.24	316	313.17	356	346.45	396	379.16
37	50.88	77	94.67	117	134.95	157	173.13	197	209.84	237	245.42	277	280.10	317	314.01	357	347.27	397	379.97
38	52.04	78	95.71	118	135.92	158	174.07	198	210.75	238	246.30	278	280.95	318	314.85	358	348.10	398	380.78
39	53.20	79	96.75	119	136.90	159	175.00	199	211.65	239	247.18	279	281.81	319	315.69	359	348.92	399	381.59
40	54.35	80	97.79	120	137.87	160	175.93	200	212.55	240	248.05	280	282.66	320	316.52	360	349.74	400	382.40

Water Quality Standards for Pentachlorophenol Acute Aquatic and Wildlife coldwater, warmwater and edw			
pH	ug/L	pH	ug/L
3	0.163	7	9.070
3.1	0.180	7.1	10.029
3.2	0.199	7.2	11.090
3.3	0.220	7.3	12.262
3.4	0.243	7.4	13.558
3.5	0.269	7.5	14.992
3.6	0.298	7.6	16.577
3.7	0.329	7.7	18.329
3.8	0.364	7.8	20.267
3.9	0.402	7.9	22.410
4	0.445	8	24.779
4.1	0.492	8.1	27.399
4.2	0.544	8.2	30.296
4.3	0.601	8.3	33.498
4.4	0.665	8.4	37.040
4.5	0.735	8.5	40.956
4.6	0.813	8.6	45.286
4.7	0.899	8.7	50.074
4.8	0.994	8.8	55.368
4.9	1.099	8.9	61.222
5	1.215	9	67.694
5.1	1.344	9.1	74.851
5.2	1.486	9.2	82.765
5.3	1.643	9.3	91.515
5.4	1.817	9.4	101.190
5.5	2.009	9.5	111.888
5.6	2.221	9.6	123.717
5.7	2.456	9.7	136.797
5.8	2.716	9.8	151.260
5.9	3.003	9.9	167.252
6	3.320	10	184.934
6.1	3.671	10.1	204.486
6.2	4.059	10.2	226.105
6.3	4.488	10.3	250.010
6.4	4.963	10.4	276.442
6.5	5.488	10.5	305.668
6.6	6.068	10.6	337.984
6.7	6.709	10.7	373.717
6.8	7.419	10.8	413.228
6.9	8.203	10.9	456.916
		11	505.223

Chronic Aquatic and Wildlife coldwater, warmwater and edw			
pH	ug/L	pH	ug/L
3	0.103	7	5.726
3.1	0.114	7.1	6.331
3.2	0.126	7.2	7.001
3.3	0.139	7.3	7.741
3.4	0.154	7.4	8.559
3.5	0.170	7.5	9.464
3.6	0.188	7.6	10.465
3.7	0.208	7.7	11.571
3.8	0.230	7.8	12.794
3.9	0.254	7.9	14.147
4	0.281	8	15.643
4.1	0.311	8.1	17.296
4.2	0.343	8.2	19.125
4.3	0.380	8.3	21.147
4.4	0.420	8.4	23.383
4.5	0.464	8.5	25.855
4.6	0.513	8.6	28.588
4.7	0.568	8.7	31.611
4.8	0.628	8.8	34.953
4.9	0.694	8.9	38.648
5	0.767	9	42.734
5.1	0.848	9.1	47.252
5.2	0.938	9.2	52.248
5.3	1.037	9.3	57.772
5.4	1.147	9.4	63.880
5.5	1.268	9.5	70.633
5.6	1.402	9.6	78.101
5.7	1.550	9.7	86.358
5.8	1.714	9.8	95.488
5.9	1.896	9.9	105.583
6	2.096	10	116.746
6.1	2.318	10.1	129.089
6.2	2.563	10.2	142.736
6.3	2.833	10.3	157.827
6.4	3.133	10.4	174.513
6.5	3.464	10.5	192.963
6.6	3.831	10.6	213.364
6.7	4.235	10.7	235.922
6.8	4.683	10.8	260.864
6.9	5.178	10.9	288.444
		11	318.939

Acute Aquatic and Wildlife ephemeral			
pH	ug/L	pH	ug/L
3	0.660	7	36.760
3.1	0.730	7.1	40.646
3.2	0.807	7.2	44.943
3.3	0.892	7.3	49.695
3.4	0.986	7.4	54.949
3.5	1.091	7.5	60.758
3.6	1.206	7.6	67.182
3.7	1.334	7.7	74.284
3.8	1.475	7.8	82.138
3.9	1.631	7.9	90.822
4	1.803	8	100.424
4.1	1.994	8.1	111.041
4.2	2.204	8.2	122.781
4.3	2.437	8.3	135.762
4.4	2.695	8.4	150.115
4.5	2.980	8.5	165.985
4.6	3.295	8.6	183.534
4.7	3.643	8.7	202.938
4.8	4.029	8.8	224.393
4.9	4.454	8.9	248.117
5	4.925	9	274.349
5.1	5.446	9.1	303.354
5.2	6.022	9.2	335.426
5.3	6.659	9.3	370.888
5.4	7.363	9.4	410.100
5.5	8.141	9.5	453.457
5.6	9.002	9.6	501.398
5.7	9.953	9.7	554.408
5.8	11.006	9.8	613.021
5.9	12.169	9.9	677.832
6	13.456	10	749.495
6.1	14.878	10.1	828.735
6.2	16.451	10.2	916.351
6.3	18.191	10.3	1013.231
6.4	20.114	10.4	1120.354
6.5	22.240	10.5	1238.802
6.6	24.591	10.6	1369.773
6.7	27.191	10.7	1514.590
6.8	30.066	10.8	1674.718
6.9	33.245	10.9	1851.775
		11	2047.552

A&Ww - ACUTE

Total Ammonia mg N/liter (or mg NH3 N/liter)

	Temperature in Degrees Celsius															
pH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	pH
6.5	29	28	28	27	27	27	27	26	26	26	25	25	25	25	25	6.5
6.6	28	27	27	27	26	26	26	25	25	25	25	25	24	24	24	6.6
6.7	27	27	26	26	26	25	25	25	24	24	24	24	23	23	23	6.7
6.8	26	25	25	25	24	24	24	24	23	23	23	23	23	22	22	6.8
6.9	25	24	24	24	23	23	23	22	22	22	22	22	21	21	21	6.9
7.0	23	23	22	22	22	22	21	21	21	21	20	20	20	20	20	7.0
7.1	22	21	21	21	20	20	20	20	19.5	19.3	19.1	18.9	18.8	18.6	18.5	7.1
7.2	20	20	19.2	19.0	18.8	18.5	18.4	18.1	17.9	17.8	17.6	17.5	17.3	17.2	17.0	7.2
7.3	18.0	17.8	17.5	17.3	17.1	16.9	16.7	16.5	16.3	16.2	16.0	15.9	15.8	15.6	15.5	7.3
7.4	16.2	16.0	15.7	15.5	15.3	15.1	15.0	14.8	14.7	14.5	14.4	14.3	14.1	14.0	13.9	7.4
7.5	14.3	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.8	12.7	12.6	12.5	12.4	12.4	7.5
7.6	12.5	12.3	12.2	12.0	11.9	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	7.6
7.7	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.6	9.5	9.5	9.3	7.7
7.8	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.1	8.0	7.8
7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	6.9	6.8	6.8	7.9
8.0	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	5.8	5.7	5.7	8.0
8.1	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.6	8.1
8.2	4.2	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	8.2
8.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9	2.9	8.3
8.4	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	8.4
8.5	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.95	1.94	1.93	1.92	1.91	1.90	1.90	8.5
8.6	1.68	1.66	1.65	1.63	1.61	1.60	1.59	1.58	1.57	1.56	1.55	1.55	1.54	1.54	1.54	8.6
8.7	1.35	1.33	1.32	1.31	1.30	1.29	1.28	1.27	1.26	1.26	1.25	1.25	1.25	1.25	1.25	8.7
8.8	1.08	1.07	1.06	1.05	1.04	1.04	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.02	1.02	8.8
8.9	0.87	0.86	0.86	0.85	0.84	0.84	0.84	0.83	0.83	0.83	0.83	0.83	0.84	0.84	0.84	8.9
9.0	0.70	0.70	0.69	0.69	0.69	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.69	0.69	0.70	9.0

NOTES:

1. pH and temperature are field measurements taken at the same time and location as the water samples destined for the laboratory analysis of ammonia.

2. If field measured pH and/or temperature values fall between the A&Ww Acute Total Ammonia tabular values, round field measured values according to standard scientific rounding procedures to nearest tabular value to determine the ammonia standard.

A&Ww - ACUTE

Total Ammonia mg N/liter (or mg NH3 N/liter) (cont.)

pH	Temperature in Degrees Celsius 15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 and above	pH
6.5	24	24	24	24	24	24	24	24	24	24	23	22	20	19.1	17.8	16.6	6.5
6.6	24	24	23	23	23	23	23	23	23	23	23	21	20	18.5	17.3	16.1	6.6
6.7	23	23	23	23	22	22	22	22	22	22	22	21	19.2	17.9	16.7	15.6	6.7
6.8	22	22	22	22	22	21	21	21	21	21	21	20	18.4	17.2	16.1	15.0	6.8
6.9	21	21	21	21	21	20	20	20	20	20	20	18.8	17.5	16.4	15.3	14.3	6.9
7.0	20	20	20	19.4	19.3	19.2	19.2	19.1	19.1	19.0	19.0	17.7	16.5	15.4	14.4	13.4	7.0
7.1	18.4	18.3	18.2	18.1	18.0	17.9	17.9	17.8	17.8	17.7	17.7	16.5	15.4	14.4	13.4	12.6	7.1
7.2	16.9	16.8	16.7	16.7	16.6	16.5	16.5	16.4	16.4	16.4	16.3	15.2	14.2	13.3	12.4	11.6	7.2
7.3	15.4	15.3	15.2	15.2	15.1	15.0	15.0	15.0	14.9	14.9	14.9	13.9	12.9	12.0	11.3	10.6	7.3
7.4	13.8	13.8	13.7	13.6	13.6	13.5	13.5	13.5	13.4	13.4	13.4	12.5	11.6	10.9	10.2	9.5	7.4
7.5	12.3	12.2	12.2	12.1	12.1	12.0	12.0	12.0	11.9	11.9	11.9	11.1	10.4	9.7	9.1	8.5	7.5
7.6	10.8	10.7	10.6	10.6	10.5	10.5	10.5	10.4	10.4	10.4	10.5	9.8	9.1	8.5	8.0	7.4	7.6
7.7	9.3	9.2	9.2	9.2	9.1	9.1	9.1	9.1	9.1	9.1	9.1	8.5	7.9	7.4	6.9	6.5	7.7
7.8	8.0	7.9	7.9	7.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.3	6.8	6.4	6.0	5.6	7.8
7.9	6.7	6.7	6.7	6.7	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.2	5.8	5.4	5.1	4.8	7.9
8.0	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.2	4.9	4.6	4.3	4.0	8.0
8.1	4.5	4.5	4.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.2	4.0	3.7	3.5	3.3	8.1
8.2	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7	3.4	3.2	3.0	2.8	2.7	8.2
8.3	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	2.8	2.6	2.5	2.3	2.2	8.3
8.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.1	2.0	1.90	1.80	8.4
8.5	1.90	1.90	1.90	1.90	1.91	1.92	1.92	1.93	1.95	1.96	1.99	1.86	1.77	1.66	1.57	1.49	8.5
8.6	1.54	1.54	1.55	1.55	1.56	1.57	1.58	1.58	1.60	1.62	1.63	1.55	1.46	1.38	1.31	1.24	8.6
8.7	1.25	1.26	1.26	1.27	1.28	1.29	1.30	1.31	1.33	1.34	1.36	1.29	1.22	1.16	1.10	1.05	8.7
8.8	1.03	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.11	1.12	1.14	1.09	1.03	0.98	0.94	0.90	8.8
8.9	0.85	0.85	0.86	0.87	0.88	0.89	0.91	0.92	0.93	0.95	0.97	0.93	0.88	0.84	0.81	0.77	8.9
9.0	0.70	0.71	0.72	0.73	0.74	0.75	0.77	0.78	0.80	0.81	0.83	0.80	0.76	0.73	0.70	0.68	9.0

NOTES:

1. pH and temperature are field measurements taken at the same time and location as the water samples destined for the laboratory analysis of ammonia.

2. If field measured pH and/or temperature values fall between the A&Ww Acute Total Ammonia tabular values, round field measured values according to standard scientific rounding procedures to nearest tabular value to determine the ammonia standard.

Acute Criteria for Total Ammonia (in mg N / L)		
pH	**A&Wc**	**A&Ww**
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Chronic Criteria for Total Ammonia in mg N / L for A&Wc, and A&Ww Designated Uses										
pH	Temperature, °C									
	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.33	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Appendix B.List of Surface Waters and Designated Uses
Abbreviations
River Basins
~~(Correspond to State Water Quality Assessment Report~~
BW = Bill Williams
CM = Colorado Mainstem (includes Red Lake)
LC = Little Colorado
MG = Middle Gila (includes Gila River below San Carlos Indian Reservation, Salt River below Granite Reef Dam and Phoenix area waterbodies)
RM = Rios de Mexico (includes Rio Magdalena, Rio Sonoita, and Rio Yaqui Basins)
SC = Santa Cruz
SP = San Pedro
SR = Salt River (includes Salt River and tributaries above Granite Reef Dam)
UG = Upper Gila (includes Gila River and tributaries above San Carlos Indian Reservation)
VR = Verde River
WP = Wilcox Playa
Designated Uses
A&Wc = Aquatic and Wildlife cold water
A&Ww = Aquatic and Wildlife warm water
A&We = Aquatic and Wildlife ephemeral
A&Wedw = Aquatic and Wildlife effluent dependent water
FBC = ~~Full body~~ Full-body Contact
PBC = ~~Partial body~~ Partial-body Contact
DWS = Domestic Water Source
FC = Fish Consumption
AgI = Agricultural Irrigation

AgL = Agricultural Livestock Watering

Other

U = Unique Water

EDW = Effluent-dependent Water

WWTP = Wastewater Treatment Plant

Km = kilometers

BASIN	SEGMENT	LOCATION	A&Wc	A&Ww	A&We	A&Wedw	FBC	PBC	DWS	FC	AgI	AgL
BW	Alamo Lake	34°14'45"/113°35'00"		A&Ww			FBC			FC		AgL
BW	Big Sandy River	~~Aquarius & Hualapai Mountains~~ Tributary to the Santa Maria River at 34°18'36"/113°31'34"		A&Ww			FBC			FC		AgL
BW	Bill Williams River	~~Buckskin & Rawhide Mountains~~ Tributary to the Colorado River at 34°18'04"/114°08'10"		A&Ww			FBC			FC		AgL
BW	Blue Tank	34°40'14"/112°58'16"		A&Ww			FBC			FC		AgL
BW	Boulder Creek	~~Tributary to Burro Creek~~ Headwaters to confluence with unnamed tributary at 34°41'14"/113°03'34"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
BW	Boulder Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
BW	Burro Creek (Unique Water)	Headwaters to confluence with Boulder Creek at 34°36'47"/ 113°18'00"		A&Ww			FBC			FC		AgL
BW	Burro Creek	Below confluence with Boulder Creek		A&Ww			FBC			FC		AgL
BW	Conger Creek	~~Tributary to Burro Creek~~ Headwaters to confluence with unnamed tributary at 34°45'13"/113°05'45"	A&Wc	~~A&Ww~~			FBC			FC		AgL
BW	Conger Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
BW	Coors Lake	34°36'20"/113°11'25"		A&Ww			FBC			FC		
BW	Copper Basin Wash	Headwaters to confluence with unnamed tributary at 34°28'11"/ 112°35'31"	A&Wc	~~A&Ww~~			FBC			FC		AgL
BW	Copper Basin Wash	Below confluence with unnamed tributary			A&We			PBC				AgL
BW	Cottonwood Canyon	~~Tributary to the Santa Maria River~~ Headwaters to Bear Trap Spring at 34°45'10"/112°52'32"	A&Wc	~~A&Ww~~			FBC			FC		AgL
BW	Cottonwood Canyon	Below Bear Trap Spring		A&Ww			FBC			FC		AgL
BW	Date Creek	Tributary to the Santa Maria River at 34°18'11"/113°29'53"		A&Ww			FBC			FC		AgL
BW	Francis Creek (Unique Water)	Tributary to Burro Creek at 34°44'28"/113°14'35"		A&Ww			FBC		DWS	FC	AgI	AgL
BW	Kirkland Creek	Tributary to Santa Maria River at 34°32'02"/112°59'38"		A&Ww			FBC			FC	AgI	AgL
BW	Knight Creek	~~East of Hualapai Mountains~~ Tributary to the Big Sandy River at 34°55'16"/113°37'30"		A&Ww			FBC			FC		AgL
BW	Peoples Canyon (Unique Water)	Tributary to the Santa Maria River at 34°20'35"/113°15'11"		A&Ww			FBC			FC		AgL
BW	Santa Maria River	Tributary to ~~Alamo Lake~~ the Bill Williams River at 34°18'36"/ 113°31'34"		A&Ww			FBC			FC	AgI	AgL
BW	Trout Creek	~~Tributary to Big Sandy River~~ Headwaters to confluence with unnamed tributary at 35°06'47"/113°13'01"	A&Wc	~~A&Ww~~			FBC			FC		AgL
BW	Trout Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
CM	A-10 Backwater	33°31'38"/114°33'19"		A&Ww			FBC			FC		
CM	A-7 Backwater	33°34'39"/114°39'42"		A&Ww			FBC			FC		
CM	Adobe Lake	33°02'39"/114°39'19"		A&Ww			FBC			FC		
CM	Agate Canyon Creek	Grand Canyon, tributary to the Colorado River at 36°08'38"/ 112°16'48"	~~A&We~~	A&Ww			FBC			FC		
CM	Beaver Dam Wash	Tributary to the Virgin River at 36°53'42"/113°55'09"		A&Ww			FBC			FC		AgL

CM	Big Springs Tank	36°36'10"/112°20'58"	A&Wc				FBC			FC		AgL
CM	Boucher Creek	Grand Canyon, tributary to the Colorado River at 36°06'54"/112°13'44"	~~A&We~~	A&Ww			FBC			FC		
CM	Bright Angel Creek	Headwaters to confluence with Roaring Springs Canyon at 36°11'34"/112°01'54"	A&Wc				FBC			FC		
CM	Bright Angel Creek	Below confluence with Roaring Spring Canyon		A&Ww			FBC			FC		
CM	Bright Angel Wash (EDW)	South rim WWTP outfall to Coconino Wash				A&Wedw		PBC				AgL
CM	~~Bull Rush~~ Bulrush Canyon Wash	Tributary to Kanab Creek at 36°46'55"/112°37'08"			A&We			PBC				
CM	Cataract Creek	Headwaters to Santa Fe Reservoir	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Cataract Creek	Santa Fe Reservoir to Williams WWTP outfall	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
CM	Cataract Creek (EDW)	Williams WWTP outfall to 1 km downstream				A&Wedw		PBC				
CM	Cataract Creek	Below 1 km downstream of Williams WWTP outfall to confluence of Red Lake Wash	A&Wc	~~A&Ww~~			FBC			FC		AgL
CM	Cataract Creek	Red Lake Wash to Havasupai Reservation			A&We			PBC				AgL
CM	Cataract Lake	35°15'05"/112°12'58"	A&Wc				FBC		DWS	FC		AgL
CM	Chuar Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°11'36"/111°52'17"	A&Wc				FBC			FC		
CM	Chuar Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Cibola Lake	33°14'20"/114°40'16"		A&Ww			FBC			FC		
CM	City Reservoir	35°13'57"/112°11'23"	A&Wc				FBC		DWS	FC		
CM	Clear Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°09'12"/111°58'25"	A&Wc				FBC			FC		
CM	Clear Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Clear Lake	33°01'57"/114°31'26"		A&Ww			FBC			FC		
CM	Colorado River	Lake Powell to Topock	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Colorado River	Topock to ~~Imperial~~ Morelos Dam		A&Ww			FBC		DWS	FC	AgI	AgL
~~CM~~	~~Colorado River~~	~~Imperial Dam to Mexico~~		~~A&Ww~~			~~FBC~~			~~FC~~	~~AgI~~	~~AgL~~
CM	Cottonwood Creek	Headwaters to confluence with unnamed tributary at 35°20'45.5"/113°35'31"	A&Wc	~~A&Ww~~			FBC			FC		AgL
CM	Cottonwood Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
CM	Crystal Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°13'42"/112°11'48"	A&Wc				FBC			FC		
CM	Crystal Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Deer Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°26'16"/112°28'15.5"	A&Wc				FBC			FC		
CM	Deer Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Detrital Wash	Tributary to Lake Mead at 36°02'20"/114°27'47"			A&We			PBC				
CM	Dogtown Reservoir	35°12'40"/112°07'46"	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Dragon Creek	Grand Canyon; headwaters to confluence with Milk Creek at 36°12'25"/112°09'33"	A&Wc	~~A&Ww~~			FBC			FC		
CM	Dragon Creek	Below confluence with Milk Creek		A&Ww			FBC			FC		
CM	Garden Creek	Grand Canyon, tributary to Pipe Creek at 36°05'35"/112°06'40"	~~A&We~~	A&Ww			FBC			FC		
CM	Gonzalez Lake	35°15'26"/112°12'07"	A&Wc				FBC			FC	AgI	AgL
CM	Grand Wash	Tributary to Lake Mead at 36°15'29"/114°00'18"			A&We			PBC				

CM	Grapevine Creek	Grand Canyon; tributary to the Colorado River at 36°03'29"/112°00'00"	~~A&We~~	A&Ww			FBC			FC		
CM	Grapevine Wash	Tributary to Lake Mead at 36°06'29"/114°00'07"			A&We			PBC				
CM	Hakatai Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°14'42"/112°22'59"	~~A&We~~	A&Ww			FBC			FC		
CM	Hance Creek	Grand Canyon; tributary to the Colorado River at 36°02'46"/111°57'07"	~~A&We~~	A&Ww			FBC			FC		
CM	Havasu Canyon Creek	Below the Havasupai Indian Reservation; tributary to the Colorado River at 36°18'29"/112°45'43"		A&Ww			FBC			FC		
CM	Hermit Creek	Grand Canyon; headwaters to Hermit Pack Trail crossing at 36°03'23"/112°13'25"	A&Wc				FBC			FC		
CM	Hermit Creek	Below Hermit Pack Trail crossing		A&Ww			FBC			FC		
CM	Holy Moses Wash (EDW)	Kingman WWTP outfall to 3 km downstream				A&Wedw		PBC				
CM	Horn Creek	Grand Canyon; tributary to the Colorado River at 36°05'56"/112°07'59"	~~A&We~~	A&Ww			FBC			FC		
CM	Hualapai Wash	Tributary to ~~the Colorado River~~ Lake Mead at 36°00'40"/114°07'37"			A&We			PBC				
CM	Hunter's Hole Backwater	32°31'15"/114°48'03"		A&Ww			FBC			FC		AgL
CM	Imperial Reservoir	32°53'04"/114°27'40"		A&Ww			FBC		DWS	FC	AgI	AgL
CM	Island Lake	33°01'52"/114°35'07"		A&Ww			FBC			FC		
CM	Jacob Lake	36°42'26"/112°13'48"		A&Ww			FBC			FC		
CM	Kaibab Lake	35°17'04"/112°09'17"	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Kanab Creek	Kanab Plateau; ~~northwestern Arizona~~ ; tributary to the Colorado River at 36°23'31"/112°37'44"		A&Ww			FBC		DWS	FC		AgL
CM	Kwagunt Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°13'29"/111°55'24"	A&Wc				FBC			FC		
CM	Kwagunt Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Laguna Reservoir	32°51'15"/114°28'38"		A&Ww			FBC		DWS	FC	AgI	AgL
CM	Lake Havasu	34°18'15"/114°08'15"		A&Ww			FBC		DWS	FC	AgI	AgL
CM	Lake Mead	36°01'00"/114°44'15"	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Lake Mohave	35°11'45"/114°34'00"	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Lake Powell	36°57'00"/111°29'15"	A&Wc				FBC		DWS	FC	AgI	AgL
CM	Lonetree Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°04'48"/112°01'52"		A&Ww			FBC			FC		
CM	Martinez Lake	32°58'52"/114°28'23"		A&Ww			FBC			FC	AgI	AgL
CM	Matkatamiba Creek	~~Grand Canyon, South Rim~~ Below Havasupai Indian Reservation; tributary to the Colorado River at 36°20'38"/112°40'19"	~~A&We~~	A&Ww			FBC			FC		
CM	Mittry Lake	32°49'11"/114°27'41"		A&Ww			FBC			FC		
CM	Mohave Wash	Tributary to Lake Havasu at 33°28'55"/114°35'56"			A&We			PBC				
CM	Monument Creek	Grand Canyon; tributary to the Colorado River at 36°05'53"/112°10'55"		A&Ww			FBC			FC		
CM	Nankoweap Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°15'30"/111°57'23"	A&Wc				FBC			FC		
CM	Nankoweap Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	National Canyon Creek	Grand Canyon; those reaches not located on the Hualapai Indian Reservation	~~A&We~~	A&Ww			FBC			FC		

CM	North Canyon Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°33'57"/111°55'39"	A&Wc				FBC			FC		
CM	North Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Nortons Lake	33°02'35"/114°37'58"		A&Ww			FBC			FC		
CM	Olo Creek	Grand Canyon; tributary to the Colorado River at 36°22'16"/ 112°38'56"		A&Ww			FBC			FC		
CM	Parashant Canyon	Headwaters to confluence with unnamed tributary at 36°21'26"/ 113°28'10"	A&Wc				FBC			FC		
CM	Parashant Canyon	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Paria River	Paria Plateau; ~~Northern AZ Border~~ tributary to the Colorado River at 36°51'29"/111°36'04"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Phantom Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°10'04"/112°07'50"	A&Wc				FBC			FC		
CM	Phantom Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Pipe Creek	Grand Canyon; tributary to the Colorado River at 36°05'56"/ 112°06'36"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Pretty Water Lake	33°19'45"/114°42'15"		A&Ww			FBC			FC		
CM	Quigley Ponds	32°43'00"/113°58'00"		A&Ww			FBC			FC		
CM	Red Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°02'42"/ 111°55'08"		A&Ww			FBC			FC		
CM	Red Lake	35°40'00"/114°03'45"		A&Ww			FBC			FC		AgL
CM	Redondo Lake	32°44'32"/114°29'02"		A&Ww			FBC			FC		
CM	Roaring Springs	Headwaters of Roaring Springs Creek	A&Wc				FBC		DWS	FC		
CM	Roaring Springs Canyon	Grand Canyon; tributary to Bright Angel Creek at 36°11'35"/ 112°01'55"	A&Wc				FBC			FC		
CM	Rock Canyon	Tributary to Truxton Wash at 35°26'56"/113°36'29"			A&We			PBC				
CM	Royal Arch Creek	Grand Canyon; tributary to the Colorado River at 36°11'53"/ 112°26'56"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Ruby Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°11'24"/ 112°18'54"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Russell Tank	34°52'22"/111°52'44"	A&Wc				FBC			FC		AgL
CM	Sacramento Wash	Tributary to Topock Marsh at 34°43'48"/114°29'13"			A&We			PBC				
CM	Saddle Canyon Creek	Marble Canyon; headwaters to confluence with unnamed tributary at 36°21'35.5"/112°22'46"	A&Wc				FBC			FC		
CM	Saddle Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Santa Fe Reservoir	35°14'26"/112°11'04"	A&Wc				FBC		DWS	FC		
CM	Sapphire Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°08'49"/ 112°17'28"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Sawmill Canyon	Headwaters to abandoned gaging station at 35°09'46.5"/113°57'51"		A&Ww			FBC			FC		AgL
CM	Sawmill Canyon	Below abandoned gaging station			A&We			PBC				AgL
CM	Serpentine Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°12'22"/ 112°19'37"	~~A&Wc~~	A&Ww			FBC			FC		
CM	Shinumo Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°18'21"/112°18'03"	A&Wc				FBC			FC		
CM	Shinumo Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
CM	Short Creek	Tributary to the Virgin River at 36°58'23"/113°16'08"			A&We			PBC				

CM	Slate Creek	Grand Canyon; tributary to the Colorado River at 36°08'06"/ 112°14'42"	~~A&We~~	A&Ww			FBC			FC		
CM	Spring Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°01'08"/ 113°21'00"	~~A&We~~	A&Ww			FBC			FC		
CM	Stone Creek	Grand Canyon; tributary to the Colorado River at 36°20'49"/ 112°27'14"	~~A&We~~	A&Ww			FBC			FC		
CM	Tapeats Creek	Grand Canyon; tributary to the Colorado River at 36°22'16"/ 112°28'05"	A&Wc				FBC			FC		
CM	Thunder River	Tributary to Tapeats Creek at 36°23'31"/112°27'00"	A&Wc				FBC			FC		~~AgL~~
CM	Topock Marsh	34°47'30"/114°31'00"		A&Ww			FBC		DWS	FC	AgI	AgL
CM	Trail Canyon Creek	Grand Canyon; tributary to the Colorado River at 35°50'20"/ 113°19'37"	~~A&We~~	A&Ww			FBC			FC		
CM	Transept Canyon (EDW)	North Rim WWTP outfall to 1 km downstream				A&Wedw		PBC				
CM	Travertine ~~Falls~~ Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°06'11"/ 112°13'05"	~~A&We~~	A&Ww			FBC			FC		
CM	Truxton Wash	Tributary to Red Lake Playa at 35°37'23"/114°03'00"			A&We			PBC				
CM	Turquoise Canyon Creek	Grand Canyon; tributary to the Colorado River at 36°09'14"/ 112°18'07"	~~A&We~~	A&Ww			FBC			FC		
CM	Unkar Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°07'54"/111°54'03"	A&Wc				FBC			FC		
CM	Unkar Creek	Below conf with unnamed tributary		A&Ww			FBC			FC		
CM	Vasey's Paradise	Grand Canyon; 36°26'49"/ 111°50'46"	A&Wc				FBC			FC		
CM	Virgin River	Tributary to the Colorado River at 36°47'28"/114°06'11"		A&Ww			FBC			FC	AgI	AgL
CM	Vishnu Creek	Grand Canyon; tributary to the Colorado River at 36°03'18"/ 111°59'42"	~~A&We~~	A&Ww			FBC			FC		
CM	Warm Springs Creek	Grand Canyon; tributary to the Colorado River at 36°11'49"/ 113°04'55"		A&Ww			FBC			FC		
CM	Wellton Canal	Yuma Canal System							DWS		AgI	AgL
CM	Wellton Ponds	32°42'15"/114°06'15"		A&Ww			FBC			FC		
CM	West Cataract Creek	Tributary to Cataract ~~Lake~~ Creek at 35°15'40"/112°11'38"	A&Wc				FBC			FC		AgL
CM	White Creek	Grand Canyon; headwaters to confluence with unnamed tributary at 36°18'42"/112°21'03"	A&Wc	~~A&Ww~~			FBC			FC		
CM	White Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		
~~CM~~	~~Wia Manua Park Lake~~	~~In Kingman~~		~~A&Ww~~			~~FBC~~			~~FC~~		
CM	Wright Canyon Creek	Headwaters to confluence with unnamed tributary at 35°20'54"/ 113°30'35"	A&Wc	~~A&Ww~~			FBC			FC		AgL
CM	Wright Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
CM	YPG Pond	32°50'22"/114°26'25"		A&Ww			FBC			FC		
CM	Yuma Area Canals	Above municipal water treatment plant intakes							DWS		AgI	AgL
CM	Yuma Area Canals	Below municipal water treatment plant intakes and all drains									AgI	AgL
LC	Als Lake	35°02'17"/111°25'13"		A&Ww			FBC			FC		AgL
LC	Ashurst Lake	35°01'10"/111°24'09"	A&Wc				FBC			FC	AgI	AgL
LC	Atcheson Reservoir	34°00'00"/109°20'41"		A&Ww			FBC			FC	AgI	AgL
LC	Auger Creek	Tributary to Nutrioso Creek at 33°57'22"/109°12'58"	A&Wc				FBC			FC		AgL
LC	Barbershop Canyon Creek	Tributary to East Clear Creek at 34°33'00"/111°09'43"	A&Wc				FBC			FC		AgL

LC	Bear Canyon Creek	Tributary to ~~Blue Ridge Reservoir~~ General Springs Canyon at 34°32'18"/111°12'15"	A&Wc				FBC			FC		AgL
LC	Bear Canyon Creek	Tributary to Willow Creek at 34°27'29"/111°00'00"	A&Wc				FBC			FC		AgL
LC	Bear Canyon Lake	34°24'10"/111°00'09"	A&Wc				FBC			FC	AgI	AgL
LC	Becker Lake	34°09'16"/109°18'18"	A&Wc				FBC			FC		AgL
LC	Billy Creek	Tributary to Show Low Creek at 34°12'25"/110°00'00"	A&Wc				FBC			FC		AgL
LC	Black Canyon Creek	Tributary to Chevelon Creek at 34°47'38"/110°36'22"	A&Wc				FBC			FC	AgI	AgL
LC	Black Canyon Lake	34°19'50"/110°41'59"	A&Wc				FBC		DWS	FC	AgI	AgL
LC	Blue Ridge Reservoir	34°33'15"/111°11'01"	A&Wc				FBC			FC	AgI	AgL
LC	Boot Lake	34°58'53"/111°20'00"		A&Ww			FBC			FC		AgL
LC	Buck Springs Canyon Creek	Tributary to Leonard Canyon Creek at 34°28'52"/111°05'24"	A&Wc				FBC			FC		AgL
LC	Bunch Reservoir	34°02'12"/109°26'45"	A&Wc				FBC			FC	AgI	AgL
LC	Camillo Tank	34°55'03"/111°22'41"		A&Ww			FBC			FC		AgL
LC	Carnero Lake	34°06'57"/109°31'39"	A&Wc				FBC			FC		AgL
LC	Chevelon Canyon Lake	34°30'39"/110°49'28"	A&Wc				FBC			FC	AgI	AgL
LC	Chevelon Creek	Tributary to the Little Colorado River at 34°57'04"/110°31'30"	A&Wc				FBC			FC	AgI	AgL
LC	Chevelon Creek, West Fork	Tributary to Chevelon Creek at 34°36'58"/110°46'05"	A&Wc				FBC			FC		AgL
LC	Chilson Tank	34°51'46"/111°22'52"		A&Ww			FBC			FC		AgL
LC	Cholla Lake	34°56'00"/110°17'12"		A&Ww			FBC			FC		~~AgL~~
LC	Clear Creek	~~Mogollon Plateau; east of Winslow~~ Tributary to the Little Colorado River at 34°59'13"/110°38'17"	A&Wc				FBC		DWS	FC		AgL
LC	Clear Creek Reservoir	34°58'10"/110°38'33"	A&Wc				FBC		DWS	FC	AgI	AgL
LC	Coconino Reservoir	35°00'16"/111°23'52"	A&Wc				FBC			FC	AgI	AgL
LC	Colter Creek	Tributary to Nutrioso Creek at 33°58'19"/109°12'29"	A&Wc				FBC			FC		AgL
LC	Colter Reservoir	33°56'40"/109°28'50"	A&Wc				FBC			FC		AgL
LC	Concho Creek	Tributary to Carrizo Wash at 34°36'25"/109°33'54"	A&Wc	~~A&Ww~~			FBC			FC		AgL
LC	Concho Lake	34°26'36"/109°37'40"	A&Wc				FBC			FC	AgI	AgL
LC	Cow Lake	34°53'19"/111°18'49"		A&Ww			FBC			FC		AgL
LC	Coyote Creek	Tributary to ~~Upper~~ the Little Colorado River at 34°18'22"/109°20'53"	A&Wc				FBC			FC	AgI	AgL
LC	Crisis Lake (Snake Tank #2)	34°47'51"/111°17'01"		A&Ww			FBC			FC		AgL
LC	Dane Canyon Creek	Tributary to Barbershop Canyon Creek at 34°30'29"/111°09'07"	A&Wc				FBC			FC		AgL
LC	Daves Tank	34°44'23"/111°17'08"		A&Ww			FBC			FC		AgL
LC	Deep Lake	35°03'30"/111°24'55"		A&Ww			FBC			FC		AgL
LC	Dry Lake (EDW)	34°37'52"/110°23'40"				A&Wedw		PBC				
LC	Ducksnest Lake	34°59'15"/111°23'53"		A&Ww			FBC			FC		AgL
LC	East Clear Creek	Tributary to Clear Creek ~~Reservoir~~ at 34°38'31"/110°59'49"	A&Wc				FBC			FC	AgI	AgL
LC	Ellis Wiltbank Reservoir	34°05'25"/109°28'24"		A&Ww			FBC			FC	AgI	AgL
LC	Fish Creek	Tributary to the Little Colorado River at 34°04'05"/109°26'49"	A&Wc				FBC			FC		AgL
LC	Fool's Hollow Lake	34°16'14"/110°04'15"	A&Wc				FBC			FC		AgL
LC	General Springs Canyon Creek	Tributary to ~~Blue Ridge Reservoir~~ East Clear Creek at 34°32'17"/111°12'18"	A&Wc				FBC			FC		AgL
LC	Geneva Reservoir	34°01'44"/109°31'44"		A&Ww			FBC			FC		AgL
LC	Hall Creek	Tributary to ~~White Mountain Reservoir~~ the Little Colorado River at 34°03'58"/109°27'07"	A&Wc				FBC			FC	AgI	AgL
LC	Hart Canyon Creek	Tributary to Willow Creek at 34°30'40"/110°59'28"	A&Wc				FBC			FC		AgL

LC	Hay Lake	34°00’11”/109°25’55”		A&Ww			FBC			FC		AgL
LC	Hog Wallow Lake	33°58’57”/109°25’38”		A&Ww			FBC			FC	AgI	AgL
LC	Horse Lake	35°03’53”/111°27’51”		A&Ww			FBC			FC		AgL
LC	Huffer Tank	34°27’45”/111°23’09”		A&Ww			FBC			FC		AgL
LC	Hulsey Creek	Tributary to Nutrioso Creek at 33°56’28”/109°11’28”	A&Wc				FBC			FC		AgL
LC	Hulsey Lake	33°55’57”/109°09’33”	A&Wc				FBC			FC		AgL
LC	Indian Lake	35°00’38”/111°22’37”		A&Ww			FBC			FC		AgL
LC	Jack’s Canyon Creek	Tributary to the Little Colorado River at 35°00’07”/110°39’07”	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
LC	Jarvis Lake	33°58’59”/109°12’33”		A&Ww			FBC			FC		AgL
LC	Kinnikinick Lake	34°53’52”/111°18’20”	A&Wc				FBC			FC		AgL
LC	Knoll Lake	34°25’38”/111°05’10”	A&Wc				FBC			FC		AgL
LC	Lake Humphreys (EDW)	35°11’51”/111°35’16”				A&Wedw		PBC				
LC	Lake Mary, Lower	35°06’22”/111°34’20”	A&Wc				FBC			FC		AgL
LC	Lake Mary, Upper	35°04’45”/111°31’56”	A&Wc				FBC		DWS	FC		AgL
LC	Lake of the Woods	34°09’39”/109°58’45”	A&Wc				FBC			FC	AgI	AgL
LC	Lee Valley Creek (UW)	Headwaters to Lee Valley Reservoir	A&Wc				FBC			FC		
LC	Lee Valley Creek	~~Tributary to Colter Reservoir~~ From Lee Valley Reservoir to the East Fork of the Little Colorado River at 33°56’35”/109°29’06”	A&Wc				FBC			FC		AgL
LC	Lee Valley Reservoir	33°56’30”/109°30’00”	A&Wc				FBC			FC	AgI	AgL
LC	Leonard Canyon Creek	Tributary to ~~East~~ Clear Creek at 34°37’26”/111°02’20”	A&Wc				FBC			FC		AgL
LC	Leonard Canyon Creek, East Fork	Tributary to Leonard Canyon Creek at 34°25’52”/111°05’06”	A&Wc				FBC			FC		AgL
LC	Leonard Canyon Creek, Middle Fork	Tributary to Leonard Canyon, West Fork at 34°26’17”/111°06’47”	A&Wc				FBC			FC		AgL
LC	Leonard Canyon Creek, West Fork	Tributary to Leonard Canyon, East Fork at 34°28’01”/111°05’28”	A&Wc				FBC			FC		AgL
LC	Lily Creek	~~Escudilla Mountain~~ Tributary to Coyote Creek at 33°59’46”/ 109°03’58”	A&Wc				FBC			FC		AgL
LC	Little Colorado River	Headwaters to Lyman Reservoir	A&Wc				FBC			FC	AgI	AgL
LC	Little Colorado River	Below Lyman Reservoir, to confluence with the Puerco River at 34°53’20”/110°07’41”	A&Wc	~~A&Ww~~			FBC		DWS	FC	AgI	AgL
LC	Little Colorado River	Below confluence with Puerco River		A&Ww			FBC		DWS	FC	AgI	AgL
LC	Little Colorado River, East Fork	~~White Mountains~~ Tributary to the Little Colorado River at 34°00’14”/ 109°27’22”	A&Wc				FBC			FC	~~AgI~~	AgL
LC	Little Colorado River, South Fork	~~White Mountains~~ Tributary to the Little Colorado River at 34°05’20”/ 109°24’58”	A&Wc				FBC			FC	~~AgI~~	AgL
LC	Little Colorado River, West Fork (Unique Water)	Headwaters to Government Springs at 33°59’33”/109°27’52”	A&Wc				FBC			FC		
LC	Little Colorado River, West Fork	Below Government Springs	A&Wc				FBC			FC	~~AgI~~	AgL
LC	Little George Reservoir	34°00’37”/109°19’15”		A&Ww			FBC			FC	AgI	
LC	Little Mormon Lake	34°17’00”/109°58’03”		A&Ww			FBC			FC	AgI	AgL
LC	Little Ortega Lake	34°22’45”/109°40’00”	A&Ww				FBC			FC		
LC	Long Lake, Lower	34°46’45”/111°12’00”	A&Wc				FBC			FC	AgI	AgL
LC	Long Lake, Upper	35°00’00”/111°21’00”		A&Ww			FBC			FC		AgL
LC	Long Tom Tank	34°20’37”/110°49’20”	A&Wc				FBC			FC		AgL
LC	Lower Walnut Canyon Lake (EDW)	35°12’04”/111°34’07”				A&Wedw		PBC				
LC	Lyman Reservoir	34°21’30”/109°21’30”	A&Wc				FBC			FC	AgI	AgL

LC	Mamie Creek	~~Escudilla Mountain~~ Tributary to Coyote Creek at 33°59'24"/ 109°03'50"	A&Wc				FBC			FC	~~AgI~~	AgL
LC	Marshall Lake	35°07'10"/111°32'01"	A&Wc				FBC			FC		AgL
LC	McKay Reservoir	34°01'27"/110°29'07"	A&Wc				FBC			FC	AgI	AgL
LC	Merritt Draw Creek	Tributary to Barbershop Canyon Creek at 34°29'38"/111°09'54"	A&Wc				FBC			FC		AgL
LC	Mexican Hay Lake	34°01'57"/109°21'25"	A&Wc				FBC			FC	AgI	AgL
LC	Milk Creek	Tributary to Hulsey Creek at 33°56'31"/109°11'17"	A&Wc				FBC			FC		AgL
LC	Miller Canyon Creek	Tributary to East Clear Creek at 34°33'00"/111°14'17"	A&Wc				FBC			FC		AgL
LC	Miller Canyon Creek, East Fork	Tributary to Miller Canyon Creek at 34°30'18"/111°14'53"	A&Wc				FBC			FC		AgL
LC	Mineral Creek	~~Near Vernon, Sitgreaves NF~~ Tributary to Little Ortega Lake at 34°22'52"/109°39'50"	A&Wc				FBC			FC	AgI	AgL
LC	Mormon Lake	34°56'40"/111°27'10"	A&Wc				FBC		DWS	FC	AgI	AgL
LC	Morton Lake	34°53'36"/111°17'39"	A&Wc				FBC			FC		AgL
LC	Mud Lake	34°55'24"/111°21'18"		A&Ww			FBC			FC		AgL
LC	Ned Lake (EDW)	32°17'18"/110°03'20"				A&Wedw		PBC				
LC	Nelson Reservoir	34°03'12"/109°11'18"	A&Wc				FBC			FC	AgI	AgL
LC	Norton Reservoir	34°03'57"/109°31'21"		A&Ww			FBC			FC		AgL
LC	Nutrioso Creek	Tributary to the Little Colorado River at 34°09'04"/109°17'35"	A&Wc				FBC			FC	AgI	AgL
LC	Paddy Creek	Tributary to Nutrioso Creek at 33°54'47"/109°10'16"	A&Wc				FBC			FC		AgL
LC	Phoenix Park Wash	Tributary to Dry Lake at 34°37'30"/ 110°22'12"			A&We			PBC				
LC	Pine Tank	34°46'49"/111°17'17"		A&Ww			FBC			FC		AgL
LC	Pintail Lake (EDW)	34°18'06"/110°01'17"				A&Wedw		PBC				
LC	Pool Corral Lake	33°58'16"/109°24'53"		A&Ww			FBC			FC	AgI	AgL
LC	Porter Creek	Tributary to Show Low Creek at 34°10'16"/109°58'48"	A&Wc				FBC			FC		AgL
LC	Potato Lake	34°27'44"/111°20'42"	A&Wc				FBC			FC		AgL
LC	Pratt Lake	34°01'31"/109°04'16"	A&Wc				FBC			FC		
LC	Puerco River	Tributary to the Little Colorado River at 34°53'20"/110°07'41"		A&Ww			FBC		DWS	FC	AgI	AgL
LC	Rainbow Lake	34°09'03"/109°59'01"	A&Wc				FBC			FC	AgI	AgL
LC	Reagan Reservoir	~~Apache-Sitgreaves National Forest~~ 34°02'09"/109°08'43"		A&Ww			FBC			FC		AgL
LC	Rio de Flag (EDW)	Flagstaff WWTP outfall to the confluence with San Francisco Wash at 35°14'04"/111°28'02.5"				A&Wedw		PBC				
LC	River Reservoir	34°02'01"/109°26'07"	A&Wc				FBC			FC	AgI	AgL
LC	Rogers Reservoir	33°58'30"/109°16'18"		A&Ww			FBC			FC		AgL
LC	Rudd Creek	Tributary to Nutrioso Creek at 34°04'12"/109°11'56"	A&Wc				FBC			FC		AgL
LC	Russel Reservoir	33°59'29"/109°20'00"		A&Ww			FBC			FC	AgI	AgL
LC	San Salvador Reservoir	33°58'51"/109°19'51"		A&Ww			FBC			FC	AgI	AgL
LC	Salt House Lake	33°57'06"/109°20'12"		A&Ww			FBC			FC		AgL
LC	Scott Reservoir	34°10'27"/109°57'27"	A&Wc				FBC			FC	AgI	AgL
LC	Show Low Creek	Tributary to Silver Creek at 34°25'26"/110°04'05"	A&Wc				FBC			FC	AgI	AgL
LC	Show Low Lake	34°11'25"/109°59'55"	A&Wc				FBC			FC	AgI	AgL
LC	Silver Creek	Tributary to the Little Colorado~~, near Holbrook~~ River at 34°44'24"/ 110°02'17"	A&Wc				FBC			FC	AgI	AgL
LC	Slade Reservoir	33°59'50"/109°20'00"		A&Ww			FBC			FC	AgI	AgL
LC	Soldiers Annex Lake	34°47'13"/111°13'48"	A&Wc				FBC			FC	AgI	AgL
LC	Soldiers Lake	34°47'49"/110°13'59"	A&Wc				FBC			FC	AgI	AgL
LC	Spaulding Tank	34°30'17"/111°02'03"		A&Ww			FBC			FC		AgL
LC	Sponseller Lake	34°14'10"/109°50'42"	A&Wc				FBC			FC		AgL

LC	St Johns Reservoir (Little Reservoir)	34°29'14"/109°21'57"		A&Ww			FBC			FC	AgI	AgL
LC	Telephone Lake (EDW)	34°17'35"/110°02'39"				A&Wedw		PBC				
LC	Tremaine Lake	34°46'00"/111°14'10"	A&Wc				FBC			FC		AgL
LC	Tunnel Reservoir	34°01'51"/109°26'32"	A&Wc				FBC			FC	AgI	AgL
LC	Vail Lake	35°05'24"/111°30'42"	A&Wc				FBC			FC		AgL
LC	Walnut Creek	Tributary to Billy Creek at 34°09'50"/109°58'48"	A&Wc				FBC			FC		AgL
LC	Water Canyon Creek	Tributary to the Little Colorado River at 34°06'47"/109°18'43"	A&Wc				FBC			FC		AgL
LC	Water Canyon Reservoir	34°00'15"/109°20'05"		A&Ww			FBC			FC	AgI	AgL
LC	Whale Lake (EDW)	35°12'32"/111°34'42"				A&Wedw		PBC				
LC	Whipple Lake	34°16'47"/109°58'28"		A&Ww			FBC			FC		AgL
LC	White Mountain Lake	34°21'54"/109°59'38"	A&Wc				FBC			FC	AgI	AgL
LC	White Mountain Reservoir	34°00'15"/109°30'48"	A&Wc				FBC			FC	AgI	AgL
LC	Willow Creek	Tributary to ~~East~~ Clear Creek at 34°38'31"/110°59'49"	A&Wc				FBC			FC		AgL
LC	Willow Springs Canyon Creek	Tributary to Chevelon Creek at 34°21'32"/110°53'20"	A&Wc				FBC			FC		AgL
LC	Willow Springs Lake	34°18'45"/110°52'34"	A&Wc				FBC			FC	AgI	AgL
LC	Woodland Reservoir	34°07'36"/109°57'06"	A&Wc				FBC			FC	AgI	AgL
LC	Woods Canyon Creek	Tributary to Chevelon Creek at 34°21'32"/110°53'20"	A&Wc				FBC			FC		AgL
LC	Woods Canyon Lake	34°20'05"/110°56'35"	A&Wc				FBC		DWS	FC	AgI	AgL
LC	Zuni River	Tributary to the Little Colorado River at 34°38'42"/109°40'26"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
LG	Columbus Wash	Tributary to the Gila River at 33°00'25"/113°16'08"			A&We			PBC				
LG	Gila River	Painted Rock Dam to the Colorado River at 32°43'12"/114°33'14"		A&Ww			FBC			FC	AgI	AgL
LG	Painted Rock (Borrow Pit) Lake	33°05'00"/113°01'20"		A&Ww			FBC			FC	AgI	AgL
MG	Agua Fria River	~~Above~~ Headwaters to confluence with unnamed EDW wash at 34°35'43"/112°16'29", receiving treated wastewater from the Prescott Valley WWTP			A&We			PBC				AgL
MG	Agua Fria River (EDW)	Below confluence with unnamed wash receiving treated wastewater from the Prescott Valley WWTP to State Route 169				A&Wedw		PBC				AgL
MG	Agua Fria River	State Route 169 to Lake Pleasant		A&Ww			FBC		DWS	FC	AgI	AgL
MG	Agua Fria River	Below Lake Pleasant to the El Mirage WWTP			A&We			PBC				AgL
MG	Agua Fria River (EDW)	El Mirage WWTP to 2 km downstream				A&Wedw		PBC				
MG	Agua Fria River	Below 2 km downstream of the El Mirage WWTP to State Highway 85			A&We			PBC				
MG	Agua Fria River	Below State Highway 85		A&Ww			FBC			FC		
MG	Alvord Park Lake	Municipal Park Lake: 35th Avenue & Baseline Road, Phoenix		A&Ww				PBC		FC		
MG	Antelope Creek	Tributary to Martinez Creek at 34°16'37"/112°08'46"		A&Ww			FBC			FC	~~AgI~~	AgL
MG	Arlington Canal	Above Wilson Avenue										AgL
MG	Ash Creek	~~Tributary to the Agua Fria River~~ Headwaters to confluence with Tex Canyon at 34°34'44"/112°07'18"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
MG	Ash Creek	Below confluence with Tex Canyon		A&Ww			FBC			FC	AgI	AgL
MG	Beehive Tank	32°52'36"/111°02'19"		A&Ww			FBC			FC		AgL
MG	Big Bug Creek	~~Tributary to the Agua Fria River~~ Headwaters to confluence with Eugene Gulch at 34°27'11"/112°18'28.5"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL

MG	Big Bug Creek	Below confluence with Eugene Gulch		A&Ww			FBC			FC	AgI	AgL
MG	Black Canyon Creek	Tributary to the Agua Fria River at 34°04'12"/112°09'29"		A&Ww			FBC			FC	~~AgI~~	AgL
MG	Blind Indian Creek	Tributary to the Hassayampa River at 34°12'40"/112°32'17"		A&Ww			FBC			FC	~~AgI~~	AgL
MG	Bonsall Park Lake	Municipal Park Lake; 59th Avenue & Bethany Home Road, Phoenix		A&Ww				PBC		FC		
MG	Canal Park Lake	Municipal Park Lake; College Avenue & Curry Road, Tempe		A&Ww				PBC		FC		
MG	Cave Creek	Headwaters to the Cave Creek Dam		A&Ww			FBC			FC		AgL
MG	Cave Creek	Cave Creek Dam to the Arizona Canal at 33°34'24"/112°06'25"			A&We			PBC				
MG	Centennial Wash	Tributary to the Gila River~~; west of Hassayampa~~ at 33°13'44"/ 112°46'16"			A&We			PBC				AgL
MG	Centennial Wash Ponds	33°55'10"/113°23'05"		A&Ww			FBC			FC		AgL
MG	Chaparral Park Lake	Municipal Park Lake; Hayden Road & Chaparral Road, Scottsdale		A&Ww				PBC		FC	AgI	
MG	Cortez Park Lake	Municipal Park Lake; 35th Avenue & Dunlap, Glendale		A&Ww				PBC		FC	AgI	
MG	Desert Breeze Lake	Municipal Park Lake; Galaxy Drive, West Chandler		A&Ww				PBC		FC		
MG	Devils Canyon	Tributary to Mineral Creek at 33°12'58"/110°59'42"		A&Ww				FBC		FC		AgL
MG	Dobson Lake	Municipal Park Lake; Dobson Road & Los Lagos Vista Avenue, Mesa		A&Ww				PBC		FC		
MG	Eldorado Park Lake	Municipal Park Lake; Miller Road & Oak Street, Tempe		A&Ww				PBC		FC		
MG	Encanto Park Lake	Municipal Park Lake; 15th Avenue & Encanto Blvd., Phoenix		A&Ww				PBC		FC	AgI	
MG	Fain Lake	Park Lake, city of Prescott Valley		A&Ww				PBC		FC		
MG	Galena Gulch	Tributary to the Agua Fria River at 34°28'37"/112°15'14"			A&We			PBC				AgL
MG	Gila River	San Carlos Indian Reservation to the Ashurst-Hayden Dam		A&Ww			FBC			FC	AgI	AgL
MG	Gila River	Ashurst-Hayden Dam to the Florence WWTP outfall			A&We			PBC				AgL
MG	Gila River (EDW)	Florence WWTP outfall to Felix Road				A&Wedw		PBC				
MG	Gila River	Felix Road to the Gila River Indian Reservation			A&We			PBC				AgL
MG	Gila River (EDW)	Salt River to the Gillespie Dam				A&Wedw		PBC		FC	AgI	AgL
MG	Gila River	Gillespie Dam to Painted Rock Dam		A&Ww			FBC			FC	AgI	AgL
MG	Granada Park Lake	Municipal Park Lake; 6505 North 20th Street, Phoenix		A&Ww				PBC		FC		
MG	Groom Creek	Tributary to the Hassayampa River at 34°27'14"/112°29'24"	A&Wc				FBC		DWS	FC		AgL
MG	Hank Raymond Lake	33°50'18"/112°16'07"		A&Ww			FBC			FC	AgI	AgL
MG	Hassayampa Lake	34°25'45"/112°25'29"	A&Wc				FBC		DWS	FC		
MG	Hassayampa River	~~Headwaters to 8 miles south of Wickenburg~~ Headwaters to confluence with unnamed tributary at 34°26'09"/112°30'32"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
MG	Hassayampa River	Below confluence with unnamed tributary to 8 miles south of Wickenberg		A&Ww			FBC			FC	AgI	AgL
MG	Hassayampa River	8 miles south of Wickenburg to the Buckeye Irrigation Company Canal			A&We			PBC				AgL
MG	Hassayampa River	Buckeye Irrigation Company canal to the Gila River		A&Ww			FBC			FC		AgL
MG	Horsethief Lake	34°09'42"/112°17'56"	A&Wc				FBC		DWS	FC		AgL
MG	Indian Bend Wash	~~Scottsdale~~ Tributary to the Salt River at 33°26'13"/111°54'58"		~~A&Ww~~	A&We			PBC		~~FC~~		
MG	Indian Bend Wash Lakes	Municipal Park Lakes; Scottsdale		A&Ww				PBC		FC		

MG	Indian School Park Lake	Municipal Park Lake; Indian School Road & Hayden Road, Scottsdale		A&Ww				PBC		FC		
MG	Kiwanis Park Lake	Municipal Park Lake; 6000 South Mill Avenue, Tempe		A&Ww				PBC		FC	AgI	
MG	Lake Pleasant	33°51'15"/112°16'15"		A&Ww			FBC		DWS	FC	AgI	AgL
MG	Lion Canyon	Tributary to Weaver Creek at 34°10'12"/112°41'49"		A&Ww			FBC			FC		AgL
MG	Little Ash Creek	Tributary to Ash Creek~~; Prescott NF~~ at 34°20'46"/112°04'16"		A&Ww			FBC			FC		AgL
MG	Lynx Creek	~~Tributary to Lynx Lake~~ Headwaters to confluence with unnamed tributary at 34°34'29"/112°21'05"	A&Wc	~~A&Ww~~			FBC			FC		AgL
MG	Lynx Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
MG	Lynx Lake	34°31'08"/112°23'05"	A&Wc				FBC		DWS	FC	AgI	AgL
MG	Maricopa Park Lake	33°35'30"/112°18'16"		A&Ww				PBC		FC		
MG	Martinez Canyon	Tributary to Box Canyon at 33°06'33"/111°12'48"		A&Ww			FBC			FC		AgL
MG	Martinez Creek	Tributary to the Hassayampa River at 33°59'56"/112°44'38"		A&Ww			FBC			FC	AgI	AgL
MG	McKellips Park Lake	Municipal Park Lake; Miller Road & McKellips Road, Scottsdale		A&Ww				PBC		FC	AgI	
MG	Mineral Creek	Tibutary to the Gila River at 34°17'42"/112°13'34"		A&Ww			FBC			FC		AgL
MG	Minnehaha Creek	Tributary to the Hassayampa River at 34°11'49"/112°32'24"		A&Ww			FBC			FC		AgL
MG	New River	Headwaters to I-17		A&Ww			FBC			FC	AgI	AgL
MG	New River	Below I-17			A&We			PBC				AgL
MG	Painted Rock Reservoir	33°04'15"/113°00'30"		A&Ww			FBC			FC	AgI	AgL
MG	Papago Park Ponds	Municipal Park Lake; Galvin Parkway, Phoenix		A&Ww				PBC		FC		
MG	Perry Mesa Tank	34°11'03"/112°01'59"		A&Ww			FBC			FC		AgL
MG	Phoenix Area Canals	Granite Reef Dam to all municipal WTP intakes							DWS		AgI	AgL
MG	Phoenix Area Canals	Below municipal WTP intakes and all other locations									AgI	AgL
MG	Picacho Reservoir	32°51'17"/111°28'49"		A&Ww			FBC			FC	AgI	AgL
MG	Poland Creek	~~Tributary to the Agua Fria; Bradshaw Mtns~~ Headwaters to confluence with Lorena Gulch at 34°12'32"/112°19'07"	A&Wc	~~A&Ww~~			FBC			FC		AgL
MG	Poland Creek	Below confluence with Lorena Gulch		A&Ww			FBC			FC		AgL
MG	Queen Creek	Headwaters to the ~~Superior Mining Division discharge~~ Town of Superior WWTP outfall		~~A&Ww~~	A&We			PBC	~~DWS~~	~~FC~~		AgL
MG	Queen Creek (EDW)	~~Superior Mining Division discharge~~ Town of Superior WWTP outfall to confluence with Potts Canyon				A&Wedw		PBC				
MG	Queen Creek	Potts Canyon to ~~El Camino Viejo Road~~ Queen Valley golf course		A&Ww			FBC			FC		AgL
MG	Queen Creek	Below ~~El Camino Viejo Road~~ Queen Valley golf course			A&We			PBC				
MG	Riverview Park Lake	Municipal Park Lake; Dobson Road & 8th Street, Mesa		A&Ww				PBC		FC		
MG	Roadrunner Park Lake	Municipal Park Lake; 36th Street & Cactus, Phoenix		A&Ww				PBC		FC		
MG	Sycamore Creek	~~Tributary to the Agua Fria River~~ Headwaters to confluence with Tank Canyon at 34°19'32"/ 111°50'12"	A&Wc				FBC			FC		AgL
MG	Sycamore Creek	Below confluence with Tank Canyon		A&Ww			FBC			FC		AgL
MG	Tule Creek	Tributary to the Agua Fria River at 33°57'25"/112°14'13"		A&Ww			FBC			FC		AgL

MG	Turkey Creek	~~Tributary to Black Canyon Creek~~ Headwaters to confluence with unnamed tributary at 34°19'28"/ 112°21'28"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
MG	Turkey Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
MG	Unnamed Wash (EDW)	Gila Bend WWTP outfall to the Gila River				A&Wedw		PBC				
MG	Unnamed Wash (EDW)	Luke Air Force Base WWTP outfall to the Agua Fria River				A&Wedw		PBC				
MG	Unnamed Wash (EDW)	Prescott Valley WWTP outfall to the Agua Fria River				A&Wedw		PBC				
MG	Unnamed Wash (EDW)	Queen Valley Sanitary District WWTP outfall to the confluence with Queen Creek				A&Wedw		PBC				
MG	Vista Del Camino Park North	Municipal Park Lake; 7700 East Roosevelt Street, Scottsdale		A&Ww				PBC		FC		
MG	Vista Del Camino Park South	Municipal Park Lake; 7700 East Roosevelt Street, Scottsdale		A&Ww				PBC		FC		
MG	Walnut Canyon Creek	Tributary to the ~~upper~~ Gila River at 33°06'47"/111°05'20"		A&Ww			FBC			FC		AgL
MG	Weaver Creek	Tributary to Martinez Creek at 34°03'18"/112°46'48"		A&Ww			FBC			FC		AgL
MG	White Canyon Creek	Tributary to Walnut Canyon Creek at 33°09'25"/111°04'48"		A&Ww			FBC			FC		AgL
RM	Abbot Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Ash Creek	Chiricahua Mountains	~~A&We~~	A&Ww			FBC			FC	AgI	AgL
RM	Bear Creek	Headwaters to U.S./Mexico border at 31°19'59"/110°22'58.5"		A&Ww			FBC			FC		AgL
RM	Blackwater Draw	San Bernardino Valley		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Buck Canyon	~~Chiricahua Mountains~~ Headwaters to Buck Creek Tank at 31°33'06"/ 109°52'43"		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Buck Canyon	Below Buck Creek Tank			A&We			PBC				AgL
RM	California Gulch	South of Ruby		A&Ww			FBC			FC		AgL
RM	Dixie Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Dry Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Gadwell Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Glance Creek	Mule Mountains		A&Ww			FBC			FC	~~AgI~~	AgL
RM	Gold Gulch	Mule Mountains		A&Ww			FBC			FC	~~AgI~~	AgL
RM	Holden Canyon Creek	Coronado National Forest		A&Ww			FBC	~~PBC~~		FC		
RM	Johnson Canyon	Chiricahua Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Leslie Canyon Creek	Chiricahua Mountains		A&Ww			FBC		~~DWS~~	FC		AgL
RM	Mexican Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Mule Gulch	Headwaters to ~~the Bisbee WWTP~~ just above the Lavender Pit		A&Ww				PBC		FC	~~AgI~~	~~AgL~~
RM	Mule Gulch	Just above the Lavender Pit to the Bisbee WWTP outfall			A&We			PBC				
RM	Mule Gulch (EDW)	Below the Bisbee WWTP outfall, to the Highway 80 bridge at 31°26'30"/109°49'28"				A&Wedw		PBC				~~AgL~~
RM	Mule Gulch	Below the Highway 80 bridge			A&We			PBC				AgL
RM	Quitobaquito Spring	(Pond and Springs) 31°56'39"/ 113°01'06"		A&Ww			FBC			FC		AgL
RM	Ruby Lakes	Near the town of Ruby		A&Ww			FBC			FC		AgL
RM	Rucker Canyon Creek	Chiricahua Mtns; tributary to Whitewater Draw at 31°44'46"/ 109°26'06"	A&Wc				FBC		~~DWS~~	FC		AgL
RM	Rucker Canyon Lake	31°46'46"/109°18'30"	A&Wc				FBC			FC		AgL
RM	Soto Canyon	Mule Mountains		A&Ww			FBC		~~DWS~~	FC	~~AgI~~	AgL
RM	Sycamore Canyon Creek	~~Coronado National Forest~~ Headwaters to the U.S./Mexico border at 31°22'48"/111°13'19"		A&Ww			FBC			FC		AgL
RM	Unnamed Wash (EDW)	Bisbee-Douglas International Airport WWTP outfall to Whitewater Draw				A&Wedw		PBC				

RM	Whitewater Draw	~~Sulphur Springs Valley~~ Headwaters to confluence with unnamed tributary at 31°20'36"/109°34'46"		~~A&Ww~~	A&We		~~FBC~~	PBC		~~FC~~	~~AgI~~	AgL
RM	Whitewater Draw	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SC	Agua Caliente Lake	Municipal Park Lake; 12325 East Roger Road, Tucson		A&Ww				PBC		FC		
SC	Agua Caliente Wash	~~Headwaters to the Coronado National Forest boundary~~ Headwaters to Soldier Trail		A&Ww			FBC			FC		AgL
SC	Agua Caliente Wash	~~Below Coronado National Forest boundary~~ Below Soldier Trail			A&We			PBC				AgL
SC	Aguirre Wash	~~Aguirre Valley~~ Those reaches not located on the Tohono O'odham Indian Reservation			A&We			PBC				
SC	Alambre Wash	Tributary to Brawley Wash at 31°57'47"/111°23'28"			A&We			PBC				
SC	Alamo Wash	Tributary to Rillito Creek at 32°16'23"/110°54'18"			A&We			PBC				
SC	Altar Wash	~~Altar Valley~~ Tributary to Brawley Wash at 31°57'47"/111°23'28"			A&We			PBC				
SC	Alum Gulch	Headwaters to ~~T22S R16E Sec 19 CBA SW1/4~~ 31°28'20"/110°43'51"		~~A&Ww~~	A&We		~~FBC~~	PBC		~~FC~~		AgL
SC	Alum Gulch	From 31°28'20"/110°43'51" to 31°29'17"/110°44'25"		A&Ww			FBC			FC		AgL
SC	Alum Gulch	~~Below T22S R16E Sec 19 CBA SW1/4~~ Below 31°29'17"/ 110°44'25"			A&We			PBC				AgL
SC	Arivaca Creek	Tributary to ~~Arivaca Lake~~ Altar Wash at 31°43'01"/111°25'41"		A&Ww			FBC			FC		AgL
SC	Arivaca Lake	31°31'50"/111°15'05"		A&Ww			FBC			FC	AgI	AgL
SC	Atterbury Wash	Tributary to Pantano Wash at 32°10'52"/110°48'50"			A&We			PBC				AgL
SC	Bear Grass Tank	31°33'01"/111°11'32"		A&Ww			FBC			FC		AgL
SC	Big Wash	Tributary to Cañada del Oro at 32°24'47"/110°56'28"			A&We			PBC				
SC	Bog Hole Tank	31°28'34"/110°37'07"		A&Ww			FBC			FC		AgL
SC	Brawley Wash	~~Avra Valley~~ Tributary to Los Robles Wash at 32°21'54"/111°17'31"			A&We			PBC				
SC	Cañada del Oro	Headwaters to Highway 89 at 32°24'48"/110°56'14"		A&Ww			FBC		~~DWS~~	FC	AgI	AgL
SC	Cañada del Oro	Below Highway 89			A&We			PBC				AgL
SC	Cienega Creek	Headwaters to ~~Interstate 10~~ confluence with Gardner Canyon and Spring Water Canyon at R18E, T17S.		A&Ww			FBC			FC		AgL
SC	Cienega Creek (Unique Water)	~~Interstate 10 to Del Lago Dam~~ From confluence with Gardner Canyon and Spring Water Canyon at R18E, T17S to USGS gaging station at 32°02'09"/110°40'34"		A&Ww			FBC			FC		AgL
~~SC~~	~~Cienega Creek~~	~~Below Del Lago Dam~~		~~A&Ww~~			~~FBC~~			~~FC~~		~~AgL~~
SC	Davidson Canyon	~~Tributary to Cienega Creek~~ Headwaters to unnamed spring at 31°59'00"/110°38'46"			A&We			PBC				AgL
SC	Davidson Canyon	Unnamed Spring to confluence with unnamed tributary at 31°59'32.5"/ 110°38'43.5"		A&Ww			FBC			FC		AgL
SC	Davidson Canyon	From confluence with unnamed tributary to unnamed spring at 32°00'54"/110°38'54"			A&We			PBC				AgL
SC	Davidson Canyon	From unnamed spring at 32°00'54"/ 110°38'54" to confluence with Cienega Creek		A&Ww			FBC			FC		AgL
SC	Empire Gulch	Headwaters to ~~Empire Ranch~~ unnamed spring at 31°47'14"/ 110°38'13"			A&We			PBC				
SC	Empire Gulch	From 31°47'14" / 110°38'13" to31°47'11" / 110°00'39"		A&Ww			FBC			FC		

SC	Empire Gulch	Below ~~Empire Ranch Spring~~ 31°47'11" / 110°00'39" to 31°47'18" / 110°36'57"		~~A&Ww~~	A&We		~~FBC~~	PBC		~~FC~~		AgL
SC	Empire Gulch	From 31°47'18" / 110°36'57" to confluence with Cienega Creek		A&Ww			FBC			FC		
SC	Flux Canyon	Tributary to Alum Canyon at 31°30'22"/110°46'41"			A&We			PBC				AgL
SC	Gardner Canyon Creek	~~Tributary to Cienega Creek~~ Headwaters to confluence with Sawmill Canyon at 31°42'51"/110°44'43"	A&Wc	~~A&Ww~~			FBC			FC		
SC	Gardner Canyon Creek	Below Sawmill Canyon		A&Ww			FBC			FC		
SC	Greene Wash	Tributary to the Santa Cruz River at 33°00'54"/111°59'46"			A&We			PBC				
SC	Harshaw ~~Wash~~ Creek	Tributary to Sonoita Creek at 31°32'35"/110°44'42"		~~A&Ww~~	A&We		~~FBC~~	PBC		~~FC~~		AgL
SC	Hit Tank	32°43'57"/111°03'18"		A&Ww			FBC			FC		AgL
SC	Huachuca Tank	31°21'11"/110°30'12"		A&Ww			FBC			FC		AgL
SC	Julian Wash	Tributary to the Santa Cruz River at 32°11'20"/110°59'13"			A&We			PBC				
SC	Kennedy Lake	Municipal Park Lake; Mission Road & Ajo Road, Tucson		A&Ww				PBC		FC		
SC	Lakeside Lake	Municipal Park Lake; 8300 East Stella Road, Tucson		A&Ww				PBC		FC		
SC	Lemmon Canyon Creek	~~Tributary to Sabino Canyon Creek~~ Headwaters to confluence with unnamed tributary at 32°23'47"/ 110°47'46"	A&Wc				FBC			FC		
SC	Lemmon Canyon Creek	Below unnamed tributary		A&Ww			FBC			FC		
SC	Los Robles Wash	Tributary to the Santa Cruz River at 32°32'13"/111°23'53"			A&We			PBC				
SC	Madera Canyon Creek	~~Tributary to the Santa Cruz River~~ Headwaters to confluence with unnamed tributary at 31°43'42"/ 110°52'50"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SC	Madera Canyon Creek	Below unnamed tributary		A&Ww			FBC			FC		AgL
SC	Mattie Canyon	Tributary to Cienega Creek at 31°51'31"/110°34'25"		A&Ww			FBC			FC		AgL
SC	Nogales Wash	Tributary to Potrero Creek at 31°24'07"/110°57'11"		A&Ww				PBC				
SC	Oak Tree Canyon	Tributary to Cienega Creek at 31°48'43"/110°35'24"			A&We			PBC				
SC	Palisade Canyon Creek	~~Tributary to Sabino Canyon Creek~~ Headwaters to confluence with unnamed tributary at 32°22'34"/ 110°45'35"	A&Wc				FBC			FC		
SC	Palisade Canyon Creek	Below unnamed tributary		A&Ww			FBC			FC		
SC	Pantano Wash	Tributary to Tanque Verde Creek at 32°16'23"/110°54'18"			A&We			PBC				
SC	Paradise Lake	~~Near Arizona City~~ 32°44'18"/ 111°40'42"		A&Ww			FBC				AgI	
SC	Parker Canyon Creek	~~Tributary to Parker Canyon Lake~~ Headwaters to confluence with unnamed tributary at 31°24'17"/ 110°28'44.5"	A&Wc	~~A&Ww~~			FBC			FC		
SC	Parker Canyon Creek	Below unnamed tributary		A&Ww			FBC			FC		
SC	Parker Canyon Lake	31°25'35"/110°27'15"	A&Wc				FBC			FC	AgI	AgL
SC	Patagonia Lake	31°29'30"/110°52'00"	A&Wc				FBC		DWS	FC	AgI	AgL
SC	Peña Blanca Lake	31°24'12"/111°05'04"	A&Wc				FBC			FC	AgI	AgL
SC	Potrero Creek	Headwaters to Interstate 19 at 31°23'24"/110°57'30"			A&We			PBC				AgL
SC	Potrero Creek	Below Interstate 19		A&Ww			FBC			FC		AgL
SC	Puertocito Wash	Tributary to Altar Wash at 31°43'01"/111°25'41"			A&We			PBC				
SC	Redrock Canyon Creek	Tributary to ~~Sonoita Creek~~ Harshaw Creek at 31°32'35"/110°44'13"		A&Ww			FBC			FC		

SC	Rillito Creek	Tributary to the Santa Cruz River at 32°18'50"/111°03'18"			A&We			PBC				AgL
SC	Romero Canyon Creek	~~Tributary to Cañada del Oro~~ Headwaters to confluence with unnamed tributary at 32°24'30"/110°50'35"	A&Wc				FBC			FC		
SC	Romero Canyon Creek	Below unnamed tributary		A&Ww			FBC			FC		
SC	Rose Canyon Creek	Tributary to Rose Canyon Lake at 32°23'10"/110°43'01"	A&Wc	~~A&Ww~~			FBC			FC		
SC	Rose Canyon Lake	32°23'13"/110°42'38"	A&Wc				FBC			FC	~~AgI~~	AgL
SC	Sabino Canyon Creek	~~Tributary to Tanque Verde Creek~~ Headwaters to confluence with unnamed tributary at 32°23'28"/110°47'00"	A&Wc				FBC		DWS	FC	AgI	
SC	Sabino Canyon Creek	Below unnamed tributary		A&Ww			FBC		DWS	FC	AgI	
SC	Salero Ranch Tank	31°35'42"/110°53'22"		A&Ww			FBC			FC		AgL
SC	Santa Cruz River	Headwaters to the International Boundary at 31°19'58"/110°35'48"		A&Ww			FBC			FC	AgI	AgL
SC	Santa Cruz River	International Boundary to the Nogales International WWTP outfall		A&Ww			FBC		DWS	FC	AgI	AgL
SC	Santa Cruz River (EDW)	Nogales International WWTP outfall to the Tubac Bridge				A&Wedw		PBC				AgL
SC	Santa Cruz River	The Tubac Bridge to Roger Rd WWTP outfall			A&We			PBC				AgL
SC	Santa Cruz River (EDW)	Roger Road WWTP outfall to Baumgartner Road				A&Wedw		PBC				
SC	Santa Cruz River (Wash)	Baumgartner Road to the Gila River Indian Reservation			A&We			PBC				AgL
SC	Santa Cruz River, West Branch	Tributary to the Santa Cruz River at 32°12'07"/110°59'20"			A&We			PBC				AgL
SC	Santa Cruz River, N. Fork	Tributary to the Santa Cruz River at 32°55'55"/111°53'10"			A&We			PBC				
SC	Santa Rosa Wash	Below ~~Papago~~ Tohono O'odham Indian Reservation to the Santa Cruz Wash at 32°53'49"/111°56'46"			A&We			PBC				
SC	Soldier Lake	32°25'34"/110°44'41"	A&Wc				FBC			FC		AgL
SC	Sonoita Creek	Headwaters to ~~1 km downstream of the State Route 82 bridge~~ the Town of Patagonia WWTP outfall			A&We			PBC				AgL
~~SC~~	~~Sonoita Creek~~	~~1 km downstream of the State Route 82 bridge to the Town of Patagonia WWTP outfall~~		~~A&Ww~~			~~FBC~~			~~FC~~		~~AgL~~
SC	Sonoita Creek (EDW)	Town of Patagonia WWTP outfall to 750 feet downstream of outfall				A&Wedw		PBC				AgL
SC	Sonoita Creek	Below 750 feet downstream of Town of Patagonia WWTP outfall		A&Ww			FBC			FC	AgI	AgL
SC	Split Tank	31°28'15"/111°05'15"		A&Ww			FBC			FC		AgL
SC	Sutherland Wash	Tributary to Cañada del Oro at 32°25'05"/110°55'26"		A&Ww	~~A&We~~		FBC	~~PBC~~		FC		
SC	Sycamore Canyon	From 32°21'36" / 110°45'21" to Sycamore Reservoir		A&Ww			FBC			FC		
SC	Sycamore Reservoir	32°20'57"/110°44'52"	A&Wc				FBC			FC		AgL
SC	Tanque Verde Creek	Headwaters to ~~Wentworth Road~~ Houghton Road at 32°14'13"/110°46'04"		A&Ww			FBC			FC		AgL
SC	Tanque Verde Creek	Below ~~Wentworth Road~~ Houghton Road			A&We			PBC				AgL
SC	The Lake Tank	32°54'14"/111°04'14"		A&Ww			FBC			FC		AgL
SC	Three R Canyon	Headwaters ~~to bottom of perennial reach~~ to Lat/Long: 31°28'35"/110°46'19"		~~A&Ww~~	A&We		~~FBC~~	PBC		~~FC~~		AgL
SC	Three R Canyon	From Lat/Long: 31°28'35"/110°46'19" to Lat/Long: 31°28'27"/110°47'12"		A&Ww			FBC			FC		AgL
SC	Three R Canyon	~~Bottom of perennial reach to Sonoita Creek~~ From Lat/Long: 31°28'27"/110°47'12" to Sonoita Creek			A&We			PBC				AgL

SC	Tinaja Wash	Eastern foothills, Sierrita Mountains			A&We			PBC				AgL
SC	Unnamed Wash (EDW)	Oracle Sanitary District WWTP outfall to 5 km downstream				A&Wedw		PBC				
SC	Vekol Wash	~~Tributary to Santa Cruz Wash~~ Those reaches not located on the Ak-Chin, Tohono O'odham and Gila River Indian Reservations			A&We			PBC				
SC	Wakefield Canyon	Headwaters to confluence with unnamed tributary 31°52'47"/ 110°26'25"	A&Wc				FBC			FC		AgL
SC	Wakefield Canyon	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SC	Wild Burro Canyon	Headwaters to confluence with unnamed tributary at 32°28'36"/ 111°05'18"		A&Ww			FBC			FC		AgL
SC	Wild Burro Canyon	Below confluence with unnamed tributary			A&We			PBC				AgL
SC	Williams Ranch Tanks	31°55'15"/110°25'30"		A&Ww			FBC			FC		AgL
SP	Aravaipa Creek	Headwaters to confluence with Stowe Gulch at 32°52'10"/ 110°22'00"		A&Ww			FBC		~~DWS~~	FC		AgL
SP	Aravaipa Creek (Unique Water)	Stowe Gulch confluence to downstream boundary of Aravaipa Canyon Wilderness Area at 32°54'23"/ 110°33'40"		A&Ww			FBC		~~DWS~~	FC		AgL
SP	Aravaipa Creek	Below downstream boundary of Aravaipa Canyon Wilderness Area		A&Ww			FBC		~~DWS~~	FC		AgL
SP	Babocomari Creek	Tributary to the San Pedro River at 31°43'19"/110°11'35"		A&Ww			FBC			FC		AgL
SP	Bass Canyon Creek	~~Muleshoe Preserve~~ Headwaters to confluence with unnamed tributary at 32°26'06"/110°13'18"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SP	Bass Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SP	Bass Canyon Tank	32°24'00"/110°13'00"		A&Ww			FBC			FC		AgL
SP	Blacktail Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Booger Canyon Creek	Tributary to Aravaipa Creek at 32°54'54"/110°29'35"		A&Ww			FBC			FC		AgL
SP	Buehman Canyon Creek (Unique Water)	~~Southeast slope, Santa Catalina Mountains~~ Headwaters to confluence with unnamed tributary at 32°24'31.5"/110°32'08"		A&Ww			FBC			FC		AgL
SP	Buehman Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SP	Bull Tank	32°31'15"/110°12'45"		A&Ww			FBC			FC		AgL
SP	Bullock Canyon	Tributary to Buehman Canyon at 32°23'00"/110°33'04"		A&Ww			FBC			FC		AgL
SP	Carr Canyon Creek	~~Huachuca Mtns~~ Headwaters to confluence with unnamed tributary at 31°27'00"/110°15'45"	A&Wc				FBC			FC		AgL
SP	Carr Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SP	Copper Creek	Headwaters to confluence with Prospect Canyon at 32°44'48"/ 110°30'18"		A&Ww			FBC			FC		AgL
SP	Copper Creek	Below confluence with Prospect Canyon			A&We			PBC				AgL
SP	Deer Creek	~~Tributary to Aravaipa Creek~~ Headwaters to confluence with unnamed tributary at 32°59'56"/110°20'09"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SP	Deer Creek	Below confluence with unnamed tributary to Aravaipa Creek		A&Ww			FBC			FC		AgL
SP	Double R Canyon Creek	Tributary to Bass Canyon at 32°21'06"/110°14'23"		A&Ww			FBC			FC		
SP	East Gravel Pit Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Espiritu Canyon Creek	Tributary to Soza Wash at 32°18'52"/110°28'35"		A&Ww			FBC			FC		AgL
SP	Fly Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		

SP	Fourmile Canyon Creek	Tributary to Aravaipa Creek at 32°50'14"/110°20'08"		A&Ww			FBC			FC		AgL
SP	Fourmile Canyon, Left Prong	Headwaters to confluence with unnamed tributary at 32°43'14"/ 110°23'43"	A&Wc				FBC			FC		AgL
SP	Fourmile Canyon, Left Prong	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SP	Fourmile Canyon, Right Prong	Tributary to Fourmile Canyon at 32°47'33"/110°22'36"		A&Ww			FBC			FC		AgL
SP	Garden Canyon Creek	~~Eastern Slope, Huachuca Mtns~~ Headwaters to confluence with unnamed tributary at 31°29'00"/ 110°19'42"	A&Wc	~~A&Ww~~			FBC		DWS	FC	AgI	
SP	Garden Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	
SP	Golf Course Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Gravel Pit Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Hidden Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Horse Camp Canyon Creek	Tributary to Aravaipa Creek at 32°55'07"/110°30'56"		A&Ww			FBC			FC		AgL
SP	Hot Springs Canyon Creek	~~Muleshoe Preserve~~ Tributary to the San Pedro River at 32°17'24"/ 110°22'55"		A&Ww			FBC			FC		AgL
SP	Lower Garden Canyon Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Miller Canyon Creek	~~Eastern Slope, Huachuca Mtns~~ Headwaters to Broken Arrow Ranch Road at 31°25'33"/ 110°15'08"	A&Wc				FBC		DWS	FC		AgL
SP	Miller Canyon Creek	Below Broken Arrow Ranch Road		A&Ww			FBC		DWS	FC		AgL
SP	Oak Grove Creek	Tributary to Turkey Creek~~; Aravaipa Basin~~ at 32°45'32"/ 110°14'06"		A&Ww			FBC			FC		AgL
SP	Officers Club Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Paige Canyon Creek	Tributary to the San Pedro River at 32°17'10"/110°22'48"		A&Ww			FBC			FC		AgL
SP	Parsons Canyon Creek	Tributary to Aravaipa Creek at 32°54'11"/110°27'40"		A&Ww			FBC			FC		AgL
SP	Ramsey Canyon Creek	~~Huachuca Mtns~~ Headwaters to Forest Service Road #110 at 31°27'44"/110°17'27"	A&Wc				FBC		~~DWS~~	FC	AgI	AgL
SP	Ramsey Canyon Creek	Below Forest Service Road #110		A&Ww			FBC			FC	AgI	AgL
SP	Rattlesnake Canyon	~~Tributary to Aravaipa Creek~~ Headwaters to confluence with Brush Canyon at 32°38'27"/110°21'24"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SP	Rattlesnake Canyon	Below confluence with Brush Canyon		A&Ww			FBC			FC		AgL
SP	Redfield Canyon Creek	~~Galiuro Mtns~~ Headwaters to confluence with unnamed tributary at 32°33'39"/110°18'41"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SP	Redfield Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SP	San Pedro River	U.S./ Mexico Border to Redington		A&Ww			FBC			FC	AgI	AgL
SP	San Pedro River	Redington to the Gila River		A&Ww			FBC			FC		AgL
SP	Swamp Springs Canyon Creek	~~Muleshoe Preserve~~ Tributary to Redfield Canyon at 32°26'10"/ 110°19'30"		A&Ww			FBC			FC		AgL
SP	Sycamore Pond I	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Sycamore Pond II	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SP	Turkey Creek	Tributary to Aravaipa Creek at 32°53'49"/110°26'35"		A&Ww			FBC			FC	~~AgI~~	AgL
SP	Virgus Canyon Creek	Tributary to Aravaipa Creek at 32°54'58"/110°31'16"		A&Ww			FBC			FC		AgL
SP	Walnut Gulch (EDW)	Tombstone WWTP outfall to the confluence of Tombstone Wash				A&Wedw		PBC				
SP	Woodcutters Pond	Fort Huachuca Military Reservation		A&Ww			FBC			FC		
SR	Ackre (Judge) Lake	33°37'00"/109°20'37"	A&Wc				FBC			FC	AgI	AgL
SR	Apache Lake	33°35'30"/111°20'30"	A&Wc				FBC		DWS	FC	AgI	AgL

SR	Barnhardt Creek	~~Tributary to Rye Creek; Mazatzal Wilderness~~ Headwaters to confluence with unnamed tributary at 34°05'36"/111°26'38"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SR	Barnhardt Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Basin Lake	33°55'00"/109°26'05"		A&Ww			FBC			FC		AgL
SR	Bear Creek	Tributary to the Black River at 33°43'26"/109°22'30"	A&Wc				FBC			FC	AgI	AgL
SR	Bear Wallow Creek (UW)	Tributary to the Black River at 33°37'44"/109°31'23"	A&Wc				FBC			FC	~~AgI~~	AgL
SR	Bear Wallow Creek, North Fork (UW)	Tributary to Bear Wallow Creek at 33°35'53"/109°26'49"	A&Wc				FBC			FC		AgL
SR	Bear Wallow Creek, South Fork (UW)	Tributary to Bear Wallow Creek at 33°35'53"/109°26'49"	A&Wc				FBC			FC		AgL
SR	Beaver Creek	Tributary to the Black River at 33°43'44"/109°21'07"	A&Wc				FBC			FC	AgI	AgL
SR	Big Lake	33°52'45"/109°25'00"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Black River	Tributary to the Salt River at 33°44'20"/110°13'30"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Black River, East Fork	Tributary to the Black River at 33°45'07"/109°21'43"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Black River, N Fork of E Fork	Tributary to Black River, East Fork at 33°56'17"/109°24'11"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Black River, West Fork	Tributary to the Black River at 33°45'07"/109°21'43"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Bloody Tanks Wash	Headwaters to Schultze Ranch at 33°22'29"/110°54'39"			A&We			PBC				AgL
SR	Bloody Tanks Wash	Schultze Ranch to Miami Wash			A&We			PBC				
SR	Boggy Creek	Tributary to the Black River at 33°44'31"/109°26'20"	A&Wc				FBC			FC	AgI	AgL
SR	Boneyard Creek	Tributary to Black River, East Fork at 33°51'22"/109°18'50"	A&Wc				FBC			FC	AgI	AgL
SR	Boulder Creek	Tributary to LaBarge Creek at 33°30'54"/111°24'40"		A&Ww			FBC			FC		
SR	Campaign Creek	Tributary to Roosevelt Lake at 33°37'30"/111°00'04"		A&Ww			FBC			FC		AgL
SR	Canyon Creek	~~Tributary to the Salt River~~ Headwaters to the White Mountain Apache Reservation at 33°57'53"/ 110°47'00"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Canyon Lake	33°33'15"/111°26'30"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Centerfire Creek	Tributary to the Black River at 33°42'47"/109°26'17"	A&Wc				FBC			FC	AgI	AgL
SR	Chambers Draw Creek	Tributary to Black River, N Fork of E Fork at 33°53'03"/109°20'13"	A&Wc				FBC			FC		AgL
SR	Cherry Creek	~~Tributary to the Salt River~~ Headwaters to confluence with unnamed tributary at 34°05'09"/110°56'04"	A&Wc				FBC			FC	AgI	AgL
SR	Cherry Creek	Below unnamed tributary		A&Ww			FBC			FC	AgI	AgL
SR	Christopher Creek	Tributary to Tonto Creek at 34°18'36"/111°04'23"	A&Wc				FBC			FC	AgI	AgL
SR	Cold Spring Canyon Creek	~~Tributary to Cherry Creek~~ Headwaters to confluence with unnamed tributary at 33°49'50"/110°52'55"	A&Wc				FBC			FC		AgL
SR	Cold Spring Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Conklin Creek	Tributary to the Black River at 33°41'49"/109°27'36"	A&Wc				FBC			FC	AgI	AgL
SR	Coon Creek	~~Salt River Canyon Wilderness Area~~ Headwaters to confluence with unnamed tributary at 33°46'42"/ 110°54'25"	A&Wc				FBC			FC		AgL
SR	Coon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Corduroy Creek	Tributary to Fish Creek~~, Apache NF~~ at 33°59'46"/110°17'31"	A&Wc				FBC			FC	AgI	AgL
SR	Coyote Creek	Tributary to the Black River, East Fork at 33°50'53"/109°18'18"	A&Wc				FBC			FC	AgI	AgL

SR	Crescent Lake	33°54'36"/109°25'08"	A&Wc				FBC			FC	AgI	AgL
SR	Deer Creek	Tributary to the Black River, East Fork at 33°48'07"/109°19'26"	A&Wc				FBC			FC		AgL
SR	Del Shay Creek	Tributary to Gun Creek~~, Del Shay Basin~~ at 34°00'22"/111°15'43"	~~A&Wc~~	A&Ww			FBC			FC		AgL
SR	Devils Chasm Creek	~~Tributary to Cherry Creek~~ Headwaters to confluence with unnamed tributary at 33°48'46"/110°52'33"	A&Wc				FBC			FC		AgL
SR	Devils Chasm Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Dipping Vat Reservoir	33°55'54"/109°25'15"		A&Ww			FBC			FC		AgL
SR	Double Cienega Creek	Tributary to Fish Creek at 33°38'35"/109°22'08"	A&Wc				FBC			FC		AgL
SR	Fish Creek	Tributary to the Black River at 33°42'40"/109°26'31"	A&Wc				FBC			FC	AgI	AgL
SR	Fish Creek	~~Superstition Wilderness Area~~ Tributary to the Salt River at 33°34'37"/111°21'11"		A&Ww			FBC			FC		
SR	Gold Creek	~~Tributary to Tonto Creek~~ Headwaters to confluence with unnamed tributary at 33°59'47"/111°25'07"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SR	Gold Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Gordon Canyon Creek	~~Tributary to Haigler Creek~~ Headwaters to confluence with Hog Canyon at 34°13'49"/111°00'27"	A&Wc	~~A&Ww~~			FBC			FC		AgL
SR	Gordon Canyon Creek	Below confluence with Hog Canyon		A&Ww			FBC			FC		AgL
SR	Greenback Creek	Tributary to Tonto Creek at 33°47'38"/111°15'22"		A&Ww			FBC			FC		AgL
SR	Haigler Creek	~~Tributary to Tonto Creek; Hellsgate Wilderness~~ Headwaters to confluence with unnamed tributary at 34°12'23.5"/111°00'11"	A&Wc				FBC			FC	AgI	AgL
SR	Haigler Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
SR	Hannagan Creek	Tributary to Beaver Creek at 33°42'07"/109°14'46"	A&Wc				FBC			FC		AgL
SR	Hay Creek (UW)	Tributary to the Black River, West Fork at 33°48'32"/109°25'16"	A&Wc				FBC			FC		AgL
SR	Home Creek	Tributary to the Black River, West Fork at 33°45'43"/109°22'48"	A&Wc				FBC			FC		AgL
SR	Horse Creek	Tributary to the Black River, West Fork at 33°45'11"/109°21'50"	A&Wc				FBC			FC		AgL
SR	Horse Camp Creek	~~Tributary to Cherry Creek~~ Headwaters to confluence with unnamed tributary at 33°53'53"/110°50'10"	A&Wc				FBC			FC		AgL
SR	Horse Camp Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Horton Creek	Tributary to Tonto Creek at 34°20'24"/111°05'42"	A&Wc				FBC			FC	AgI	AgL
SR	Houston Creek	Tributary to Tonto Creek at 34°07'30"/111°15'25"		A&Ww			FBC			FC		AgL
SR	Hunter Creek	Tributary to Christopher Creek at 34°18'29"/111°01'55"	A&Wc				FBC			FC		AgL
SR	LaBarge Creek	Superstition Wilderness Area; tributary to Canyon Lake		A&Ww			FBC			FC		
SR	Lake Sierra Blanca	33°52'25"/109°16'05"	A&Wc				FBC			FC	AgI	AgL
SR	Miami Wash	Tributary to Pinal Creek at 33°27'04"/110°50'17"			A&We			PBC				
SR	Mule Creek	Tributary to Canyon Creek at 34°16'34"/110°48'00"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Open Draw Creek	Tributary to the Black River, East Fork at 33°49'52"/109°18'18"	A&Wc				FBC			FC		AgL
SR	P B Creek	~~Tributary to Cherry Creek~~ Headwaters to Forest Service Road #203 at 33°57'08"/110°56'09"	A&Wc				FBC			FC		AgL
SR	P B Creek	Below Forest Service Road #203		A&Ww			FBC			FC		AgL

SR	Pinal Creek	Headwaters to confluence with unnamed EDW wash (Globe WWTP)			A&We			PBC				AgL
SR	Pinal Creek (EDW)	Below unnamed EDW wash to Radium				A&Wedw		PBC				
SR	Pinal Creek	Radium to Setka Ranch			A&We			PBC				AgL
SR	Pinal Creek	Setka Ranch to Salt River		A&Ww			FBC			FC		AgL
SR	Pine Creek	~~Superstition Wilderness Area~~ Tributary to the Salt River at 33°36'04"/111°12'36"		A&Ww			FBC			FC		
SR	Pinto Creek	~~Tributary to the Salt River~~ Headwaters to confluence with unnamed tributary at 33°19'27"/110°54'56"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
SR	Pinto Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
SR	Pueblo Canyon Creek	~~Tributary to Cherry Creek~~ Headwaters to confluence with unnamed tributary at 33°50'30"/110°53'13"	A&Wc				FBC			FC		AgL
SR	Pueblo Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
SR	Reevis Creek	Tributary to Pine Creek at 33°33'07"/111°09'40"		A&Ww			FBC			FC		
SR	Reservation Creek	Tributary to the Black River at 33°41'42"/109°28'26"	A&Wc				FBC			FC	~~AgI~~	AgL
SR	Reynolds Creek	Tributary to Workman Creek at 33°52'16"/111°00'14"	A&Wc				FBC			FC		AgL
SR	Roosevelt Lake	33°40'45"/111°09'15"		A&Ww			FBC		DWS	FC	AgI	AgL
SR	Rye Creek	Tributary to Tonto Creek at 34°01'41"/111°17'06"		A&Ww			FBC			FC		AgL
SR	Saguaro Lake	33°34'00"/111°32'06"	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Salome Creek	Tributary to the Salt River at 33°41'56"/111°05'46"	~~A&We~~	A&Ww			FBC			FC	AgI	AgL
SR	Salt River	Above Roosevelt Lake		A&Ww			FBC			FC	AgI	AgL
SR	Salt River	Theodore Roosevelt Dam to the Verde River	A&Wc				FBC		DWS	FC	AgI	AgL
SR	Salt River	Verde River to 2 km below Granite Reef Dam		A&Ww			FBC		DWS	FC	AgI	AgL
SR	Salt River	2 km below Granite Reef Dam to I-10 bridge			A&We			PBC				
SR	Salt River	I-10 bridge to the 23rd Ave WWTP		~~A&Ww~~	A&We			PBC		~~FC~~		
SR	Salt River (EDW)	23rd Ave WWTP to confluence with Gila River				A&Wedw		PBC		FC	AgI	AgL
SR	Slate Creek	Tributary to Tonto Creek at 33°56'24"/111°18'25"		A&Ww			FBC			FC		AgL
SR	Snake Creek (UW)	Tributary to the Black River at 33°40'30"/109°28'55"	A&Wc				FBC			FC		AgL
SR	Spring Creek	Tributary to Tonto Creek at 34°09'54"/111°10'08"	~~A&We~~	A&Ww			FBC			FC		AgL
SR	Stinky Creek (UW)	Tributary to the Black River, West Fork at 33°51'22"/109°27'07"	A&Wc				FBC			FC		AgL
SR	Tempe Town Lake	At Mill Avenue Bridge		A&Ww			FBC			FC		
SR	Thomas Creek	Tributary to Beaver Creek at 33°42'29"/109°15'11"	A&Wc				FBC			FC		AgL
SR	Thompson Creek	Tributary to the Black River, West Fork at 33°53'24"/109°28'48"	A&Wc				FBC			FC		AgL
SR	Tonto Creek	~~Tributary to Roosevelt Lake~~ Headwaters to confluence with unnamed tributary at 34°18'10"/111°04'14"	A&Wc				FBC			FC	AgI	AgL
SR	Tonto Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
SR	Turkey Creek	Tributary to Rock Creek~~; Sierra Ancha Mtns~~ at 33°58'30"/111°06'47"	A&Wc	~~A&Ww~~			FBC			FC		
SR	Unnamed Wash (EDW)	Globe WWTP outfall to Pinal Creek				A&Wedw		PBC				
SR	Wildcat Creek	Tributary to Centerfire Creek at 33°43'41"/109°26'28"	A&Wc				FBC			FC		AgL
SR	Willow Creek	Tributary to Beaver Creek at 33°43'52"/109°18'04"	A&Wc				FBC			FC		AgL

SR	Workman Creek	~~Tributary to Salome Creek~~ Headwaters to cofluence with Reynolds Creek at 33°52'17"/111°00'14.5"	A&Wc				FBC			FC	AgI	AgL
SR	Workman Creek	Below confluence with Reynolds Creek		A&Ww			FBC			FC	AgI	AgL
UG	Apache Creek	Tributary to the Gila River at 32°52'08"/109°11'53"		A&Ww			FBC			FC		AgL
UG	Ash Creek	~~Tributary to the Gila River~~ Headwaters to confluence with unnamed tributary at 32°45'37"/109°52'22"	A&Wc	~~A&Ww~~			FBC			FC		AgL
UG	Ash Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
UG	Bennett Wash (EDW)	ADOC-Safford WWTP outfall to the Gila River				A&Wedw		PBC				
UG	Bitter Creek	Tributary to the Gila River at 32°50'17"/109°10'59"		A&Ww			FBC	~~PBC~~		FC		
UG	Blue River	~~Tributary to the San Francisco River~~ Headwaters to confluence with Strayhorse Creek at 33°29'02"/110°12'12"	A&Wc				FBC			FC	AgI	AgL
UG	Blue River	Below confluence with Strayhorse Creek		A&Ww			FBC			FC	AgI	AgL
UG	Bonita Creek (Unique Water)	San Carlos Indian Reservation to the Gila River at 32°53'35"/109°28'41"		A&Ww			FBC		DWS	FC		AgL
UG	Buckalou Creek	Tributary to Castle Creek at 33°43'34"/109°09'07"	A&Wc				FBC			FC		AgL
UG	Campbell Blue Creek	Tributary to the ~~upper~~ Blue River at 33°43'30"/109°02'46"	A&Wc				FBC			FC		AgL
UG	Castle Creek	Tributary to Campbell Blue Creek at 33°44'06"/109°08'10"	A&Wc				FBC			FC		AgL
UG	Cave Creek (Unique Water)	Headwaters to confluence with South Fork Cave Creek at 31°53'04"/109°10'27"	A&Wc				FBC			FC	AgI	AgL
UG	Cave Creek (Unique Water)	Below confluence with South Fork Cave Creek to Coronado NF Boundary		A&Ww			FBC			FC	AgI	AgL
UG	Cave Creek	Below Coronado NF Boundary	~~A&Wc~~	A&Ww			FBC			FC	AgI	AgL
UG	Cave Creek, South Fork	Tributary to Cave Creek~~; Chiricahua Mtns~~ at 31°53'04"/109°10'27"	A&Wc				FBC			FC	AgI	AgL
UG	Chase Creek	Headwaters to the Phelps-Dodge Morenci Mine		A&Ww			FBC			FC		AgL
UG	Chase Creek	Below the Phelps-Dodge Morenci Mine			A&We			PBC				
UG	Chitty Canyon Creek	Tributary to Salt House Creek at 33°30'32"/109°24'04"	A&Wc				FBC			FC		AgL
UG	Cima Creek	Tributary to Cave Creek~~; Chiricahua Mtns~~ at 31°52'19"/109°14'02"	A&Wc				FBC			FC		AgL
UG	Cluff Ranch Pond #1	32°48'55"/109°49'15"		A&Ww			FBC			FC	AgI	AgL
UG	Cluff Ranch Pond #2	32°49'15"/109°50'33"		A&Ww			FBC			FC	AgI	AgL
UG	Cluff Ranch Pond #3	32°48'20"/109°51'43"		A&Ww			FBC			FC	AgI	AgL
UG	Coleman Creek	Tributary to Campbell Blue Creek at 33°44'20"/109°09'32"	A&Wc				FBC			FC		AgL
UG	Dankworth Ponds	32°43'15"/109°42'15"	A&Wc				FBC			FC		
UG	Deadman Canyon Creek	~~Tributary to the Gila River~~ Headwaters to confluence with unnamed tributary at 32°43'50"/109°49'01"	A&Wc				FBC		DWS	FC		AgL
UG	Deadman Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC		AgL
UG	Eagle Creek	~~Tributary to the Gila River; below Clifton~~ Headwaters to confluence with unnamed tributary at 33°23'24"/109°29'35"	A&Wc				FBC		DWS	FC	AgI	AgL
UG	Eagle Creek	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	AgL
UG	East Eagle Creek	Tributary to Eagle Creek at 33°29'38"/109°28'05"	A&Wc				FBC			FC		AgL

UG	East Turkey Creek	~~Eastern slope, Chiricahua Mntns~~ Headwaters to confluence with unnamed tributary at 31°58'22"/ 109°12'17"	A&Wc				FBC			FC		AgL
UG	East Turkey Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
UG	East Whitetail	Chiricahua Mountains		A&Ww			FBC			FC		AgL
UG	Emigrant Canyon	Chiricahua Mountains		A&Ww			FBC			FC		AgL
UG	Evans Pond	32°49'15"/109°51'15"		A&Ww			FBC			FC		
UG	Fishhook Creek	Tributary to the ~~upper~~ Blue River at 33°35'13"/109°10'01"	A&Wc				FBC			FC		AgL
UG	Foote Creek	Tributary to the ~~upper~~ Blue River at 33°35'24"/109°08'49"	A&Wc	~~A&Ww~~			FBC			FC		AgL
UG	Frye Canyon Creek	~~Eastern slope, Pinaleno Mountains~~ Headwaters to Frye Mesa Reservoir at 32°45'09.5"/109°50'02"	A&Wc				FBC		DWS	FC		AgL
UG	Frye Canyon Creek	Below Frye Mesa Reservoir		A&Ww			FBC			FC		AgL
UG	Frye Mesa Reservoir	32°45'13"/109°50'00"	A&Wc				FBC		DWS	FC		
UG	Gibson Creek	Tributary to Marijilda Creek at 32°41'24"/109°48'11"	A&Wc				FBC			FC		AgL
UG	Gila River	New Mexico border to the San Carlos Indian Reservation at 33°05'37"/110°03'21"		A&Ww			FBC			FC	AgI	AgL
UG	Grant Creek	Tributary to the ~~upper~~ Blue River at 33°34'16"/109°10'37"	A&Wc				FBC			FC		AgL
UG	Judd Lake	33°51'15"/109°09'15"	A&Wc				FBC			FC		
UG	K P Creek (UW)	Tributary to the ~~upper~~ Blue River at 33°31'44"/109°12'04"	A&Wc				FBC		~~DWS~~	FC		AgL
UG	Lanphier Canyon Creek	Tributary to the ~~upper~~ Blue River at 33°35'42"/109°07'52"	A&Wc				FBC			FC		AgL
UG	Little Blue Creek	~~Tributary to the upper Blue River~~ Headwaters to confluence with Dutch Blue Creek at 33°24'26.5"/ 109°09'18"	A&Wc	~~A&Ww~~			FBC			FC		AgL
UG	Little Blue Creek	Below confluence with Dutch Blue Creek		A&Ww			FBC			FC		AgL
UG	Little Creek	Tributary to the San Francisco River at 33°49'41"/109°04'26"	A&Wc				FBC			FC		
UG	Lower George's Reservoir	~~Near Alpine~~ 33°51'23.5"/ 109°08'28"	A&Wc				FBC			FC		AgL
UG	Luna Lake	33°49'45"/109°05'15"	A&Wc				FBC			FC		AgL
UG	Marijilda Creek	~~Tributary to the Gila River~~ Headwaters to confluence with Gibson Creek at 32°41'23"/109°48'13"	A&Wc				FBC			FC	~~AgI~~	AgL
UG	Marijilda Creek	Below confluence with Gibson Creek		A&Ww			FBC			FC	AgI	AgL
UG	Markham Creek	Tributary to the Gila River at 32°56'17"/109°53'13"		A&Ww			FBC			FC		AgL
UG	Pigeon Creek	Tributary to the ~~lower~~ Blue River at 33°16'08"/109°11'42"		A&Ww			FBC			FC		AgL
UG	Raspberry Creek	Tributary to the ~~upper~~ Blue River at 33°30'07"/109°12'32"	A&Wc	~~A&Ww~~			FBC			FC		
UG	Roper Lake	32°45'20"/109°42'11"		A&Ww			FBC			FC		
UG	San Francisco River	Headwaters to the New Mexico border at 33°49'24.5"/109°02'46"	A&Wc				FBC			FC	AgI	AgL
UG	San Francisco River	New Mexico border to the Gila River at 33°14'25"/109°02'49"		A&Ww			FBC			FC	AgI	AgL
UG	San Simon River	Tributary to the Gila River at 32°49'52"/109°38'53"			A&We			PBC				AgL
UG	Sheep Tank	32°46'15"/109°48'08"		A&Ww			FBC			FC		AgL
UG	Smith Pond	32°49'09"/109°50'26"		A&Ww			FBC			FC		
UG	Squaw Creek	Tributary to Thomas Creek at 33°23'38"/109°12'22"	A&Wc	~~A&Ww~~			FBC			FC		AgL
UG	Stone Creek	Tributary to the San Francisco River at 33°50'38"/109°02'46"	A&Wc				FBC			FC	AgI	AgL
UG	Strayhorse Creek	Tributary to the Blue River at 33°29'02"/109°12'11"	A&Wc				FBC			FC		

UG	Thomas Creek	~~Tributary to the upper Blue River~~ Headwaters to confluence with Rousensock Creek at 33°23'45"/ 109°13'13"	A&Wc	~~A&Ww~~			FBC			FC		AgL
UG	Thomas Creek	Below confluence with Rousensock Creek		A&Ww			FBC			FC		AgL
UG	Tinny Pond	33°47'49"/109°04'23"		A&Ww			FBC			FC		AgL
UG	Turkey Creek	Tributary to Campbell Blue Creek at 33°44'10"/109°04'05"	A&Wc				FBC			FC		AgL
UG	Unnamed Wash (EDW)	ADOC-Globe WWTP outfall to the San Carlos Indian Reservation				A&Wedw		PBC				
VR	American Gulch	Headwaters to the Northern Gila County Sanitary District WWTP outfall (Payson)		A&Ww			FBC			FC	AgI	AgL
VR	American Gulch (EDW)	Northern Gila County Sanitary District WWTP outfall (Payson) to the East Verde River				A&Wedw		PBC				
VR	Apache Creek	Tributary to Walnut Creek at 34°55'12"/112°50'42"		A&Ww			FBC			FC		AgL
VR	Ashbrook Wash	Headwaters to the Ft McDowell Reservation at 33°36'54"/ 111°42'06"			A&We			PBC				
VR	Aspen Creek	~~Near Prescott~~ Tributary to Granite Creek at 34°31'55"/112°28'19"		A&Ww				~~PBC~~		FC		
VR	Bar Cross Tank	35°00'40"/112°05'34"		A&Ww			FBC			FC		AgL
VR	Barrata Tank	35°02'43"/112°24'17"		A&Ww			FBC			FC		AgL
VR	Bartlett Lake	33°49'00"/111°37'45"		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Beaver Creek	Tributary to the Verde River at 34°34'26"/111°51'14"	~~A&Wc~~	A&Ww			FBC			FC		AgL
VR	Big Chino Wash	Tributary to Sullivan Lake at 34°52'37"/112°28'37"			A&We			PBC				AgL
VR	Bitter Creek	Headwaters to the Jerome WWTP outfall		~~A&Ww~~	A&We			PBC		~~FC~~		AgL
VR	Bitter Creek (EDW)	Jerome WWTP outfall to ~~2.5 km downstream~~ the Yavapai Apache Indian Reservation at 34°45'45.5"/ 112°04'44"				A&Wedw		PBC				AgL
VR	Bitter Creek	Below ~~2.5 km downstream of the Jerome WWTP outfall~~ the Yavapai Apache Indian Reservation		A&Ww			FBC			FC	AgI	AgL
VR	Black Canyon Creek	~~Mingus Mountains~~ Headwaters to confluence with unnamed tributary at 34°39'20"/112°05'05"	A&Wc	~~A&Ww~~			FBC			FC		AgL
VR	Black Canyon Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
VR	Bonita Creek	Tributary to ~~Perley Creek; Tonto NF~~ Ellison Creek at 34°20'56"/ 111°14'20"	A&Wc				FBC		~~DWS~~	FC		
VR	Bray Creek	Tributary to Webber Creek at 34°22'37"/111°20'53"	A&Wc	~~A&Ww~~			FBC			FC		AgL
VR	Camp Creek	Tributary to the Verde River at 33°45'32"/111°30'14"		A&Ww			FBC			FC		AgL
VR	Carter Tank	34°52'27"/112°57'28"		A&Ww			FBC			FC		AgL
VR	Cereus Wash	Headwaters to the Fort McDowell Indian Reservation at 33°34'13"/ 111°42'28"			A&We			PBC				
VR	Chase Creek	Tributary to the East Verde River at 34°22'48"/111°16'59"	A&Wc				FBC		DWS	FC		
VR	Clover Creek	Tributary to headwaters of West Clear Creek at 34°33'04"/ 111°24'11"	A&Wc				FBC			FC		AgL
VR	Coffe Creek	Tributary to Spring Creek at 34°48'18"/111°55'41"		A&Ww			FBC			FC		AgL
VR	Colony Wash	Headwaters to the Fort McDowell Indian Reservation at 33°35'42"/ 111°42'15"			A&We			PBC				
VR	Dead Horse Lake	34°45'00"/112°00'30"	A&Wc				FBC			FC		
VR	Deadman Creek	Tributary to Horseshoe Reservoir at 34°00'00"/111°42'36"		A&Ww			FBC			FC		AgL
VR	Del Rio Dam Lake	34°48'55"/112°28'00"		A&Ww			FBC			FC		AgL

VR	Dry Beaver Creek	Tributary to Beaver Creek at 34°37’59”/111°49’34”		A&Ww			FBC			FC	AgI	AgL
VR	Dude Creek	Tributary to the East Verde River at 34°23’06”/111°16’26”	A&Wc				FBC			FC	AgI	AgL
VR	East Verde River	~~Tributary to the Verde River~~ Headwaters to confluence with Ellison Creek at 34°21’10”/111°16’47.5”	A&Wc				FBC		DWS	FC	AgI	AgL
VR	East Verde River	Below confluence with Ellison Creek		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Ellison Creek	Tributary to the East Verde River at 34°21’11”/111°16’48”	A&Wc				FBC			FC		AgL
VR	Fossil Creek	Tributary to the Verde River at 34°18’22”/111°40’30”		A&Ww			FBC			FC		AgL
VR	Fossil Springs	34°25’24”/111°34’25”		A&Ww			FBC		DWS	FC		
VR	Foxboro Lake	34°53’48”/111°40’00”		A&Ww			FBC			FC		AgL
VR	Fry Lake	35°03’45”/111°48’02”		A&Ww			FBC			FC		AgL
VR	Gap Creek	~~Tributary to the Verde River; Prescott NF~~ Headwaters to Government Spring at 34°23’23”/111°50’53.5”	A&Wc				FBC			FC		AgL
VR	Gap Creek	Below Government Spring		A&Ww			FBC			FC		AgL
VR	Garrett Tank	35°18’57”/112°42’16”		A&Ww			FBC			FC		AgL
VR	Goldwater Lake, Lower	34°29’55”/112°27’18”	A&Wc				FBC		DWS	FC		
VR	Goldwater Lake, Upper	34°29’51”/112°26’55”	A&Wc				FBC		DWS	FC		
VR	Granite Basin Lake	34°37’01”/112°42’16”		A&Ww			FBC			FC	AgI	AgL
VR	Granite Creek	~~Tributary to the Verde River~~ Headwaters to confluence with Willow Creek at 34°36’55”/112°25’05”	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
VR	Granite Creek	Below confluence with Willow Creek		A&Ww			FBC			FC	AgI	AgL
VR	Heifer Tank	35°20’28”/112°32’56”		A&Ww			FBC			FC		AgL
VR	Hell Canyon Tank	35°05’00”/112°24’06”		A&Ww			FBC	~~PBC~~		FC		AgL
VR	Homestead Tank	35°21’23”/112°41’32”		A&Ww			FBC			FC		AgL
VR	Horse Park Tank	34°58’15”/111°36’29”		A&Ww			FBC			FC		AgL
VR	Horseshoe Reservoir	33°59’00”/111°42’30”		A&Ww			FBC			FC	AgI	AgL
VR	Houston Creek	Tributary to the Verde River at 34°16’55”/111°41’06”		A&Ww			FBC			FC		AgL
VR	J.D. Dam Lake	35°04’01”/112°01’40”	A&Wc				FBC			FC	AgI	AgL
VR	Jacks Canyon Wash (EDW)	Big Park WWTP outfall to Dry Beaver Creek				A&Wedw		PBC				
VR	Lime Creek	Tributary to Horseshoe Reservoir at 33°59’20”/111°44’13”		A&Ww			FBC			FC		AgL
VR	McLellan Reservoir	35°13’15”/112°17’05”		A&Ww			FBC			FC	AgI	AgL
VR	Meath Dam Tank	35°07’46”/112°27’35”		A&Ww			FBC			FC		AgL
VR	Mullican Place Tank	34°44’16”/111°36’08”		A&Ww			FBC			FC		AgL
VR	Oak Creek (Unique Water)	~~Tributary to the Verde River~~ Headwaters to confluence with unnamed tributary at 34°57’08.5”/111°45’13”	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Oak Creek (Unique Water)	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Oak Creek, West Fork (Unique Water)	Tributary to Oak Creek at 34°59’13”/111°44’46”	A&Wc				FBC			FC		AgL
VR	Odell Lake	34°56’02”/111°37’52”	A&Wc				FBC			FC		
VR	Peck’s Lake	34°47’07”/112°02’30”	A&Wc				FBC			FC	AgI	AgL
VR	Perkins Tank	35°06’42”/112°04’08”	A&Wc				FBC			FC		AgL
VR	Pine Creek	~~Tributary to the East Verde River~~ Headwaters to confluence with unnamed tributary at 34°21’51”/111°26’46”	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Pine Creek	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Red Creek	Tributary to the Verde River at 34°09’47”/111°43’12”		A&Ww			FBC			FC		AgL
VR	Red Lake	35°12’19”/113°03’55”		A&Ww			FBC			FC		AgL
VR	Reservoir #1	35°13’05”/111°50’07”		A&Ww			FBC			FC		

VR	Reservoir #2	35°13'16"/111°50'36"		A&Ww			FBC			FC		
VR	Roundtree Canyon Creek	Tributary to Tangle Creek at 34°09'04"/111°48'18"		A&Ww			FBC			FC		AgL
VR	Scholze Lake	35°11'53"/112°00'31"		A&Ww			FBC			FC		AgL
VR	Spring Creek	~~Tributary to Oak Creek~~ Headwaters to confluence with unnamed tributary at 34°57'23.5"/111°57'19"	A&Wc	~~A&Ww~~			FBC			FC	AgI	AgL
VR	Spring Creek	Below confluence with unnamed tributary to Oak Creek		A&Ww			FBC			FC	AgI	AgL
VR	Steel Dam Lake	35°13'36"/112°24'51"	A&Wc				FBC			FC		AgL
VR	Stehr Lake	34°21'59"/111°40'00"		A&Ww			FBC			FC		AgL
VR	Stone Dam Lake	35°13'36"/112°24'16"	A&Wc				FBC			FC	AgI	AgL
VR	Stoneman Lake	34°46'44"/111°31'05"	A&Wc				FBC			FC	AgI	AgL
VR	Sullivan Lake	34°51'46"/112°27'41"		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	~~Tributary to Verde River Coconino NF~~ Headwaters to confluence with unnamed tributary at 35°03'40"/111°57'28"	A&Wc				FBC			FC	AgI	AgL
VR	Sycamore Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	Tributary to Verde River at 33°37'55"/111°39'58" , ~~Tonto National Forest~~		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	Tributary to Verde River at 34°04'42"/111°42'14"		A&Ww			FBC			FC		AgL
VR	Tangle Creek	Tributary to the Verde River at 34°05'06"/111°42'36"		A&Ww			FBC			FC	AgI	AgL
VR	Trinity Tank	35°27'44"/112°47'56"		A&Ww			FBC			FC		AgL
VR	Verde River	Above Bartlett Dam		A&Ww			FBC			FC	AgI	AgL
VR	Verde River	Below Bartlett Dam		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Walnut Creek	Tributary to Big Chino Wash at 34°58'12"/112°34'55"		A&Ww			FBC			FC		AgL
VR	Watson Lake	34°35'15"/112°25'05"		A&Ww			FBC			FC	AgI	AgL
VR	Webber Creek	Tributary to the East Verde River at 34°18'50"/111°19'55"	A&Wc				FBC			FC		AgL
VR	West Clear Creek	~~Tributary to the Verde River~~ Headwaters to confluence with Meadow Canyon at 34°33'40"/111°31'30"	A&Wc				FBC			FC		AgL
VR	West Clear Creek	Below confluence with Meadow Canyon		A&Ww			FBC			FC	AgI	AgL
VR	Wet Beaver Creek	~~Tributary to Beaver Creek~~ Headwaters to unnamed springs at 34°41'17"/111°34'34"	A&Wc				FBC			FC	AgI	AgL
VR	Wet Beaver Creek	Below unnamed springs		A&Ww			FBC			FC	AgI	AgL
VR	Whitehorse Lake	35°07'00"/112°00'47"	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Williamson Valley Wash	Headwaters to confluence with Mint Wash at 34°49'05"/112°37'55"			A&We			PBC				AgL
VR	Williamson Valley Wash	Confluence of Mint Wash to 10.5 km dwnstm		A&Ww			FBC			FC		AgL
VR	Williamson Valley Wash	Below 10.5 km downstream of Mint Wash confluence			A&We			PBC				AgL
VR	Williscraft Tank	35°11'23"/112°35'38"		A&Ww			FBC			FC		AgL
VR	Willow Creek	Tributary to ~~Willow Creek Reservoir~~ Granite Creek at 34°51'47"/112°25'52"	A&Wc				FBC			FC		AgL
VR	Willow Creek Reservoir	34°36'17"/112°26'19"		A&Ww			FBC			FC	AgI	AgL
VR	Willow Valley Lake	34°41'08"/111°19'57"		A&Ww			FBC			FC		AgL
WP	Big Creek	~~Pinaleno Mountains~~ Tributary to Pitchfork Canyon at 32°35'24"/109°57'07"	A&Wc	~~A&Ww~~			FBC			FC		AgL
WP	Goudy Canyon Creek	Pinaleno Mountains	A&Wc				FBC			FC		AgL
WP	Grant Creek	~~Pinaleno Mountains~~ Headwaters to confluence with unnamed tributary at 32°38'09.5"/109°56'35"	A&Wc				FBC		DWS	FC		AgL
WP	Grant Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL

WP	High Creek	~~Galiuro Mountains~~ Headwaters to confluence with unnamed tributary at 32°33'07"/110°14'40"	A&Wc	~~A&Ww~~			FBC			FC		AgL
WP	High Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
WP	Lake Cochise	South of Twin Lakes Municipal Golf Course at 32°14' N / 109°11' W				A&Wedw		PBC				
WP	Moonshine Creek	Tributary to Post Creek at 32°40'52"/109°54'25"	A&Wc				FBC			FC		AgL
WP	Pinery Creek	~~Chiricahua Mtns~~ Headwaters to State Highway 181 at 32°00'24"/ 109°25'16"	A&Wc	~~A&Ww~~			FBC		DWS	FC		AgL
WP	Pinery Creek	Below State Highway 181		A&Ww			FBC		DWS	FC		AgL
WP	Post Creek	Tributary to Grant Creek at 32°40'05"/109°54'58"	A&Wc				FBC			FC	AgI	AgL
WP	Riggs Flat Lake	32°42'27"/109°57'51"	A&Wc				FBC			FC	AgI	AgL
WP	Rock Creek	Tributary to Turkey Creek at 31°53'20"/109°30'00"	A&Wc	~~A&Ww~~			FBC			FC		AgL
WP	Snow Flat Lake	32°39'09"/109°51'52"	A&Wc				FBC			FC	AgI	AgL
WP	Soldier Creek	Tributary to Post Creek~~; Coronado National Forest~~ at 32°40'52"/ 109°54'40"	A&Wc				FBC			FC		AgL
WP	Turkey Creek	~~Western slope, Chiricahua Mtns~~ Headwaters to confluence with Rock Creek at 31°53'20"/ 109°30'00"	A&Wc				FBC			FC	AgI	AgL
WP	Turkey Creek	Below confluence with Rock Creek		A&Ww			FBC			FC	AgI	AgL
WP	Ward Canyon Creek	Tributary to Turkey Creek at 31°51'47"/109°20'13"	A&Wc				FBC			FC		AgL
WP	Willcox Playa	Sulphur Springs Valley		A&Ww			FBC			FC		AgL