# NOTICES OF PROPOSED RULEMAKING

## Initiated After January 1, 1995

Unless exempted by A.R.S. § 41-1005, each agency shall begin the rulemaking process by first filing a Notice of Proposed Rulemaking, containing the preamble and the full text of the rules, with the Secretary of State's Office. The Secretary of State shall publish the notice along with the Preamble and the full text in the next available issue of the Arizona Administrative Register.

Under the administrative Procedure Act (A.R.S. § 41-1001 *et seq.*), an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the *Register* before beginning any proceedings for adoption, amendment, or repeal of any rule. A.R.S. §§ 41-1013 and 41-1022.

## NOTICE OF PROPOSED RULEMAKING

### TITLE 18. ENVIRONMENTAL QUALITY

### CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY
### WATER QUALITY STANDARDS

### PREAMBLE

1.

| Sections Affected | Rulemaking Action |
|---|---|
| R18-11-101 | Amendment |
| R18-11-102 | Amendment |
| R18-11-103 | Repeal |
| R18-11-104 | Amendment |
| R18-11-105 | New Section |
| R18-11-106 | New Section |
| R18-11-107 | Amendment |
| R18-11-108 | Amendment |
| R18-11-109 | Amendment |
| R18-11-111 | Amendment |
| R18-11-112 | Amendment |
| R18-11-113 | Amendment |
| R18-11-114 | Amendment |
| R18-11-115 | Amendment |
| R18-11-117 | Amendment |
| R18-11-118 | Amendment |
| R18-11-120 | Amendment |
| R18-11-121 | Amendment |
| R18-11-122 | New Section |
| R18-11-123 | New Section |
| Appendix A | Repeal |
| Appendix A | New Section |
| Appendix B | Repeal |
| Appendix B | New Section |
| Appendix C | Repeal |
| Article 2 | Repeal |
| R18-11-201 | Repeal |
| R18-11-202 | Repeal |
| R18-11-203 | Repeal |
| R18-11-204 | Repeal |
| R18-11-205 | Repeal |

2. The specific authority for the rulemaking, including both the authorizing statute [general] and the statutes the rules are implementing [specific]:
   Authorizing statute: A.R.S. § 49-221
   Implementing statute: A.R.S. § 49-222

3. The names and addresses of agency personnel with whom persons may communicate regarding the rulemaking:
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4. An explanation of the rule, including the agency's reasons for initiating the rule:

The Arizona Department of Environmental Quality [ADEQ] is initiating this rulemaking to comply with the requirements of the Clean Water Act. §303(c) of the Clean Water Act establishes the statutory basis in federal law for the water quality standards program. §303(c)(1) of the Clean Water Act requires states to review their surface water quality standards at least once every three years and to revise them where it is appropriate to do so. Under A.R.S. § 49-202(A), ADEQ is the designated state agency for all purposes of the Clean Water Act and is responsible for conducting the triennial review of the state's water quality standards. The last triennial review of the Arizona's water quality standards was completed with the adoption of revisions to the state-adopted water quality standards rules effective Feb. 18, 1992.

State-adopted water quality standards are subject to review and approval or disapproval by the U.S. Environmental Protection Agency [EPA]. After the last revisions to Arizona's water quality standards were officially adopted on February 18, 1992, they were submitted to the Administrator of U.S. EPA Region IX for review.

EPA is required to review the state-adopted water quality standards and make a determination whether the standards meet the requirements of the Clean Water Act and federal water quality standards regulations at 40 CFR 131. EPA's review involves a determination of whether ADEQ has adopted use designations for surface waters in Arizona that are consistent with the requirements of the Clean Water Act; whether ADEQ has adopted water quality criteria that are sufficient to protect water quality for those designated uses; whether the state-adopted water quality standards include an antidegradation policy that is consistent with federal requirements; whether ADEQ complied with procedural requirements for adopting or revising water quality standards; and whether the state-adopted water quality standards are based upon appropriate technical or scientific analyses.

EPA can either approve, conditionally approve, or disapprove state-adopted water quality standards, in whole or in part. If the Regional Administrator of EPA Region IX determines that revisions to state-adopted water quality standards are not consistent with the requirements of the Clean Water Act and its implementing regulations, then the Regional Administrator is required to disapprove the standards and provide written notice to the state specifying what changes must be made to the water quality standards in order for them to be approved. If a state fails to make the required changes within 90 days of notification, then EPA is required to promptly promulgate federal water quality standards for the state.

In the last triennial review of Arizona's water quality standards, the Regional Administrator of U.S. EPA Region IX reviewed the state-adopted water quality standards and subsequently issued four letters indicating EPA approvals and disapprovals. On March 2, 1992, EPA approved Arizona's numeric water quality standards for toxic pollutants. On July 6, 1992, EPA approved the state-adopted nutrient standards for the Lower Colorado River and the salinity standards for the Colorado River. On September 9, 1993, EPA disapproved certain portions of the state-adopted water quality standards. These disapprovals included the following:

1. Disapproval of the exclusion from water quality standards for mining-related impoundments,
2. Disapproval of the lack of the fish consumption designated use for certain surface waters in Arizona,
3. Disapproval of the lack of biomonitoring procedures for implementation of the narrative toxics standard at R18-11-108(A)(5),
4. Disapproval of the lack of implementation procedures for the narrative nutrient standard at R18-11-108(A)(6), and
5. Disapproval of the practical quantitation levels prescribed in Appendix C.

On November 8, 1993, Arizona informed EPA by letter that the state would defer its response to the disapprovals of the state's water quality standards until after EPA completed a required consultation with the U.S Fish & Wildlife Service [USFWS] on Arizona's water quality standards under §7 of the Endangered Species Act and took final action on the remainder of the water quality standards. §7 of the Endangered Species Act requires that EPA consult with the USFWS to determine whether EPA's action on the approval or disapproval of Arizona's water quality standards would be likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of their critical habitat.

On April 29, 1994, EPA completed its review, approving the remaining portions of the state-adopted water quality standards. However, EPA's final action included one additional disapproval. EPA disapproved Arizona's numeric water quality standards for mercury that had been established to protect aquatic life and wildlife. This additional disapproval was based upon a biological opinion issued by the USFWS. In the USFWS biological opinion, the USFWS stated that Arizona's water quality standards for mercury jeopardized endangered and threatened species because the state had failed to adequately consider the bioaccumulative effects of mercury on predatory birds and fish when the numeric water quality criteria were developed.

The Director of ADEQ responded to the EPA disapprovals by letter dated July 6, 1994. The response indicated that Arizona would propose required revisions to the state-adopted water quality standards rules in the current triennial review. ADEQ noted in the response to EPA that revisions to the water quality standards could not be accomplished within 90 days because rulemaking was needed to make the revisions. This rulemaking includes the necessary revisions. These revisions are discussed in the summary of the proposed changes to the rules below.

The triennial review of the state-adopted water quality standards rules is not limited to issues related to specific EPA disapprovals. ADEQ may identify other necessary revisions to designated uses, water quality criteria, antidegradation policy, or other general policies based upon water quality monitoring data or public comment. This rulemaking also includes proposed revisions that are unrelated to EPA disapprovals.

**Summary of Proposed Revisions to the Rules**

*"Navigable Water" v. "Surface Water"*

The general authorizing statute for this rulemaking states at A.R.S. §49-221(A) that the Director of the Arizona Department of Environmental Quality "shall adopt, by rule, water quality standards for all navigable waters...." The specific authorizing statute for this rulemaking, A.R.S. § 49-222, also refers to water quality standards for "navigable waters."

The use of the term, "navigable waters," is consistent with the terminology used in §303(c) of the Clean Water Act. For example, §303(c)(2) of the Act provides that a water quality standard shall consist of "the designated uses of the navigable waters involved and the water quality criteria for such waters based upon their uses."

The term, "navigable waters," is a legal term of art. It is specifically defined in the Clean Water Act as "the waters of the United States, including the territorial seas" [See § 502(7) of the Clean Water Act]. Arizona statute also defines "navigable waters" as the "waters of the United States" [See A.R.S. § 49-201(17)]. The term, "waters of the United States," has a specific legal definition. "Waters of the United States" is defined in federal regulations which govern the National Pollutant Discharge Elimination System permit program at 40 CFR 122.2. The currently effective water quality standards rules also include a definition of "waters of the United States" [See R18-11-101(45)].

In the last triennial review of the water quality standards rules, Arizona revised the rules to consistently use the term, "navigable water." This change was made to make the terminology of the state-adopted water quality standards rules consistent with the terminology used in the Clean Water Act and to clarify that the water quality standards rules were adopted by the state pursuant to A.R.S. §49-221 and §49-222. ADEQ defined "navigable water" to mean a "water of the United States" [See R18-11-101(32)] and essentially imported the federal definition of "water of the United States" at 40 CFR 122.2 into the state water quality standards rules. [See R18-11-101(45)].

Unfortunately, the use of the term, "navigable water," created confusion in the regulated community. Many people did not understand that the term, "navigable water," was a term of art with a specific legal definition under both the Clean Water Act and Arizona law. Many persons understandably interpreted "navigable water" to mean a surface water that was navigable-in-fact. Confusion over the meaning of "navigable water" led to confusion over what surface waters in Arizona were governed by state-adopted water quality standards.

To avoid this confusion and to make the water quality standards rules more understandable, ADEQ proposes to eliminate all references to "navigable waters" in the rules. ADEQ proposes to replace "navigable waters" with the term, "surface waters." ADEQ believes that "surface waters" more accurately describes the water bodies that are subject to water quality standards. ADEQ also believes that "surface waters" is less subject to misinterpretation by the regulated community.

The proposed use of the term, "surface water" should not be interpreted as a substantive change in the scope of the water quality standards rules. The terms "surface water," "navigable water," and "water of the United States" are synonymous. The proposed definition of "surface water" at R18-11-101(41) makes clear that a "surface water" is a "water of the United States." A comparison of the proposed definition of "surface water" with the federal definition of "water of the United States" at 40 CFR 122.2 will show that the two definitions are essentially the same.

*Scope of the Proposed Water Quality Standards Rules*

ADEQ proposes to amend R18-11-102 to clarify that water quality standards apply to surface waters but not to waste treatment systems or to certain man-made surface impoundments used in mining. The waste treatment system and mining impoundments exclusions from water quality standards were established by the state in the last triennial review of the water quality standards rules [See R18-11-103(1) and (2)]. In this rulemaking, ADEQ proposes to revise the language of both of the currently effective exclusions.

*The Waste Treatment System Exclusion*

The state-adopted water quality standards apply to surface waters [i.e, to "navigable waters" or "waters of the United States"]. Under the proposed waste treatment systems exclusion, water quality standards do <u>not</u> apply to waste treatment systems, including the impoundments, ponds, lagoons and constructed wetlands that are a part of such waste treatment systems [See R18-11-102(B)(1)].

The source of the waste treatment system exclusion is the federal definition of "waters of the United States." 40 CFR 122.2 provides, in relevant part:

> Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA [other than cool-

ing ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition] are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States [such as a disposal area in wetlands] nor resulted from the impoundment of waters of the United States [See Note 1 of this Section].

Note 1 to the waste treatment system exclusion states that EPA suspended the second sentence cited above [starting with "This exclusion applies only to manmade..."] in 1980. The second sentence limited the application of the waste treatment systems exclusion to those waste treatment systems that were not originally created in waters of the United States nor resulted from the impoundment of waters of the United States [See 45 Fed. Reg. 48620 (July 21, 1980)]. The suspension of this language by EPA means that the waste treatment system exclusion in the federal definition of "waters of the United States" is not conditioned. The suspension of this language remains in effect.

The same waste treatment system exclusion is found in the currently effective water quality standards rules at R18-11-103(1). However, the waste treatment system exclusion adopted by the state in 1992 includes the language suspended by EPA. ADEQ proposes to eliminate the suspended language from the state-adopted waste treatment system exclusion to make it more consistent with the currently effective federal definition of "waters of the United States" and the EPA suspension.

The elimination of the second sentence from the waste treatment system exclusion will broaden the exclusion and provide more regulatory flexibility. For example, the elimination of the second sentence from the waste treatment system exclusion will remove an existing legal barrier to the use of constructed wetlands in the channels of dry watercourses for wastewater treatment. Under the currently effective exclusion, the construction of a wetlands for wastewater treatment in the channel of a dry watercourse is effectively precluded because water quality standards have to be met at the point of discharge into the constructed wetlands. The requirement to comply with water quality standards at the point of discharge into a constructed wetlands defeats the wetland's intended purpose. If the limiting language in the wastewater treatment system exclusion is eliminated, then it is possible to construct a wetlands in the channel of a dry watercourse for the purpose of wastewater treatment. Water quality standards would not have to be met at the point of discharge into the constructed wetlands. Rather, compliance with water quality standards could be determined at the point of discharge from the constructed wetlands. The removal of the second sentence from the wastewater treatment system exclusion would allow in-channel constructed wetlands for wastewater treatment.

*The Mining Impoundments Exclusion*

In the last triennial review, ADEQ created an exclusion from water quality standards for certain mining-related impoundments. Water quality standards do not apply to:

> Man-made surface impoundments and associated ditches and conveyances used in the extraction, beneficiation, and processing of metallic ores, including pregnant leach solution ponds, raffinate ponds, tailing impoundments, decant ponds, concentrate or tailing thickeners, blowdown water ponds, ponds and sumps in mine pits associated with dewatering activity, ponds holding water that has come in contact with process or product that is being held for recycling, spill or upset catchment ponds or ponds used for on-site remediation provided that any discharge from any such surface impoundment to a navigable water is permitted under the National Pollutant Discharge Elimination System [See R18-11-103(2)].

On September 9, 1993, EPA disapproved the exclusion from water quality standards for man-made surface impoundments related to mining. EPA stated in its disapproval letter that the state must either delete the mining impoundments exclusion or otherwise revise the rule to ensure that mining-related impoundments which are waters of the United States are governed by appropriate water quality standards. In disapproving the exclusion, EPA acknowledged that most mining-related impoundments are not subject to water quality standards because they are located outside of waters of the United States.

The EPA disapproval of the mining impoundment exclusion did not require the repeal of the currently effective rule. EPA indicated that the exclusion provision was approvable if the state revised the language of the exclusion in a way that makes clear that the exclusion does not exempt any water of the United States from coverage by water quality standards.

ADEQ is proposing to revise the language of the mining impoundments exclusion in this rulemaking [R18-11-102(B)(2)]. The proposed revisions to the language of the mining impoundments exclusion are intended to ensure that any mining-related impoundments which are waters of the United States will be governed by appropriate water quality standards. ADEQ has revised the language of the rule to exempt from water quality standards only those mining-related impoundments that are: 1) located on lands that would not be otherwise be considered surface waters or waters of the United States [e.g. upland areas]; or 2) that are located on fast lands. The term, "fast lands" means lands which may have been a surface water at one time but which have been converted to land by the discharge of dredged or fill material [See proposed definition at R18-11-101(24)].

The retention of a revised mining impoundments exclusion will provide regulatory certainty by clarifying that the state does not consider the types of man-made impoundments that are described in the exclusion to be "waters of the United States." ADEQ continues to believe that it is unreasonable to apply water quality standards to the types of mining-related impoundments that would be covered by this exclusion. Congress did not intend that the goals and objectives of the Clean Water Act apply to such impoundments. For example, Congress could not reasonably have intended that mining-related impoundments meet the interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and which provides for recreation in and on the water. The "fishable/swimmable" goals of the Clean Water Act are clearly unreasonable water quality objectives for pregnant leach solution ponds, tailings impoundments, and similar man-made impoundments.

The proposed exclusion includes a list of mining-related impoundments. This list provides examples of the types of mining impoundments that are covered by the exclusion. The list is provided for illustrative purposes and it is not intended to be an exclusive list.

*Revisions to the Tributary Rule*

The currently effective water quality standards rules include a provision at R18-11-104(D) which is commonly referred to as the tributary rule. The tributary rule establishes water quality standards for surface waters that are not specifically listed in Appendix B of the water quality standards rules.

The currently effective tributary rule at R18-11-104(D) provides a minimum level of water quality protection for unlisted tributaries by applying the water quality standards that have been established for the nearest downstream surface water that is listed in Appendix B. If the nearest listed downstream surface water is an ephemeral water, then the water quality standards that apply to that downstream ephemeral water [i.e., partial-body contact (PBC) and aquatic and wildlife (ephemeral)(A&We)] apply only to those portions of an upstream tributary that also are ephemeral. For portions of an upstream tributary that are not ephemeral, the currently effective rule establishes the aquatic and wildlife (warm water fishery) and full-body-contact water quality standards by default.

The operation of the currently effective tributary rule can result in the application of inappropriate water quality standards to unlisted tributaries. For example, if the nearest downstream surface water to an unlisted tributary is a perennial stream with a cold water fishery, then the tributary rule applies the water quality standards for that perennial water to all of the upstream tributaries, even if a triburary is an ephemeral water. A perennial stream with a cold water fishery typically will have the following designated uses: aquatic and wildlife [cold water fishery], fish consumption, and full-body contact. The operation of the tributary rule would apply these water quality standards to all upstream tributaries, even to a dry wash that flows only in response to a storm event.

ADEQ proposes to revise the tributary rule to avoid the application of inappropriate water quality standards to unlisted tributaries. The revised tributary rule establishes water quality standards for four different types of tributaries: ephemeral waters, effluent-dependent waters, perennial tributaries that are cold water fisheries and perennial tributaries that are warm water fisheries.

Under the proposed rule, ephemeral tributaries will be protected by water quality standards that are appropriate for ephemeral waters: aquatic and wildlife [ephemeral] and partial-body contact. For tributaries that are effluent dependent, the aquatic and wildlife [effluent-dependent water] and partial-body contact water quality standards will apply. Perennial tributaries that have salmonids present will be protected by aquatic and wildlife [cold water fishery] standards, fish consumption standards, and the water quality standards that apply to the nearest downstream surface water. Perennial tributaries that do not have salmonids will be protected by aquatic and wildlife [warm water fishery] standards, fish consumption standards, and the water quality standards that apply to the nearest downstream surface water.

*Modification of water quality standards on grounds of net ecological benefit*

ADEQ is proposing a new Section, R18-11-106, which will allow the modification of a water quality standard where it can be demonstrated that there is a net ecological benefit associated with the discharge of effluent to support or create a riparian or aquatic habitat in an area where such water resources are limited. Under the proposed rule, a water quality standard may be modified if the following demonstrations are made:

1. The discharge of effluent creates or supports an ecologically valuable aquatic, wetland, or riparian habitat in an area where such resources are limited;
2. The cost of treatment to comply with a water quality standard is so high that it is more cost effective to eliminate the discharge of effluent rather than upgrade treatment;
3. It is feasible for a point source discharger to completely eliminate the discharge of effluent;
4. The environmental benefits associated with the discharge of effluent under a modified water quality standard exceed the environmental costs associated with elimination of the discharge and destruction of the effluent dependent ecosystem;
5. All practicable point source control discharge programs, including local pretreatment, waste minimization, and source reduction programs are implemented;
6. The discharge of effluent under a modified water quality standard will not cause or contribute to a violation of a water quality standard that has been established for a downstream surface water;
7. The discharge of effluent will 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.

Because ephemeral streams provide little or no dilution, water quality criteria often have to be met at the "end-of-the-pipe." Where water quality criteria cannot be met, point source dischargers may consider alternatives to discharge, including the complete removal of effluent from a surface water. High treatment costs associated with compliance with water quality-based discharge limitations may encourage point source dischargers to remove the effluent from such streams, resulting in the total loss of the effluent dependent ecosystem that is created by the discharge. In such cases, it may be appropriate to modify a water quality standard in order to allow continued discharge and maintenance of the effluent dependent ecosystem. The proposed Section may help to preserve or create in-stream flows which support desirable aquatic or riparian ecosystems.

*Antidegradation*

Each state must develop, adopt, and retain a statewide antidegradation policy regarding water quality standards and establish procedures for its implementation through the state's water quality management process. The state antidegradation policy and implementation procedures must be consistent with the federal antidegradation policy at 40 CFR 131.12.

Arizona's antidegradation policy is found in the water quality standards rules at R18-11-107. The antidegradation rule can be summarized as providing three levels of water quality protection. These levels of protection are commonly referred to as Tiers 1, 2, and 3. In this rulemaking, ADEQ proposes to revise the antidegradation rule to use this terminology.

ADEQ also proposes to revise the antidegradation rule by eliminating the language at R18-11-107(A) which states that "[t]he determination of whether there is any degradation of water quality in a navigable water shall be on a pollutant-by-pollutant basis." ADEQ is proposing the deletion of this language for 2 reasons. First, the subsection implies that an antidegradation review is done only on a chemical-specific basis. However, an antidegradation review may be broader in scope. For example, a degradation of water quality may be demonstrated by an overall increase in toxicity as indicated by biomonitoring or by a decrease in the general health of an aquatic community as measured by biocriteria. The currently effective antidegradation rule might be interpreted to prohibit antidegradation analyses based upon biocriteria or biomonitoring.

Second, R18-11-107(A) of the currently effective rule addresses how the antidegradation rule is implemented. Such implementation issues are more properly addressed in a guidance document. ADEQ currently is developing detailed antidegradation implementation procedures through the Continuing Planning Process [i.e., the state water quality management planning process].

*Proposed Escherichia coli [E. coli] Water Quality Standards*

The currently effective water quality standards rules include microbiological water quality standards to maintain and protect water quality in surface waters that are used for full-body-contact recreation. These full-body-contact standards are expressed in terms of concentrations of an indicator organism, fecal coliforms [See R18-11-109(B)].

The currently effective fecal coliform criteria are based on recommendations made by the National Technical Advisory Committee to the Federal Water Pollution Control Administration [NTAC]. In 1968, the NTAC recommended the following microbiological criterion:

> Fecal coliforms should be used as the indicator organism for evaluating the microbiological suitability of recreation waters. As determined by the multiple-tube fermentation or membrane filter procedures and based on a minimum of not less than 5 samples taken over not more than a 30-day period, the fecal coliform content of primary contact recreation waters shall not exceed a log mean of 200 cfu/ 100 ml, nor shall more than 10% of total samples during any 30-day period exceed 400 cfu / 100 ml.

In 1976, EPA recommended the fecal coliform criteria cited above as the microbiological water quality standards for recreational waters. EPA recommended fecal coliform criteria even though those criteria had been criticized by the National Academy of Sciences and others for the poor quality of data base and for deficiencies in the study design that had been used in their development.

More recent studies by EPA have shown that in fresh waters, *E. coli* is a better indicator of swimming-associated gastrointestinal illness than fecal coliform [See Dufour, Alfred, *Health Effects Criteria for Fresh Recreational Waters*, EPA 600/ 1-84-004, Health Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina (August 1984)]. The EPA freshwater studies confirm that there is a strong correlation between densities of *E. coli* and swimming-related gastrointestinal illness and that there is no correlation between densities of fecal coliform organisms and swimming-related gastrointestinal illness. ADEQ proposes to adopt *E. coli* water quality criteria for the full-body-contact designated use because *E. coli* organisms are a better indicator of the microbiological water quality in surface waters that are used for swimming.

The proposed numeric water quality criteria for *E. coli* are based upon EPA's national criteria guidance. EPA recommends that the geometric mean concentration of *E. coli* not exceed 126 cfu / 100 ml for freshwater bathing [See Ambient Water Quality Criteria for Bacteria - 1986, EPA 440/5-84-002, U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, Washington, D.C. (January, 1986)]. EPA also recommends single-sample maximum criteria that are calculated using different confidence limits associated with anticipated levels of use. EPA recommends a single sample maximum concentration of 576 cfu / 100 ml for surface waters that are infrequently used for bathing.

Based upon this EPA criteria guidance, ADEQ proposes to adopt *E. coli* water quality criteria for surface waters with the full-body-contact designated use. ADEQ proposes to adopt a 30-day geometric mean criterion [5-sample minimum] of 130 cfu / 100 ml [the EPA-recommended density rounded to the nearest ten]. ADEQ proposes to adopt a single-sample maximum criterion of 580 cfu / 100 ml [the EPA-recommended density rounded to the nearest ten].

*Dissolved Oxygen in Effluent-dependent Waters*

The currently effective water quality standard for dissolved oxygen in effluent-dependent waters is 1.0 mg/L. The U.S. Environmental Protection Agency and others have criticized this dissolved-oxygen standard as being inadequate to fully protect aquatic life in effluent-dependent waters.

ADEQ proposes to revise the 1.0 mg/L dissolved-oxygen standard by adopting diurnal water quality criteria for dissolved oxygen in effluent-dependent waters. The proposed water quality criteria are expressed as single-sample minimum concentrations. During the daylight hours, from 3 hours after sunrise to sunset, ADEQ proposes that the minimum dissolved oxygen concentration for an effluent-dependent water be 3.0 mg/L. From sunset to 3 hours after sunrise, ADEQ proposes retention of the single-sample minimum concentration of 1.0 mg/L.

Dissolved oxygen is essential for all aquatic organisms that utilize aerobic respiration. There must be adequate dissolved oxygen in the water to maintain a community of aquatic organisms, even in an effluent-dependent water where other conditions may limit species diversity and abundance. Tolerances to low dissolved-oxygen levels vary from one species to the next. EPA has surveyed

a large body of literature to determine the range of tolerances of aquatic organisms [See Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-003, U.S Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, Washington D.C., 20460 (April, 1986), p. 1]. EPA concludes that although some species need very little oxygen to survive, a dissolved-oxygen minimum concentration is necessary to prevent mortality of aquatic organisms. A dissolved-oxygen mean concentration may be necessary to prevent sustained low concentrations of dissolved oxygen which may adversely affect the reproduction, growth and behavior of aquatic organisms.

The research on the dissolved-oxygen requirements of aquatic life that is reported in the criteria document is biased towards fish studies, especially salmonids. The criteria document presents separate dissolved-oxygen criteria for coldwater and warmwater biota. The criteria document is divided into two fish groups: salmonids and non-salmonids. The criteria document does not specifically address fish species found in effluent-dependent waters. Since most effluent-dependent waters in Arizona have warm water and do not support salmonid populations, the dissolved-oxygen criteria for nonsalmonids appear to be most applicable to the development of appropriate dissolved-oxygen criteria for effluent-dependent waters.

In general, the research cited by EPA in the criteria document indicates that nonsalmonid species appear to be considerably less sensitive than salmonids to low dissolved-oxygen concentrations. The data also indicate that the larval stage is the most sensitive life stage for nonsalmonid fish species. As a general rule, dissolved-oxygen water quality criteria that are high enough to sustain larval forms of nonsalmonid species are probably adequate to maintain all fish and inverterbrate species in an effluent-dependent water.

There is little data on the acute effects of low dissolved-oxygen concentrations on nonsalmonid fish species. Generally, adults and juveniles of all fish species can survive at concentrations of dissolved oxygen as low as 3 mg/L. In most cases, no mortality results from acute exposures to 3 mg/L of dissolved oxygen for the 24-hour to 96-hour duration of acute tests. Some nonsalmonid fish species appear to be able to survive a several-day exposure to concentrations of dissolved oxygen below 1 mg/L.

Several studies have been done on the effects of hypoxia on nonsalmonid fish species. In general, the results of these studies indicate that the critical dissolved-oxygen concentration for nonsalmonid fish species lies between 2 and 4 mg/L [The critical dissolved-oxgyen concentration is the concentration of dissolved oxygen at which a reduction in the resting metabolic rate first appears].

A number of studies of the effect of dissolved-oxygen concentration on fish growth are reported in the EPA criteria document. In general, the growth of nonsalmonid species is reduced at lower dissolved-oxygen concentrations. One researcher who studied channel catfish found that there was a graded reduction in growth at each dissolved-oxygen concentration below 6 mg/L. Each mg/L increase in dissolved-oxygen concentrations between 3 and 6 mg/L increased growth 10 to 13%.

Continuous low dissolved-oxygen concentrations may have an adverse effect on the reproduction of fish. In a study of fathead minnows, it was found that no spawning occurred when the dissolved-oxygen concentration of the water was 1 mg/L. At 2 mg/L, the number of eggs produced per female was reduced. However, there was no effect on the number of eggs produced at concentrations greater than 2 mg/L. In general, the studies show that embryos are more tolerant of low dissolved-oxygen levels than are fish larvae. Several studies have provided evidence of mortality or other significant damage to young nonsalmonids as a result of a few weeks exposure to dissolved-oxygen concentrations in the 3 to 6 mg/L range.

The EPA national criteria recommendations for ambient dissolved-oxygen concentrations for the protection of aquatic life in warm water are as follows:

| Early life stages | | Other life stages |
|---|---|---|
| 30-day mean | NA | 5.5 |
| 7-day mean | 6.0 | NA |
| 7-day mean minimum | NA | 4.0 |
| 1-day minimum | 5.0 | 3.0 |

These EPA recommendations are derived from production impairment estimates. The mean concentrations that are recommended by EPA represent values which fall somewhere between providing the maximum protection to the fishery resource and a high level of protection which risks only slight impairment of production in most cases. The EPA-recommended minimum concentration is established at a concentration which will prevent acute mortality of sensitive warmwater species.

The proposed diurnal standard for effluent-dependent waters provides a minimum level of protection which prevents mortality of aquatic organisms. The proposed standards assume a greater degree of production impairment in an effluent-dependent water. The proposed diurnal standards also recognize that dissolved-oxygen levels in an effluent-dependent water are subject to variation. During the day, the photosynthetic production of oxygen by aquatic plants in an effluent-dependent water usually exceeds the uptake of dissolved oxygen by aquatic organisms and the oxygen demand associated with the decomposition of organic material in the effluent, resulting in higher concentrations of dissolved oxygen. However, at night, dissolved-oxygen levels steadily decline as photosynthesis ceases and plant and animal respiration, coupled with the oxidation of carbonaceous and nitrogenous material, gradually deplete the available dissolved oxygen in the water column. The proposed standard of 1.0 mg/L for the night recognizes the dissolved-oxygen sag that typically occurs at night in an effluent-dependent water.

The proposed diurnal standards for dissolved oxygen are an improvement over the currently effective water quality standard of 1.0 mg/L which applies to an effluent-dependent water on a continuous basis. The daytime standard of 3.0 mg/L is more stringent and

provides a higher level of protection for aquatic organisms. ADEQ acknowledges that the 1 mg/L standard which will apply at night is not fully protective of aquatic species if it is applied continuously. However, the proposed 1.0 mg/L dissolved-oxygen standard applies only during the night. In a recent study conducted on the South Platte River in Colorado [an EDW], researchers investigated diurnal variations in dissolved-oxygen concentrations and their effect on fish. It was found that fish are capable of surviving dissolved-oxygen concentrations as low as 1 mg/L during the night if the dissolved-oxygen concentration returns to higher levels during the day. In the absence of site-specific data from effluent-dependent waters to support an alternative dissolved-oxygen standard, ADEQ proposes to retain the current standard of 1.0 mg/L.

*Turbidity*

Turbidity is a measure of water clarity. Changes in turbidity are caused by the presence of organic and inorganic particulate matter that is suspended in water such as clay, silt, finely divided organic material, bacteria, plankton, and other microscopic organisms. Arizona's currently effective water quality standards for turbidity are expressed as maximum concentrations in nephelometric turbidity units [NTUs]. The following turbidity standards apply to surface waters in Arizona:

| Waterbody | FBC, PBC, A&Ww, A&Wedw | A&Wc |
|---|---|---|
| Rivers, streams, & other flowing waters | 50 NTUs | 10 NTUs |
| Lakes, reservoirs, tanks, and ponds | 25 NTUs | 10 NTUs |

The currently effective standards were established primarily to protect aquatic life from the adverse effects of high concentrations of suspended solids in water. ADEQ recognizes that turbid water may interfere with the recreational use and aesthetic enjoyment of water. For example, turbid water may be dangerous for swimming and diving because of the possibility of unseen submerged hazards and the difficulty of locating swimmers who are in danger of drowning. In general, the less turbid the water, the more desirable it becomes for swimming and other water recreation. However, the currently effective numeric water quality criteria for turbidity for the full-body-contact and partial-body-contact designated uses were not established to protect these designated uses. The numeric water quality criteria of 50 NTUs and 25 NTUs have no relationship to the maintenance of water quality for primary or secondary contact recreation. ADEQ proposes to eliminate the numeric water quality criteria for turbidity which have been established for the full-body-contact and partial-body-contact water quality designated uses because they are not scientifically defensible.

*Unique waters*

The Director of the ADEQ may classify a surface water as a unique water upon making a finding that the surface water is an outstanding state resource water. The Director may make a finding that a surface water is an outstanding state resource water based upon one of the following:

1. 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 wilderness characteristics of the surface water; or
2. 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.

ADEQ proposes to classify the following surface waters as unique waters in this rulemaking:

1. Aravaipa Creek from the confluence of Stowe Gulch to the downstream boundary of the Aravaipa Canyon Wilderness Area;
2. Cave Creek and the South Fork of Cave Creek in the Chiricahua Moutains, from their headwaters to the Coronado National Forest boundary; and
3. Buehman Canyon Creek from its headwaters to approximately 9.8 miles downstream.

Each of these surface waters meets the criteria for classification as a unique water. A brief description of each proposed unique water follows. A more complete description of each surface water is contained in the nomination document for each surface water which is on file in the ADEQ Water Quality Assessment Unit.

*Aravaipa Creek*

Aravaipa Creek is located within Graham and Pinal Counties and is tributary to the San Pedro River. The perennial reach of Aravaipa Creek begins at the confluence of Stowe Gulch and usually flows to the confluence of Holy Joe Canyon where the streamflow usually goes subsurface. The creek is located in the Aravaipa Canyon Wilderness Area. Aravaipa Creek has long been recognized as a significant natural resource because of its ecological importance, wilderness characteristics, and recreational value.

Aravaipa Creek is widely recognized as one of Arizona's best remaining native fish habitats. The creek provides habitat for seven species of native fish, two of which are currently listed on the U.S. Fish & Wildlife Service's list of threatened and endangered species [the spikedace (*Meda fulgida*) and the loach minnow (*Tiaroga cobitia*)]. Fish counts by the Arizona Game & Fish Department have shown the presence of the threatened Colorado Roundtail Chub [*Gila robusta*].

In addition to threatened or endangered fish species, Aravaipa Creek and its tributary canyons provide valuable habitat for the following threatened or endangered species which utilize the area either as full-time residents, winter residents, or as migrants:

American peregrine falcon, gray hawk, common black hawk, red bat, great egret, snowy egret, black-bellied whistling duck, bald eagle, osprey, yellow-billed cuckoo, belted kingfisher, rose-throated becard, and willow flycatcher.

*Cave Creek and South Fork of Cave Creek*

Cave Creek and the South Fork of Cave Creek are located on the eastern side of the Chiricahua Mountains in southeastern Arizona. Both surface waters are located within the Coronado National Forest. The headwaters of both surface waters are located within the Chiricahua Wilderness Area.

Due to the presence of perennial flow in Cave Creek and the South Fork of Cave Creek and the combination of varied life zones through which these surface waters descend, the Cave Creek Canyon watershed has been described as a "natural treasure" and "one of the premier sites for field biology in the world." The American Museum of Natural History operates the Southwestern Research Station in Cave Creek Canyon to conduct long-term research into what has been described as "probably the richest biota in the United States."

The Cave Creek Canyon watershed is well known for the abundance and diversity of its bird species. Over 200 bird species have been identified. Other important wildlife species which inhabit the Cave Creek Canyon watershed include black bear, white-tailed deer, mountain lion, ringtail cat, coatimundi, striped skunk, Apache squirrel, and wild turkey.

Cave Creek and the South Fork of Cave Creek provide critical habitat for the following threatened and endangered species: Sanborn's Long-nosed Bat, Mexican Long-Tongued Bat, Red Bat, Chiricahua Leopard Frog, American Peregrine Falcon, Mexican Spotted Owl, Violet-crowned Hummingbird, Elegant Trogon, Buff-breasted Flycatcher, and Northern Goshawk. Several threatened and endangered plant species also have been identified in the Cave Creek and South Fork of Cave Creek canyon areas.

*Buehman Canyon Creek*

Buehman Canyon Creek is an outstanding state resource water located approximately 20 miles northeast of Tucson, Arizona in the Coronado National Forest. Buehman Canyon Creek originates on the east slope of the Santa Catalina Mountains and trends in a generally easterly direction for approximately 13 miles to its confluence with the San Pedro River. Buehman Canyon Creek is an unusual and unique surface water which provides a continuous wildlife migration corridor between the upper elevations of the Santa Catalina Mountains and the San Pedro River valley.

Buehman Canyon Creek descends through several different life zones and supports a rich diversity of flora and fauna, including numerous species that are listed or are candidates for listing as threatened or endangered species. For example, the creek supports several species of native freshwater fish that are endangered or threatened, including the Longfin Dace, the Gila Topminnow, and the Desert Pupfish.

Buehman Canyon Creek also provides exceptional recreational opportunities. The creek's proximity to Tucson, Arizona and its outstanding scenery and wilderness characteristics make it a valuable resource for outdoor recreation, including nature study, hiking, photography, and birdwatching.

Aravaipa Creek, Cave Creek, South Fork of Cave Creek, and Buehman Canyon Creek support outstanding riparian areas. The protection and restoration of such riparian habitat is critically important in Arizona. Arizona's riparian ecosystems are limited, occupying less than 0.5% of the landscape. However, they constitute Arizona's richest environments in terms of plant and animal productivity and biodiversity. The Arizona Game and Fish Department has estimated that 75% or more of all Arizona's native wildlife species depend on healthy riparian ecosystems during some portion of their life cycle. Riparian systems are critical to the survival of approximately 60% of the Arizona fish and wildlife species that are identified as threatened or endangered.

Desert riparian areas have been described as Arizona's most threatened natural community. According to most estimates, over 90% of the riparian areas along Arizona's major desert watercourses have been lost, altered, or degraded as a result of man's activities. These activities include mining, sand and gravel extraction, grazing, timber harvesting, groundwater pumping, water diversion, impoundments, channelization, flood control, and urbanization.

In recognition of the critical importance of desert riparian habitat to Arizona, Governor Rose Mofford signed Executive Order 89-16 on June 10, 1989. This executive order directs all state agencies to determine whether current and proposed policies, actions, and requirements impact stream and riparian resources and, when appropriate, to implement changes that will allow for the restoration of riparian resources. On February 14, 1991, Governor Rose Mofford signed Executive Order 91-6. Executive Order 91-6 again recognizes the critical importance of riparian areas to Arizona and states that it is Arizona's policy to actively encourage and develop management practices that will result in the maintenance of existing riparian areas and the restoration of degraded riparian areas and to actively encourage the preservation, maintenance, and restoration of instream flows throughout the State. The proposed unique waters classifications will further Arizona's policy with regard to protection and management of the state's remaining riparian areas.

ADEQ also proposes to repeal certain site-specific standards for unique waters that are precribed in R18-11-112(F). In general, ADEQ proposes to repeal the site-specific standards where the default water quality standards which apply to all surface waters are more stringent. Also, ADEQ is proposing to adopt site-specific standards for two unique waters, Cienega Creek and Bonita Creek, which were classified as unique waters during the last triennial review. Finally, ADEQ is proposing to update the lists of endangered or threatened species that are incorporated by reference in the unique waters rule.

*Effluent-dependent Waters*

ADEQ proposes to revise the descriptions of many of the effluent-dependent waters in the state. The proposed descriptions are

more accurate because they are based upon survey information obtained from the operators of the wastewater treatment plants which create the effluent-dependent waters. ADEQ is proposing that several effluent-dependent waters be deleted from the rule either because: 1) they are located on tribal lands that are outside the state's jurisdiction, or 2) the wastewater treatment plant that originally created the effluent-dependent water has stopped discharging and the effluent-dependent water no longer exists.

*Practical Quantitation Limits [PQLs]*

In the last triennial review, ADEQ adopted R18-11-120(B). This subsection states:

> A numeric water quality standard may be established at a concentration that is below the practical quantitation limit. In such cases, the water quality is enforceable at the practical quantitation limit. The applicable practical quantitation limits are prescribed in Appendix C of this Article.

The PQL is defined as the lowest level that is achievable by laboratories, within specified limits, during routine laboratory operations. As such, the PQL represents a practical and routinely achievable detection limit with a relatively good certainty that any reported value is reliable. It thus provides a compliance limit that is both quantifiable and enforceable.

ADEQ adopted R18-11-120(B) during the last triennial review to provide regulatory certainty regarding the enforcement of water quality standards. During the last triennial review, ADEQ acknowledged that many of the state-adopted numeric water quality standards for toxic pollutants were established at concentrations that could not be reliably detected and quantified. ADEQ adopted R18-11-120(B) to provide guidance to the regulatory community regarding the enforcement of water quality standards that were expressed at concentrations below reliable levels of detection and quantification. ADEQ stated in the rule that such water quality standards are enforceable at the PQL. ADEQ also adopted Appendix C which prescribes the specific PQLs at which the water quality standards would be enforced.

On September 9, 1993, EPA disapproved the inclusion of PQLs in Appendix C. While EPA found that the PQLs that were prescribed in Appendix C were acceptably derived and reasonable, EPA objected to the inclusion of PQLs in the rule because the PQLs could not be readily modified to keep pace with improvements in analytical technology. EPA stated that the state must remove Appendix C from the rules for the water quality standards to be approved. EPA did not fundamentally object to the use of PQLs for enforcement purposes and stated that ADEQ could include PQLs in a policy statement or guidance document.

ADEQ is proposing to amend R18-11-120(B) in response to this EPA disapproval. ADEQ will retain the general statement of enforcement policy which states that ADEQ will enforce any water quality standard that is established at a concentration that is below the practical quantitation limit at the PQL. However, ADEQ proposes to repeal the sentence in R18-11-120(B) which states that "[t]he applicable PQLs are prescribed in Appendix C of this Article." The repeal of this sentence and Appendix C will resolve the EPA disapproval and avoids a federal promulgation of water quality standards in this regard. ADEQ intends to list specific PQLs in a separate guidance document.

*Schedules of compliance*

ADEQ is proposing to amend the timeframes that apply to schedules of compliance. The currently effective rule states at R18-11-121(A) that a compliance schedule which is established in an NPDES permit shall require compliance with water quality-based discharge limitations within 3 years of the effective date of the water quality standard. ADEQ proposes to amend this provision to require that compliance be required within 3 years of issuance of the NPDES permit. The currently effective rule is extremely difficult to administer because it requires knowledge of the effective dates of each water quality standard in Chapter 11, Article 1. The proposed rule ties the schedule of compliance to a known date: the date of issuance of the NPDES permit.

Also, ADEQ proposes to repeal the last sentence of R18-11-121(C) which states that a schedule of compliance for a stormwater discharge shall require compliance with water quality standards no later than 10 years after the effective date of the water quality standard. Again, this provision is difficult to administer because it requires knowledge of the effective date of each water quality standard in Chapter 11, Article 1. The water quality standards and their effective dates will change over time. It is not possible to determine the effective date of any single water quality standard from the rules as they are currently formatted.

In the last triennial review, ADEQ established a 10-year period as a compliance "window" for stormwater discharges. ADEQ created this "window" to allow time for Congress to resolve issues related to stormwater discharges in the debate over Clean Water Act reauthorization. The Clean Water Act has not been reauthorized as of the date of the proposal of these rules. ADEQ believes a repeal of the specific timeframe for compliance with water quality standards is advisable while the Congressional debate over Clean Water Act reauthorization is still pending. Hopefully, Congress will specifically address issues related to stormwater discharges and the compliance with water quality standards when the Act is reauthorized.

*Variances*

ADEQ proposes a new Section which establishes a procedure for granting a variance from a water quality standard [See R18-11-122]. EPA has stated that variances from state-adopted water quality standards are allowed [See Water Quality Standards Handbook, 2nd Edition, EPA-823-B-94-005a, U.S. Environmental Protection Agency, Water Quality Standards Branch, Office of Science & Technology, Washington, D.C., § 5.3 (August, 1994)].

According to EPA, a variance from water quality standards involves the same substantive and procedural requirements which apply to the removal of a designated use through the use attainability process, except that variances are discharger-specific, pollutant-specific, limited in duration, and do not result in a change to a designated use. According to EPA guidance, a variance is viewed as an alternative to the permanent downgrade of a water quality standard. A variance is used where a state believes that a water quality standard can ultimately be attained. By maintaining the water quality standard and granting a variance, the state can

assure that reasonable progress is made in improving water quality. With a variance, a NPDES permit may be written to ensure that reasonable progress is made toward attaining the water quality standard without violating §402(a)(1) of the Clean Water Act which requires that NPDES permits ensure compliance with water quality standards.

The proposed variance procedure which will make it possible to grant a variance where a point source discharger demonstrates that it is not feasible to immediately comply with an applicable water quality standard because of technological limitations or substantial economic hardship. The proposed procedure will allow short-term noncompliance with a water quality standard while maintaining the standard as a water quality goal for the surface water.

In the last triennial review, Arizona adopted a comprehensive set of numeric water quality standards for toxic pollutants. The numeric water quality criteria were derived using methodologies that did not take the economic or technical feasibility of achieving compliance into consideration. The criteria were established at concentrations deemed necessary to protect the various designated uses. ADEQ believes that a variance procedure should be included in the water quality standards rules to provide regulatory flexibility when it is not technically or economically feasible for a point source discharger to achieve compliance. Situations can and do arise where a point source discharger cannot comply with a water quality standard because the treatment technology is unavailable or the cost of treatment is too high. In such cases, a variance procedure provides a mechanism for maintaining the water quality standard as the ultimate water quality goal for a surface water while providing short-term relief from the water quality standard for a specific discharge. The grant of a variance does not modify a water quality standard but would provide the legal basis for the establishment of alternative discharge limitations in an NPDES permit. The allowance of a variance on a discharger-specific, pollutant-specific, short-term basis is preferable to a permanent downgrade of the water quality standards for a surface water through the use attainability process.

Under the proposed rule, a variance could be granted on a discharger-specific basis for a period of up to 5 years. ADEQ anticipates that a variance would be implemented through an NPDES permit for a specific discharge. The point source discharger would have to document that treatment more advanced than that required by technology-based effluent limitations prescribed by the Clean Water Act is necessary to achieve compliance with the water quality standard and that alternative discharge control strategies have been evaluated. The point source discharger will have to document that it is not technically or economically feasible to install and operate any of the available discharge control technologies to achieve compliance with the water quality standard. The applicant for a variance also will have to demonstrate that the discharge of the pollutant for which a variance is sought is reduced to the maximum extent practicable through implementation of a local pretreatment program, source reduction or waste minimization. Any person who requests a variance will be required to propose interim discharge limitations which represent the highest level of treatment achievable by the point source discharger during the term of the variance.

A variance may be renewed under the proposed rule, but a point source discharger who seeks renewal will have to demonstrate that reasonable progress towards achieving compliance with the water quality standard has been made during the term of the variance.

The proposed rule also includes public participation procedures and provides a right of appeal to any person who may be adversely affected by a decision to grant or deny a variance from a water quality standard. The proposed rule clarifies that all variances are subject to EPA review and approval.

*Proposed Repeal of Article 2: Discharge Limitations*

ADEQ proposes to repeal Article 2 in this rulemaking. The three currently effective Sections in Article 2 [R18-11-202, R18-11-203 and R18-11-205] have been moved to Article 1 of the proposed rules. R18-11-202, which establishes discharge limitations for phosphates for certain specific surface waters has been moved to R18-11-109(H)(11) and (12). In relocating this Section, ADEQ deleted references to surface waters that are located on tribal lands. The prohibition on the discharge of treated wastewater to Sabino Creek at R18-11-203 has been relocated to R18-11-123 without change. Finally, ADEQ relocated R18-11-205 [which addresses discharge limitations for point source discharges to ephemeral waters] to R18-11-113(E).

*Proposed Revisions to Numeric Water Quality Criteria in Appendix A*

ADEQ proposes to repeal the currently effective Appendix A and to replace it with a new, reformatted Appendix A. The proposed Appendix A is separated into 2 tables. Table 1 lists the numeric water quality criteria to protect human health and agricultural uses. These include the domestic water source [DWS], fish consumption [FC], full-body-contact [FBC], partial-body-contact [PBC], agricultural irrigation [AgI], and agricultural livestock watering [AgL] designated uses. Table 2 lists the numeric water quality criteria to protect aquatic life and wildlife. The division of Appendix A into 2 tables will enhance its readability.

The reformatted table includes a column for the chemical abstract number [CAS] for each pollutant. Many chemicals have similar names and spellings and some have multiple names. The chemical abstract number is a specific identifier for each chemical. The identification of the chemical by CAS number will provide certainty as to the chemicals for which water quality standards have been established.

ADEQ proposes to update the numeric water quality criteria that have been established to protect human health. No changes are proposed to the numeric water quality criteria that have been established to protect the aquatic and wildlife designated uses or the agricultural uses [AgI and AgL].

In the last triennial review, ADEQ used EPA methodologies to derive water quality criteria to protect the domestic water source [DWS], full-body-contact [FBC], and fish consumption [FC] designated uses. Separate methodologies were used to derive water quality criteria for carcinogens and non-carcinogens. The methodology used to derive criteria for carcinogens utilizes a cancer potency slope value, or q1*, in the equation used to calculate the criterion. The methodology for non-carcinogens utilizes a refer-

ence dose, or Rfd. The q1* and Rfd values were obtained from EPA's Integrated Risk Information System database [IRIS]. ADEQ does not propose to change any of the methodologies used to derive water quality criteria to protect human health in this rulemaking [except for arsenic: see rationale in following table]. However, where values for cancer potency slopes or reference doses have been revised in the IRIS database, ADEQ has recalculated the numeric water quality criteria. If a new q1* or Rfd has been published in the IRIS database, ADEQ used the new value to recalculate the criteria. If a q1* has been withdrawn and a Rfd is available, then ADEQ recalculated the standard using the methodology for non-carcinogens and the available Rfd. If a q1* has been withdrawn and no Rfd is available, then ADEQ has withdrawn the numeric water quality criterion and replaced it with "NNS" or "no numeric standard."

Numeric water quality criteria to protect the domestic water source designated use are based upon available National Primary Drinking Water Maximum Contaminant Levels [MCLs] or EPA methodologies for deriving criteria for water ingestion. If a new MCL has been published for a chemical since the last triennial review, then ADEQ has adopted the MCL as the numeric water quality criterion for that chemical for the domestic water source designated use.

The calculation of the numeric water quality criteria for the partial-body-contact designated use are based upon EPA one-day health advisory standards [ODHA]. Where an ODHA is unavailable, ADEQ calculated a water quality criterion for the partial-body-contact designated use using the Rfd. Where neither an ODHA or Rfd is available, then no numeric standard was calculated for the partial-body-contact designated use. After all the recalculations were completed, if the numeric water quality criterion for partial-body contact was more stringent than the numeric water quality criterion for full-body contact, then the full-body-contact criterion was lowered to equal the partial-body-contact standard.

The tables on the following pages present the revisions that have been made to the numeric water quality criteria for the DWS, FC, FBC, and PBC designated uses. The table includes a column which indicates a "+" or a "-" for each pollutant. A "+" means that the proposed standard is less stringent than the 1992 standard or that the numeric water quality criterion was revised to "no numeric standard." A "-" means that the proposed standard is more stringent than the 1992 standard or that a "no numeric standard" is replaced with a calculated water quality criterion.

| DOMESTIC WATER SOURCE | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Acenaphthylene | + | 0.003 | NNS | Now classified as a Class D carcinogen. No RfD available. |
| Antimony | + | 2.8 T | 6 T | Published MCL is 6 μg/L and is expressed as total antimony. |
| Barium | + | 1000 D | 2000 T | Published MCL is 2000 μg/L and is expressed as total barium. |
| Benzo (a) pyrene | + | 0.003 | 0.2 | Published MCL is 0.2 μg/L. |
| Benzo (ghi) perylene | + | 0.003 | NNS | Now classified as a Class D carcinogen. No RfD available. |
| Beryllium | + | 0.008 T | 4 T | Published MCL is 4 μg/L and is expressed as total beryllium. |
| Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl)phthalate) | + | 2.5 | 6 | Published MCL is 6 μg/L. |
| Boron | - | NNS | 630 | A new RfD (0.09) has been listed on IRIS. |
| Cyanide | + | 140 T | 200 T | Published MCL is 200 μg/L. |
| 1,3-Dichloropropene | - | 2.1 | 0.2 | Incorrectly considered non-carcinogen in 1992 standards. Recalculated as carcinogen with q1* of 0.18. |
| 2,4-Dinitrotoluene | + | 0.009 | 14 | New RfD (0.002) published. |
| Endosulfan-alpha | + | 0.35 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan-beta | + | 0.35 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan (Total) | + | | 42 | See rationale for Endosulfan-alpha or -beta. |
| Hexachlorobenzene | + | 0.02 | 1 | Published MCL is 1 μg/L. |
| Hexachlorocyclopentadiene | + | 49 | 50 | Published MCL is 50 μg/L. |

| DOMESTIC WATER SOURCE | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Isophorone | + | 8.5 | 36.8 | New q1* (9.5E-4) published. |
| Manganese | - | NNS | 4900 T | New RfD used to calculate draft standard. However, in November 1995, revised RfD (0.14) published resulting in new proposed standard. |
| Mercury | - | 2.1 T | 2 T | Published MCL is 2 μg/L. |
| Methylene Chloride (Dichloromethane) | + | 4.7 | 5 | Published MCL is 5 μg/L. |
| Nickel | - | 140 T | 100 T | Published MCL is 100 μg/L. |
| Pentachlorophenol | - | 210 | 1 | New q1* (0.12) published. |
| Phenanthrene | + | 0.003 | NNS | Classified as a Class D carcinogen. No RfD available. |
| Thallium | + | 0.63 T | 2 T | Published MCL is 2 μg/L. |
| 1,2,4-Trichlorobenzene | - | NNS | 70 | Published MCL is 70 μg/L. |
| 1,1,2-Trichloroethane | + | 0.61 | 5 | The MCL is now 5 μg/L. |
| Zinc | - | 5000 T | 2100 T | New RfD (0.3) published. |

| FISH CONSUMPTION | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Acenaphthylene | + | 0.002 | NNS | Now classified as a Class D carcinogen. No RfD available. |
| Arsenic | + | 3.1 T | 1450 | Now classified as a non-carcinogen for tissue consumption on the basis that arsenic in tissue is primarily the relatively non-toxic organic form rather than the relatively toxic inorganic form. The RfD (0.0003) was used to calculate the standard, and the result was multiplied by a 0.9 uncertainty factor to account for the possibility of some inorganic arsenic. |
| Benzidine | + | 0.0007 | 0.002 | New q1* (4.3) published. |
| Benzo (ghi) perylene | + | 0.00001 | NNS | Now classified as a Class D carcinogen. No RfD available. |
| Cadmium | - | 83 T | 41 T | Error in 1992 standards calculation corrected. |
| Dibromochloromethane (Bromodichloromethane) | + | 10 | 22 | New q1* (0.06) published. |
| 1,3-Dichlorobenzene | + | 1200 | 2000 | Error in 1992 standards calculation corrected. |
| 1,3-Dichloropropene | - | 360 | 6.6 | Error in 1992 standards calculation corrected. |
| 2,4-Dinitrotoluene | + | 0.02 | 163 | New RfD (0.002) published. |
| Endosulfan-alpha | + | 0.92 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan-beta | + | 0.92 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan (Total) | + | | 110 | See rationale for Endosulfan-alpha or -beta. |
| Isophorone | + | 520 | 2300 | New q1* (9.5E-4) published. |
| Nickel | + | 400 T | 730 T | Error in 1992 standards calculation corrected. |

| FISH CONSUMPTION | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| N-nitrosodiphenylamine | + | 12 | 14 | Rounding error in 1992 standards calculation corrected. |
| Pentachlorophenol | - | 29000 | 8.2 | New q1* (0.12) published. |
| Phenanthrene | + | 0.0005 | NNS | Classified as a Class D carcinogen. No RfD available. |
| Thallium | - | 44 T | 41 T | The RfDs for 5 species of thallium were averaged to arrive at a total RfD of 8.4E-5. |
| 1,2,4-Trichlorobenzene | - | NNS | 155 | New RfD (0.01) published. |
| Zinc | - | NNS | 22000 T | New RfD (0.3) published. |

| FULL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Acenaphthylene | + | 0.12 | NNS | Acenaphthylene is now considered a class D carcinogen. No RfD is published. |
| Acrolein | + | 1300 | 2200 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Alachlor | - | NNS | 1400 | New RfD (0.01) published. |
| Anthracene | - | 420000 | 42000 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Atrazine | - | NNS | 4900 | New RfD (0.035) published. |
| Barium | + | 1000 D | 9800 D | New RfD (0.07) published. |
| Benzo (a) pyrene | + | 0.12 | 0.2 | New q1* (7.3) published. |
| Benzo (ghi) perylene | + | 0.12 | NNS | Benzo (ghi) perylene is now considered a class D carcinogen. No RfD is published. |
| Beryllium | + | 0.33 T | 4 T | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| Boron | - | NNS | 12600 | New RfD (0.09) published. |
| Carbofuran | - | NNS | 700 | New RfD (0.005) published. |
| Chlorine (total residual) | - | NNS | 14000 | New RfD (0.1) published. |
| Cyanide | - | 3100 T | 2800 T | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Dichlorobromomethane (Bromodichloromethane) | + | 11 | 100 | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| 1,2-Dibromoethane | - | NNS | 1.6 | New q1* (0.85) published. |

| FULL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| 1,1-Dichloroethane | + | 14000 | NNS | There is no RfD for 1,1-Dichloroethane and it is considered a class C carcinogen. |
| 2,4-Dichlorophenoxyacetic acid | - | NNS | 1400 | New RfD (0.01) published. |
| 1,2-Dichloropropane | + | 200 | NNS | There is no RfD or q1* available. |
| 1,3-Dichloropropene | - | 60 | 7.8 | Error in 1992 standards calculation corrected. |
| 2,4-Dimethylphenol | - | 28000 | 2800 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Dimethyl phthalate | - | 14000000 | 1400000 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| 2-methyl-4,6-Dinitrophenol (4,6-Dinitro-o-cresol) | - | 550 | 55 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| 2,4-Dinitrotoluene | + | 0.380 | 280 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Endosulfan-alpha | + | 70 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed for Endosulfan (Total). The FBC standard for this toxicant is driven by the PBC standard. See PBC change table. |
| Endosulfan-beta | + | 70 | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed for Endosulfan (Total). The FBC standard for this toxicant is driven by the PBC standard. See PBC change table. |
| Endosulfan (Total) | + | | 840 | See rationale for Endosulfan-alpha or -beta. |
| Ethylbenzene | - | 64000 | 14000 | The FBC standard for this toxicant is driven by the PBC standard.[1] See PBC change table. |

| FULL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Heptachlor | + | 0.31 | 0.4 | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| Heptachlor epoxide | + | 0.15 | 0.2 | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| Hexachlorobenzene | + | 0.83 | 1 | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| Isophorone | + | 340 | 1500 | New q1* (9.5E-4) published. |
| Manganese | - | NNS | 19600 T | New RfD used to calculate draft standard. However, in November 1995, revised RfD (0.14) published resulting in new proposed standard. |
| Methoxychlor | - | NNS | 700 | New RfD (0.005) published. |
| Naphthalene | + | 560 | NNS | Naphthalene is now considered a class D carcinogen. No RfD is published. |
| Nitrate | - | NNS | 224000 | New RfD (1.6) published. |
| Nitrite | - | NNS | 14000 | New RfD (0.1) published. |
| Pentachlorophenol | - | 2000 | 11.7 | New q1* (0.12) published. |
| Phenanthrene | + | 0.120 | NNS | Phenanthrene is now considered a class D carcinogen. No RfD is published. |
| Polychlorinatedbiphenals | + | 0.18 | 0.5 | The calculated standard is less than the MCL; the MCL was substituted[2]. |
| Selenium | + | 420 T | 700 T | Error in the 1992 standards calculation was corrected. |
| Styrene | - | NNS | 28000 | New RfD (0.2) published. |
| Thallium | - | 3700 T | 12 T | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| Toluene | - | 42000 | 28000 | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| 1,2,4-Trichlorobenzene | - | 2800 | 1400 | New RfD (0.01) published. |

| FULL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| 1,1,1-Trichloroethane | - | 13000 | 12600 | 1,1,1-Trichloroethane is a class D carcinogen and the RfD has been withdrawn. The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |
| 2-(2,4,5-Trichlorophenoxy) proprionic acid | - | NNS | 1120 | New RfD (0.01) published. |
| Xylenes | - | NNS | 280000 | New RfD (2.0) published. |
| Zinc | + | 28000 | 42000 T | The FBC standard for this toxicant is driven by the PBC standard[1]. See PBC change table. |

1 In some instances the methodology used to calculate the Full Body Contact (FBC) standard results in a value that is less stringent than the Partial Body Contact (PBC) standard. Because FBC is designed to protect submergence (or swimming) and PBC is designed to protect incidental contact with water, it is appropriate that the FBC standard be equal or more stringent than the PBC standard. If the calculation results in a FBC standard that is less stringent than the PBC standard, then the FBC standard is made equivalent to the PBC standard.

2 In instances where the methodology used to calculate the FBC standard results in a value that is less than the Domestic Water Source (DWS) standard that is based on an MCL, the MCL is substituted for the FBC calculated standard. This approach recognizes that the MCL is designed to protect drinking water. If it is safe to drink the water, then it is safe to swim in the water.

| PARTIAL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Acrolein | + | 1300 | 2200 | EPA one day health advisory (ODHA) for a child[1]. |
| Acrylonitrile | + | 1400 | NNS | No ODHA or RfD available to calculate standard. |
| Alachlor | - | NNS | 1400 | RfD (0.01) used to calculate standard. |
| Anthracene | - | NNS | 42000 | Error in 1992 standard calculation corrected. |
| Arsenic | - | 2800 T | 50 T | Calculated with RfD, but because MCL (50 T) is greater, it is substituted as the partial body contact standard. |
| Atrazine | - | NNS | 4900 | RfD (0.035) used to calculate standard. |
| Barium | - | NNS | 9800 D | RfD (0.07) used to calculate standard. |
| Benzene | + | 470 | NNS | Standard based on the EPA ODHA for children. |
| BHC-gamma (lindane) (Hexachlorocyclohexane gamma) | - | 2500 | 42 | Standard based on the EPA ODHA for children. |
| Bis(2-ethylhexyl) phthalate (Di(2-ethylhexyl) phthalate) | - | 28000 | 2800 | Error in 1992 standard calculation corrected. |
| Boron | - | NNS | 12600 | RfD (0.09) used to calculate standard. |
| Carbofuran | - | NNS | 700 | RfD (0.005) used to calculate standard. |
| Carbon tetrachloride | - | 8000 | 98 | Standard based on the EPA ODHA for children. |
| Chlordane | - | 110 | 8.4 | Standard based on the EPA ODHA for children. |
| Chlorine (total residual) | - | NNS | 14000 | RfD (0.10) used to calculate standard. |
| Cyanide | - | 3100 T | 2800 T | Standard based on the EPA ODHA for children. |
| DDT | - | 700 | 70 | Error in 1992 standard calculation corrected. |

| PARTIAL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| 1-3 Dichlorobenzene | - | 13000 | 1880 | Error in 1992 standard calculation corrected. |
| 1,4-Dichlorobenzene | - | 13000 | 1880 | Error in 1992 standard calculation corrected. |
| 1,1-Dichloroethane | + | 14000 | NNS | No ODHA or RfD available to calculate standard. |
| 1,2-Dichloroethane | + | 10000 | NNS | No ODHA or RfD available to calculate standard. |
| 2,4-Dichlorophenoxyacetic acid | - | NNS | 1400 | |
| 1,2-Dichloropropane | + | 200 | NNS | No ODHA or RfD available to calculate standard. |
| 1,3-Dichloropropene | - | 60 | 42 | Standard based on the EPA ODHA for children. |
| 2,4-Dimethylphenol | - | NNS | 2800 | RfD (0.02) used to calculate standard. |
| Dimethyl phthalate | - | NNS | 1400000 | Standard based on the EPA ODHA for children. |
| 2-methyl-4,6-Dinitrophenol (4,6-Dinitro-o-cresol) | - | NNS | 55 | Standard based on the EPA ODHA for children. |
| 2,4-Dinitrotoluene | - | NNS | 280 | RfD (0.002) used to calculate standard. |
| Endosulfan sulfate | - | NNS | 7 | Standard based on the EPA ODHA for children. |
| Endosulfan-alpha | - | NNS | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan-beta | - | NNS | Combine α&ß to Endosulfan (Total) | The stereoisomers of endosulfan (α and ß) will be combined into one standard and reflect the new RfD (0.006) listed on IRIS for Endosulfan (Total). |
| Endosulfan (Total) | - | | 840 | See rationale for Endosulfan-alpha or -beta. |
| Endrin Aldehyde | - | NNS | 420 | Standard based on the EPA ODHA for children. |

| PARTIAL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| Ethylbenzene | - | 64000 | 14000 | Standard based on the EPA ODHA for children. |
| Fluoride | - | NNS | 8400 | RfD (0.06) used to calculate standard. |
| Heptachlor | + | 20 | 70 | RfD (0.0005) used to calculate standard. |
| Hexachlorobenzene | + | 100 | 280 | RfD (0.002) used to calculate standard. |
| Hexachlorobutadiene | + | 280 | NNS | No ODHA or RfD available to calculate standard. |
| Manganese | - | NNS | 19600 T | RfD (0.003) used to calculate standard. |
| Methoxychlor | - | NNS | 700 | RfD (0.005) used to calculate standard. |
| Methylene chloride (Dichloromethane) | - | 27000 | 8400 | Standard based on the EPA ODHA for children. |
| Naphthalene | + | 560 | NNS | No ODHA or RfD available to calculate standard. |
| Nitrate | - | NNS | 224000 | RfD (1.6) used to calculate standard. |
| Nitrite | - | NNS | 14000 | RfD (0.1) used to calculate standard. |
| Selenium | + | 420 | 700 | RfD (0.005) used to calculate standard. |
| Styrene | - | NNS | 28000 | RfD (0.2) used to calculate standard. |
| 1,1,2,2-Tetrachloroethane | + | 450 | NNS | No ODHA or RfD available to calculate standard. |
| Tetrachloroethylene | - | 4000 | 1400 | Standard based on the EPA ODHA for children. |
| Thallium | - | 3700 | 12 T | RfD (0.00008) used to calculate standard. |
| Toluene | - | 42000 | 28000 | Error in 1992 standard calculation corrected. |
| Toxaphene | + | 1000 | NNS | No ODHA or RfD available to calculate standard. |
| 1,2,4-Trichlorobenzene | - | 2800 | 1400 | RfD (0.01) used to calculate standard. |

| PARTIAL BODY CONTACT | | | | |
|---|---|---|---|---|
| Parameter | + / - | 1992 Standard | Proposed Standard December, 1995 | Rationale For Proposed Standard Change |
| 1,1,1-Trichloroethane | - | 13000 | 12600 | Standard based on the EPA ODHA for children. |
| 2-(2,4,5-Trichlorophenoxy) proprionic acid | - | NNS | 1120 | RfD (0.01) used to calculate standard. |
| Xylenes | - | NNS | 280000 | RfD (2.0) used to calculate standard. |
| Zinc | + | 28000 | 42000 | RfD (0.3) used to calculate standard. |

1 Partial Body Contact standards calculation based on either the EPA one day health advisory (ODHA) for child. If the ODHA is not available, and the RfD is available, then the standard is calculated according to the RfD. If neither the ODHA or RfD are available, then No Numeric Standard (NNS) is used.

*Hardness-dependent metals*

The toxicity of certain metals is dependent upon the hardness of the water. The numeric water quality criteria for these metals are expressed as hardness-dependent equations. ADEQ is proposing to revise the footnote to these equations which explains how hardness is determined. The revised footnote clarifies that it is the hardness of the receiving surface water that is used to calculate the numeric water quality criterion for a hardness-dependent metal. If the receiving surface water is an ephemeral water or an effluent-dependent water, then the hardness of the effluent that is discharged is used to calculate the numeric water quality criterion. In the latter case, a hardness cap of 400 mg/L as $CaCO_3$ is imposed. The hardness cap of 400 mg/L is based upon the range of hardness values used by EPA in developing national criteria guidance recommendations for hardness-dependent metals. 40 CFR 131.36(c)(4) contains the following requirement with regard to the application of hardness-based metals criteria:

> For purposes of calculating freshwater aquatic life criteria for metals from the equations in subsection (b)(2) of this Section, the minimum hardness allowed for use in those equations shall not be less than 25 mg/L as calcium carbonate. The maximum hardness value for use in those equations shall not exceed 400 mg/L as calcium carbonate.

The rationale for the proposed 400 mg/L hardness cap is that the data base used for the development of the §304(a) criteria guidance for hardness-dependent metals does not include data which supports extrapolation of the hardness effects of metal toxicity beyond a range of hardness of 25 mg/L to 400 mg/L.

*Mercury*

In the last triennial review, ADEQ established water quality standards for mercury to protect aquatic life and wildlife using EPA methodologies and national criteria guidance. The methodologies used are fully explained in Appendix B of the Concise Explanatory Statement for the water quality standards rules which was prepared to support the state's adoption of water quality standards in the last triennial review [See Appendix B, "Rationale for the Development of Toxic Pollutant Criteria to Protect Aquatic and Wildlife Designated Uses" (January 10, 1992)].

For the state's aquatic and wildlife [cold water fishery] designated use, ADEQ used the EPA methodology described in the national "Guidelines for Deriving Water Quality Criteria for the Protection of Aquatic Life and Its Uses [Guidelines methodology] to derive water quality criteria for mercury. The Guidelines methodology calls for the calculation of a final residue value if a maximum permissible tissue concentration and at least one acceptable bioconcentration factor determined from an aquatic animal species is available. The Guidelines Methodology specifically states that one of the purposes for deriving a final residue value is to protect wildlife, including predatory birds and fishes, from demonstrated adverse effects [See 45 Fed. Reg. 79346 (November 28, 1980)]. ADEQ calculated a final residue value for mercury using data from EPA's national criteria document, "Ambient Water Quality Criteria for Mercury." The final residue value of 0.012 µg/L became Arizona's currently effective water quality standard to protect cold water and warm water fisheries from chronic toxicity from mercury. ADEQ also used the final residue value procedure to calculate a numeric water quality criterion to protect aquatic life and wildlife in effluent-dependent waters [A&Wedw] from chronic toxicity from mercury. The recalculated numeric water quality criterion for the A&W edw designated use was 0.2 µg/L. In adopting the mercury standard for A&Wedw, ADEQ stated:

> The proposed standard was based on toxicity to aquatic life. However, mercury has a propensity to accumulate in tissues of aquatic life to levels that may be harmful to wildlife or human consumers. These routes of exposure should be considered in developing A&W standards. The EPA publication Ambient Water Quality Criteria for Mercury - 1984 [Criteria Document] does not contain information regarding the effects of mercury on wildlife but does contain information on the effects of mercury on humans. Setting a standard based strictly on toxicity to aquatic life may not adequately protect wildlife. ADEQ recalculated the A&Wedw chronic standard for mercury using the more appropriate Final Residue Value procedure.

The use of the final residue value procedure to derive water quality criteria for the aquatic and wildlife designated uses demonstrates that Arizona considered bioaccumulative effects when it adopted the water quality standards for mercury.

On April 29, 1994, EPA disapproved the state-adopted water quality standard for mercury that had been established to protect aquatic life and wildlife. EPA specifically disapproved the state's failure to adopt numeric water quality for mercury to protect wildlilfe. EPA's disapproval of the water quality standards for mercury was based primarily on a biological opinion from the U.S. Fish & Wildlife Service [USFWS] that the state-adopted water quality standards had been developed without adequate consideration of the bioaccumulative effects of mercury on predatory wildlife. In its disapproval letter, EPA acknowledged that ADEQ had followed EPA national criteria guidance to derive water quality standards for mercury and that the currently available EPA methodology for criteria development may inadequately address food chain effects of mercury for predatory wildlife. EPA requested that ADEQ re-examine the state-adopted numeric water quality criteria for mercury in the next triennial review to determine whether those criteria adequately address bioaccumulation. In making this request, EPA acknowledged that national criteria guidance for the protection of wildlife were not available and that EPA would rely on the participation of the USFWS in the next triennial review to make recommendations for the adoption of numeric criteria that would be adequately protective of wildlife.

In response to this disapproval, ADEQ stated that Arizona would consider revision of its aquatic and wildlife criteria for mercury in the next triennial review if national program guidance becomes available which would support the derivation of scientifically defensible criteria to protect wildlife. Such guidance is currently unavailable. In the absence of national program guidance for developing wildlife criteria, ADEQ intends to retain the currently effective water quality standards.

To address the EPA disapproval and the concerns of the USFWS, ADEQ, in cooperation with the Arizona Game & Fish Department, the USFWS, and EPA, will conduct a tissue monitoring program to evaluate the threat posed by mercury to bald eagles nesting along surface waters in Arizona. The objective of this monitoring program will be to assess the magnitude and extent of

mercury bioaccumulation in the prey base of the bald eagle and other fish-eating birds. A concurrent monitoring program will be conducted by the International Boundary Water Commission in the lower Colorado River basin to asssess the bioaccumulation of mercury in the prey base of the Brown Pelican, Yuma Clapper Rail, and other fish-eating birds. These tissue-monitoring programs are not designed to develop a mercury standards for the protection of wildlife. The tissue-monitoring program is a problem-identification program. If mercury is found to be bioaccumulating in prey species at levels above 1.0 mg/kg, then it may be necessary to develop a more extensive sampling program to identify the contribution of mercury from different sources and to begin work on developing wildlife criteria for mercury.

*Proposed Revisions to Surface Waters and Designated Uses in Appendix B*

ADEQ is proposing the repeal of the currently effective Appendix B and its replacement with a more "user-friendly" Appendix B. The proposed Appendix B has been reformatted in tabular form to enhance its readability. Appendix B includes a new location-information column which provides information which will help users locate specific surface waters. The new format makes it easier to find where specific designated uses are applied to surface waters in river basins. The river basin names referenced in Appendix B have been revised to be consistent with the river basins names referenced in the biennial State Water Quality Assessment Report [§305(b) report]. This change will make it easier for ADEQ and the regulated community to link water quality standards with the water quality assessment information contained in the §305(b) report. The number of surface waters that are specifically listed in Appendix B have been updated to reflect new knowledge gained about those surface waters since the last triennial review. Also, Appendix B was revised by deleting all surface waters that are located on tribal lands. The state has no jurisdiction over such surface waters and cannot prescribe water quality standards for them.

The other major revisions to Appendix B are in response to a specific EPA disapproval of the state-adopted water quality standards. On September 9, 1993, EPA disapproved the lack of the fish-consumption designated use for certain surface waters listed in Appendix B. EPA notified the state that, in order to be in compliance with §101(a)(2) of the Clean Water Act and 40 CFR 131.10(a), the state would have to either: 1) designate the fish-consumption designated use for all surface waters that did not have that designated use in Appendix B; or 2) provide use attainability analyses [UAAs] to justify the omission of the fish-consumption designated use.

In its disapproval letter, EPA indicated that UAAs for categories of surface waters were acceptable as long as the methods used by the state were scientifically and technically supportable. An example of this type of a categorical UAA would be a UAA for ephemeral waters based upon the low flow factor prescribed at 40 CFR 131.10(g)(2) and R18-11-104(H)(1). EPA also indicated that the state could choose to conduct a two-tiered use attainability analysis to justify the omission of the fish-consumption designated use in effluent-dependent waters. The first tier of the UAA analysis would consist of the presentation of evidence presently available to ADEQ that there is no fishing in the effluent-dependent waters. The second tier of the UAA would be triggered by the receipt of an application for reissuance of an NPDES permit for the point source discharge which creates the effluent-dependent water. The second tier would be a more in-depth analysis to confirm that the fish-consumption designated use is not attainable.

ADEQ submitted a categorical UAA for ephemeral waters to justify the omission of both the full-body-contact and fish-consumption designated uses based upon low flow to EPA [dated August 18, 1995]. ADEQ also conducted the Tier 1 analysis referenced above to justify omission of the fish-consumption designated use in effluent-dependent waters [dated July 20, 1995]. Both of these UAAs were approved by EPA on November 20, 1995. Consequently, the proposed Appendix B does not include any new fish-consumption designated uses for ephemeral waters or effluent-dominated waters. ADEQ added the fish-consumption designated use [FC] to any surface water with either the aquatic and wildlife [cold water fishery] or aquatic and wildlife [warm water fishery] designated use.

*Repeal of Appendix C: Practical Quantitation Limits*

ADEQ proposes to repeal Appendix C to address a specific EPA disapproval. See previous discussion of practical quantitation limits [See previous discussion of practical quantitation limits].

5. <u>A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:</u>

Not applicable

6. <u>The preliminary summary of the economic, small business and consumer impact:</u>

ADEQ is required by A.R.S. § 49-1051(A)(2) to provide a brief summary of the information included in the economic, small business, and consumer impact statement for the proposed water quality standards. In general, ADEQ believes that the proposed water quality standards rules will have minimal economic impact. The majority of the proposed revisions to the rules are either organizational or editorial changes. Substantive revisions to the water quality standards that may have an economic impact include the following:

1. The proposed revision of the waste treatment system exclusion language;
2. The proposed adoption of the *E. coli* water quality standards for the full-body-contact designated use;
3. The proposed adoption of the net ecological benefit rule;
4. The repeal of the turbidity standards for the full-body-contact and partial-body-contact designated uses;
5. The proposed adoption of diurnal standards for dissolved oxygen in effluent-dependent waters.
6. The proposed unique waters classifications;

7. The proposed adoption of the variance rule;
8. The proposed revision to the numeric water quality criteria to protect the domestic water source, fish consumption, full-body-contact and partial-body-contact designated uses;
9. The proposed addition of the fish-consumption designated use to surface waters that are cold water or warm water fisheries.

This Section addresses each of the proposed revisions which are thought to have an economic impact. The economic impact of each Section is summarized qualitatively. The preliminary summary describes the persons who will be directly affected by the revision, the probable costs and benefits associated with adoption and implementation of the change, a general description of the probable impact of the revision on private and public employment, and a description of the probable impact of the revisions on small businesses, private persons, and consumers.

None of the proposed revisions to the water quality standards rules will have an effect on state revenues. Also, ADEQ does not believe there are any less costly or less intrusive alternative methods of achieving the purpose of the proposed rulemaking.

*Economic Impact of the Revision of the Waste Treatment System Exclusion*

The revision of the language of the waste treatment system exclusion will benefit persons who own or operate wastewater treatment plants that create effluent-dependent waters. Counties, municipalities, and sanitary districts which own and operate such plants will be the primary beneficiaries of the proposed revision. The proposed revision also could benefit industrial facilities which utilize lagoons or impoundments for industrial wastewater treatment or utilities which utilize cooling ponds, fly ash ponds, or blowdown ponds.

The proposed revision removes a regulatory barrier to the construction of in-channel waste treatment systems. In particular, the revision provides more flexibility under the water quality standards program for the construction of wetlands to provide "natural" wastewater treatment in dry watercourses. In many cases, constructed wetlands are a cost-effective method of wastewater treatment and disposal. The proposed revision will benefit the owners and operators of wastewater treatment plants by providing an additional treatment and disposal option.

*Economic Impact of the Proposed Adoption of the E. coli Water Quality Standards for Surface Waters With the Full-body-contact Designated Use*

The proposed adoption of *E. coli* water quality criteria for the full-body-contact [FBC] designated use will affect those point source dischargers who discharge to those surface waters with the FBC designated use. Again, this revision will primarily affect wastewater treatment plants. If the new *E. coli* water quality standards are adopted, the standards will eventually be incorporated as discharge limitations in the NPDES permits for municipal wastewater treatment plants which discharge to surface waters with the FBC designated use. The monitoring costs for those dischargers will increase because they will be required to monitor the discharge of effluent for the presence of *E. coli*. However, the increase in the cost of monitoring should be minimal. For example, the State Laboratory currently charges $40 for an *E. coli* sample analysis under state contract as compared to $15 for fecal coliform analysis. Assuming that a wastewater treatment plant was required to conduct monitoring for *E. coli* twice a month, the predicted increase in monitoring costs would be approximately $1000 a year. It is not known how many point source dischargers would be affected by such an increase in monitoring costs. However, the number is certainly a small one. As of June 30, 1995, there were only 157 NPDES permitted-facilities in Arizona. Of these, 14 are located on Indian lands and could not be affected by the adoption of *E. coli* standards by the state. Not all of the remaining 143 NPDES-permitted facilities discharge to surface waters with the full-body-contact designated use. Approximately 30 wastewater treatment plants discharge to effluent-dependent waters which do not have the FBC designated use. The remaining number of wastewater treatment plants is probably less than 100.

*Economic Impact of the Proposed Adoption of the Net Ecological Benefit Rule*

The net ecological benefit rule permits a modification of water quality standards for a wastewater treatment plant that supports or creates an effluent-dependent water. The proposed rule provides a benefit to the owners and operators of the source wastewater treatment plants because it provides a mechanism for relief from specific water quality standards. This proposed rule may be used to obtain a modification to a water quality standard and to avoid high costs associated with wastewater treatment plant upgrades. ADEQ cannot predict how many wastewater treatment plants will take advantage of this procedure to modify water quality standards.

*Economic Impact of the Proposed Repeal of Turbidity Standards for the Full-body-contact and Partial-body-contact Designated Uses*

ADEQ is proposing to repeal the turbidity standards for the full-body-contact and partial-body-contact designated uses. The repeal of these standards will affect ephemeral waters and associated land use activities. The repeal of the turbidity standards for partial-body contact results in the turbidity standards no longer being applied to any ephemeral waters in Arizona. The removal of turbidity standards from ephemeral waters may benefit urbanized counties and municipalities that are regulated under NPDES stormwater permits. The repeal of the turbidity standard removes the possibility that NPDES stormwater permits would include water quality-based discharge limitations for turbidity. The repeal of the turbidity standard also may affect the types of best management practices that are employed by NPDES permittees to control their stormwater discharges.

*Economic Impact of the Proposed Diurnal Standard for Dissolved Oxygen in Effluent-dependent Waters*

ADEQ is proposing a more stringent dissolved-oxygen standard for effluent-dependent waters. This proposed standard will affect the 30 wastewater treatment plants which discharge to dry watercourses and create effluent-dependent waters. While the proposed dissolved standard is more stringent, it should have no economic impact. Data collected by ADEQ shows that effluent-dependent waters regularly meet or exceed the proposed minimum standards. The proposed standard will not force any wastewater treatment plant to upgrade treatment.

*Economic Impact of Proposed Unique Waters Designations*

Three surface waters are proposed for unique waters classification. Two of these are located in federal wilderness areas that will remain undeveloped. The proposed unique waters classifications for Aravaipa Creek and the Cave Creek watershed would have no economic impact. Buehman Canyon Creek is located on public lands managed by U.S. Forest Service and on private lands. If Buehman Canyon Creek is classified as a unique water, land-use activities within the watershed which may degrade water quality in Buehman Canyon Creek would be prohibited. ADEQ is aware that there is interest in developing an open-pit copper mine in Buehman Canyon. Although this mining project is not located on the nominated surface water, the development of the mining project could adversely affect water quality in Buehman Canyon Creek. The adoption of the proposed rule would directly affect the interests of persons interested in the development a mining project in the area. A unique waters classification for Buehman Canyon Creek would result in any mining project being given strict scrutiny under the antidegradation provisions of the water quality standards rules. A unique waters classification may effectively prohibit any mining development.

*Economic Impact of the Proposed Variance Provision*

The proposed rule provides a mechanism for obtaining a variance from water quality standards. The proposed variance is discharger-specific. Thus, the only persons who are directly affected by the proposed rule are point source dischargers to surface waters. The proposed rule provides a benefit to dischargers because it provides a way for the discharger to obtain short-term relief from compliance with a water quality standard if compliance is not technically or economically feasible.

*Economic Impact of Proposed Revisions to Numeric Water Quality Criteria*

The proposed revisions to the numeric water quality for the domestic-water-source, fish-consumption, full-body-contact and partial-body-contact designated uses may affect point source dischargers that discharge pollutants to surface waters with those designated uses. For example, revisions to the water quality criteria for the domestic-water-source designated use will only affect point source dischargers that discharge to surface waters with that designated use. In most cases, the point source dischargers who may be affected will be domestic and municipal wastewater treatment plants. A revision to an applicable water quality standard may result in a change in discharge limitation in a NPDES permit for the wastewater treatment plant or a new monitoring requirement.

The majority of the revisions to the numeric water quality criteria result in a less stringent water quality criterion. The proposed adoption of a less stringent water quality criterion will have no economic impact on point source dischargers. However, in some cases, the proposed revision results in a more stringent water quality criterion. In such cases, there is a possibility that a point source discharger may be required to upgrade treatment to ensure compliance with a more stringent standard. A treatment upgrade would only be required if a discharge contains the pollutant in a concentration that would result in a violation of the more stringent water quality standard. It is unlikely that more stringent water quality standards will affect point source dischargers because, in most cases, the more stringent water quality standards are for pollutants that are not typically found in effluents.

For the domestic-water-source designated use, ADEQ proposes to revise the water quality criteria for 8 pollutants to be more stringent. These pollutants are: boron, 1,3-dichloropropene, manganese, mercury, nickel, pentachlorophenol, 1,2,4-trichlorobenzene, and zinc. ADEQ is interested in obtaining information on the potential economic impact of the revisions of these standards for point source dischargers that discharge to surface waters with the domestic-water-source designated use.

For the fish-consumption designated use, ADEQ proposes to revise the water quality criteria for 6 pollutants to be more stringent. These pollutants are: cadmium, 1,3-dichloropropene, pentachlorophenol, thallium, 1,2,4-trichlorobenzene, and zinc. ADEQ is interested in obtaining information on the potential economic impact of the revisions of these standards for point source dischargers that discharge to surface waters with the fish-consumption designated use.

For the full-body-contact designated use, ADEQ proposes to revise the water quality criteria for 25 pollutants to be more stringent. These pollutants are: boron, carbofuran, total residual chlorine, cyanide, 1,2-dibromomethane, 2,4-dichlorophenoxyacetic acid, 1,3-dichloropropene, 2,4-dimethylphenol, dimethyl phthalate, 2-methyl-4,6-dinitrophenol, ethylbenzene, manganese, nitrate, nitrite, pentachlorophenol, styrene, thallium, toluene, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 2-(2,4,5-trichlorophenoxy) propionic acid, and xylenes. ADEQ is interested in obtaining information on the potential economic impact of the revisions of these standards for point source dischargers that discharge to surface waters with the full-body-contact designated use. It should be noted that all surface waters in Arizona have multiple designated uses. Where there is more than one designated use and multiple water quality criteria for a surface water, the most stringent water quality criterion applies. In most cases, the water quality criteria for the full-body-contact designated use are less stringent than the water quality criteria that have been established to maintain and protect water quality for other designated uses. Thus, even where the the full-body-contact criterion is revised to be more stringent, it may have no economic impact because other applicable water quality criteria are more stringent.

For the partial-body-contact designated use, ADEQ proposes to revise the water quality criteria for 42 pollutants to be more stringent. These pollutants are indicated by a "-" in the chart on pp. 2544-2547. ADEQ is interested in obtaining information on the potential economic impact of the revisions of these standards for point source dischargers that discharge to surface waters with the partial-body-contact designated use. It should be noted that all surface waters in Arizona have multiple designated uses. Where

there is more than one designated use and multiple water quality criteria for a surface water, the most stringent water quality criterion applies. In general, the water quality criteria for the partial-body-contact designated use are less stringent than the water quality criteria for any other designated use. Thus, ADEQ believes that the revision of partial-body-contact criteria will have no economic impact because other applicable water quality criteria are more stringent.

*Economic Impact of Proposed Addition of Fish-consumption Designated Uses*

The addition of the fish-consumption designated use to surface waters that are identified as cold water or warm water fisheries may result in new discharge limitations or monitoring requirements for point source dischargers who discharge to surface waters with the added use. It is unclear how many NPDES-permitted facilities may be affected by these revisions. ADEQ is soliciting information from point source dischargers who may be affected in order to assess the economic impact.

7. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: Steven Pawlowski

Address: Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

Telephone: (602) 207-2227

Fax: (602) 207-2251

8. The time, place and nature of the proceedings for the adoption, amendment or repeal of the rule, or if no proceeding is scheduled, where, when and how persons may request an oral proceeding on the proposed rule:

Oral proceeedings to take public comment on the proposed rules are scheduled as follows:

Date: February 6, 1996

Time: 7 p.m.

Location: Coconino County Administration Building
Board of Supervisors Meeting Room
219 East Cherry Avenue, First Floor
Flagstaff, Arizona

Date: February 8, 1996

Time: 7 p.m.

Location: State Government Complex Building
400 West Congress, North Building
Room 222
Tucson, Arizona 85701

Date: February 13, 1996

Time: 7 p.m.

Location: City of Yuma City Hall
Council Chambers
180 West First Street
Yuma, Arizona 85364

Date: February 15, 1996

Time: 7 p.m.

Location: Public Meeting Room
Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona

The public comment period for the proposed water quality standards rules closes on Friday, February 23, 1996.

9. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable.

10. Incorporations by reference and their location in the rules:
    a. Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12 [revised as of July 12, 1995] in R18-11-112(D)(2)(a).
    b. List of Highly Safeguarded Protected Native Plants in Arizona, 3 A.A.C. 6, Appendix A, Subsection A [December 20, 1994] in R18-11-112(D)(2)(c).
    c. Federally Listed Threatened and Endangered Species of Arizona, U.S. Fish & Wildlife Service [June 6, 1995] in R18-11-112(D)(2)(d).
11. The full text of the rules follows:

## TITLE 18. ENVIRONMENTAL QUALITY

## CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY WATER QUALITY ~~BOUNDARIES AND~~ STANDARDS

### ARTICLE 1. WATER QUALITY STANDARDS FOR ~~NAVIGABLE~~ SURFACE WATERS

Section
R18-11-101. Definitions
R18-11-102. Applicability
R18-11-103. ~~Exclusions Reserved~~ Repealed
R18-11-104. Designated Uses
R18-11-105. ~~Reserved~~ Tributary Rule
R18-11-106. ~~Reserved~~ Net Ecological Benefit
R18-11-107. Antidegradation
R18-11-108. Narrative Water Quality Standards
R18-11-109. Numeric Water Quality Standards
R18-11-110. Salinity of the Colorado River
R18-11-111. Analytical Methods
R18-11-112. Unique Waters
R18-11-113. Effluent-~~dominated~~ dependent Waters
R18-11-114. Mixing Zones
R18-11-115. Nutrient Waivers
R18-11-116. Resource Management Agencies
R18-11-117. Canals and Municipal Park Lakes
R18-11-118. Dams and Flood Control Structures
R18-11-119. Natural Background
R18-11-120. Enforcement
R18-11-121. Schedules of Compliance
R18-11-122. Variances
R18-11-123. Prohibition Against Discharge: Sabino Creek
App. A Numeric Water Quality Criteria
App. B List of ~~navigable~~ Surface Waters and Designated Uses
App. C Practical Quantitation Limits

### ~~ARTICLE 2. DISCHARGE LIMITATIONS RESERVED~~ REPEALED

R18-11-201. Reserved
R18-11-202. ~~Discharge Limitations for Phosphates~~
R18-11-203. ~~Prohibitions on Discharge~~
R18-11-204. Reserved
R18-11-205. ~~Discharges to Ephemeral Waters~~

### ARTICLE 3. ~~WATER QUALITY DISCHARGE LIMITATIONS AND SPECIAL CLASSES OF WATER RESERVED~~ REPEALED

### ARTICLE 1.

### WATER QUALITY STANDARDS FOR ~~NAVIGABLE~~ SURFACE WATERS

**R18-11-101. Definitions**

~~In addition to the definitions prescribed in A.R.S. §§ 49-101 and 49-201, the~~ The terms of ~~Article 1 and Article 2~~ this Article shall have the following meanings:

1. "Acute toxicity" means toxicity involving a stimulus severe enough to rapidly induce a response. 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 ~~navigable~~ surface water for the irrigation of crops.
5. "Agricultural livestock watering" means the use of a ~~navigable~~ 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 months. The monthly value shall be the arithmetic mean of all values determined in a calendar month.
7. "Aquatic and wildlife (cold water fishery)" means the use of a ~~navigable~~ surface water by animals, plants, or other organisms, including salmonids, for habitation, growth, or propagation.
8. "Aquatic and wildlife (effluent- ~~dominated~~ dependent water)" means the use of an effluent- ~~dominated~~ 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 ~~navigable~~ surface water by animals, plants, or other organisms, excluding salmonids, 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- ~~dominated~~ 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 ~~(and no future amendments), which is incorporated by reference and on file with the Office of the Secretary of State and the Department.~~
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 ~~navigable~~ surface water.

18. "Domestic water source" means the use of a ~~navigable~~ 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 ~~dominated~~ dependent water.
21. "Effluent- ~~dominated~~ dependent water" means a ~~navigable~~ surface water that consists primarily of discharges of treated wastewater and that has been classified as an effluent- ~~dominated~~ dependent water by the Director pursuant to R18-11-113.
22. "Ephemeral water" means a ~~navigable~~ surface water that has a channel that is at all times above the water table, that flows only in direct response to precipitation, and that does not support a self-sustaining fish population.
23. "Existing use" means a use that is actually attained in a ~~navigable~~ surface water on or after November 28, 1975, or a use that the existing water quality of a ~~navigable~~ surface water will allow.
24. "Fast land" means land that was once a surface water but no longer remains a surface water because it has been and remains legally converted to land by the discharge of dredged or fill material that:
    a. Was authorized by a § 404 permit,
    b. Exempt from § 404 permit requirements, or
    c. Occurred before there was a § 404 permit requirement for the discharge of the dredged or fill material.

~~24.~~25"FBC" means full-body contact.

~~25.~~26"FC" means fish consumption.

~~26.~~27"Fish consumption" means the use of a ~~navigable~~ 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.~~28"Full-body contact" means the use of a ~~navigable~~ surface water which 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.~~29"Geometric mean" means the nth root of the product of n items or values. The geometric mean is calculated using the following formula:

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

~~29.~~30"Hardness" means the sum of the calcium and magnesium concentrations, expressed as calcium carbonate ($CaCO_3$), in milligrams per liter.

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

32. "Navigable waters" means the waters of the United States.
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 90th percentile.
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 contact" means the use of a ~~navigable~~ surface water which may cause the human body to come into direct contact with the water, but normally not to the point of complete submergence. The use is such that ingestion of the water is not likely to occur, nor will sensitive body organs such as the eyes, ears, or nose normally be exposed to direct contact with the water.

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

~~37.~~38"Practical quantitation limit" means the lowest level of quantitative measurement that can be reliably achieved during routine laboratory operations.

~~38.~~39"Recreational uses" means the full-body-contact and partial-body-contact designated uses.

~~39.~~40"Regional Administrator" means the regional Administrator of Region 9 of the Environmental Protection Agency.

41. Surface water" means a water of the United States and includes the following:
    a. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce;
    b. All interstate waters, including interstate wetlands;
    c. All other waters such as intrastate lakes, reservoirs, ponds, rivers, streams (including intermittent and ephemeral streams), creeks, washes, draws, mudflats, sandflats, wetlands, sloughs, backwaters, prairie potholes, wet meadows, or playa lakes, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such waters:
        i. Which are 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 used or could be used for industrial purposes by industries in interstate or foreign commerce;
    d. All impoundments of surface waters;
    e. Tributaries of surface waters; and
    f. Wetlands.

~~40.~~42"Total nitrogen" means the sum of the concentrations of ammonia ($NH_3$), ammonium ion ($NH_4^+$), nitrite ($NO_2^-$), nitrate ($NO_3^-$) and dissolved and particulate organic nitrogen expressed as elemental nitrogen.

~~41.~~43"Total phosphorus" means all the phosphorus present in the sample, regardless of form, as measured by a persulfate digestion procedure.

~~42.~~44"Toxic" means those pollutants, or combination of pollutants, which, after discharge and upon exposure, ingestion, inhalation, or assimilation into any 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 or their offspring.

~~43.~~45"Unique water" means a ~~navigable~~ surface water which has been classified as an outstanding state resource water by the Director pursuant to R18-11-112.

~~44.~~46"Use attainability analysis" means a structured scientific assessment of the factors affecting the attainment of a designated use which may include physical, chemical, biological, and economic factors.

~~45. "Waters of the United States" means:~~

~~a. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;~~

~~b. All interstate waters, including interstate wetlands;~~

~~c. All other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), creeks, washes, draws, mudflats, sandflats, wetlands, sloughs, backwaters, prairie potholes, wet meadows, playa lakes, reservoirs, or natural ponds, the use degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters:~~

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

~~d. All impoundments of waters otherwise defined as waters of the United States under this definition;~~

~~e. Tributaries of waters otherwise defined as waters of the United States under this definition; and~~

~~f. Wetlands adjacent to waters (other than waters that are themselves wetlands) otherwise defined as waters of the United States under this definition.~~

~~46.~~47"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, cienegas, tinajas, and similar areas.

~~47.~~48"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 toxic effect produced on the organisms.

**R18-11-102. Applicability**

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

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

1. Waste treatment systems, including impoundments, ponds, lagoons, and constructed wetlands that are a part of such waste treatment systems.
2. Man-made surface impoundments and associated ditches and conveyances used in the extraction, beneficiation, and processing of metallic ores, including pits, pregnant leach solution ponds, raffinate ponds, tailing impoundments, decant ponds, concentrate or tailing thickeners, blowdown water ponds, ponds and sumps in mine pits associated with dewatering activity, ponds holding water that has come in 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 located either on lands that were not and are not surface waters or that are located on fast lands.

**R18-11-103. ~~Exclusions~~ Repealed**

~~The water quality standards prescribed in this Article do not apply to:~~

~~1. Waste treatment systems, including ponds, lagoons and constructed wetlands that are a part of such waste treatment systems. This exclusion applies only to manmade bodies of water which neither are originally created in a navigable water nor result from the impoundment of a navigable water.~~

~~2. Man-made surface impoundments and associated ditches and conveyances used in the extraction, beneficiation and processing of metallic ores, including pregnant leach solution ponds, raffinate ponds, tailing impoundments, decant ponds, concentrate or tailing thickeners, blowdown water ponds, ponds and sumps in mine pits associated with dewatering activity, ponds holding water that has come in contact with process or product and that is being held for recycling, spill or upset catchment ponds or ponds used for on-site remediation provided that any discharge from any such surface impoundment to a navigable water is permitted under the National Pollutant Discharge Elimination System program.~~

**R18-11-104. Designated Uses**

A. The Director shall adopt or remove designated uses and subcategories of designated uses by rule.

B. Designated uses of ~~navigable waters~~ a surface water may include full-body contact, 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- ~~dominated~~ dependent water), agricultural irrigation and agricultural livestock watering. ~~Designated~~ The designated uses for specific ~~navigable~~ surface waters are listed in Appendix B of this Article.

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

~~D. A navigable water that is not listed in Appendix B but that is tributary to a listed navigable water shall be protected by the water quality standards that have been established for the nearest downstream navigable water listed in Appendix B that is not an effluent dominated water. Where the nearest downstream listed water is an ephemeral water, the A&We and PBC standards shall apply only to that portion of the tributary that is an ephemeral water. The A&Ww and FBC standards shall apply to that portion of the tributary that is not an ephemeral water.~~

~~E.~~D. If a ~~navigable~~ surface water has more than 1 designated use listed in Appendix B, ~~the applicable water quality criterion for a pollutant is the most stringent of those prescribed to protect the designated uses of the navigable water~~ then the most stringent water quality criterion applies.

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

~~G.~~F. In designating uses of a ~~navigable~~ surface water and in establishing water quality criteria to protect those designated uses, the Director shall take into consideration the applicable water quality standards for downstream ~~navigable~~ 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 ~~navigable~~ surface waters.

~~H.~~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.

~~I.~~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 is not feasible for any of the following reasons:

1. Naturally occurring pollutant concentrations prevent the attainment of the use;
2. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use~~, unless these conditions may be compensated for by the discharge of a sufficient volume of treated wastewater without violating water conservation or other applicable requirements. Nothing herein shall be construed to require releases of treated wastewater~~;
3. Human-caused conditions or sources of pollution prevent 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 the attainment of the use, and it is not feasible to restore the ~~navigable~~ surface water to its original condition or to operate such modification in a way that would result in attainment of the use; ~~Nothing herein shall be construed to require the releases of water from dams;~~.
5. Physical conditions related to the natural features of the ~~navigable~~ surface water, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life designated uses; or
6. Controls more stringent than those required by §§ 301(b) and 306 of the Clean Water Act are necessary to attain the use and implementation of such controls would result in substantial and widespread economic and social impact.

**R18-11-105. ~~Reserved~~ Tributary Rule**

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

1. For an unlisted tributary that is an ephemeral water, the aquatic and wildlife [ephemeral] and partial-body-contact standards shall apply.
2. For an unlisted tributary that is an effluent-dependent water, the aquatic and wildlife [effluent-dependent water] standards and partial-body-contact standards shall apply.
3. 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 shall apply as well as the water quality standards that have been established for the nearest downstream surface water that is not an ephemeral water or an effluent-dependent water.
4. 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 shall apply as well as the water quality standards which have been established for the nearest downstream surface water that is not an ephemeral water or effluent-dependent water.

**R18-11-106. ~~Reserved~~ Net Ecological Benefit**

A. The Director may modify a water quality standard on the grounds 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 criterion 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 resources are limited;
2. The ecological benefits associated with the discharge of effluent under a modified water quality standard exceeds 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 completely the discharge of effluent which creates or supports the ecologically valuable aquatic, wetland, or riparian ecosystem;
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 applies to the discharge of that effluent. The discharge of effluent which creates or supports an ecologically valuable aquatic, riparian, or wetland ecosystem shall, at a minimum, comply with applicable technology-based effluent limitations.

**R18-11-107. Antidegradation**

~~A. The determination of whether there is any degradation of water quality in a navigable water shall be on a pollutant by pollutant basis.~~

~~B.~~A. 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 ~~navigable~~ surface water where the existing water quality does not meet applicable water quality standards.

~~C.~~ B. Tier 2: Where existing water quality in a ~~navigable~~ surface water is better than applicable water quality standards, the existing water quality shall be maintained and protected. The Director may allow limited degradation of existing water quality in ~~such navigable waters, except unique waters,~~ a Tier 2 surface water, provided that the Department has held a public hearing on whether degradation should be allowed pursuant to 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.
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 control are implemented.
4. Allowing lower water quality is necessary to accommodate important economic or social development in the area in which the ~~navigable~~ surface water is located.

~~D.~~C. Tier 3: Existing water quality shall be maintained and protected in a ~~navigable~~ surface water that is classified as a unique water

or that the Director has proposed for classification as a unique water pursuant to R18-11-112. The Director shall not allow limited degradation of a unique water pursuant to subsection ~~C~~ B of this Section.

~~E.~~ D. Nothing in this Section or in the implementation of this Section shall be inconsistent with §316 of the Clean Water Act where a potential water quality impairment associated with a thermal discharge is involved.

**R18-11-108. Narrative Water Quality Standards**

A. ~~Navigable waters~~ 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 ~~navigable~~ 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 waterquality standard prescribed in R18-11-405 or R18-11-406; or
   8. Change the color of the ~~navigable~~ surface water from natural background levels of color.

B. ~~Navigable waters~~ 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 watercraft shall not be considered a violation of this narrative standard.

**R18-11-109. Numeric Water Quality Standards**

A. The water quality standards prescribed in this Section and in Appendix A apply to ~~navigable~~ 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 | ~~FBC~~ | DWS.PBC.A&W[1].AgI.AgL |
|---|---|---|
| 30-day geometric mean (5 sample minimum) | ~~200~~ | 1000 |
| 10% of samples for a 30-day period | ~~400~~ | 2000 |
| Single sample maximum | ~~800~~ | 4000 |
| 2. Fecal coliform in effluent-~~dominated~~ dependent waters | | All designated uses |
| 30-day geometric mean (5 sample minimum) | | 200 |
| 10% of samples for a 30-day period | | 400 |
| Single sample maximum | | 800 |

C. 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 |
|---|---|
| 30-day geometric mean (5 sample minimum) | 130 |
| 10% of samples for a 30-day period | 240 |
| Single sample maximum | 580 |

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

| pH | DWS | FBC.PBC.A&W[2] | 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 |

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

| Temperature[3] | A&Ww.A&Wedw | A&Wc |
|---|---|---|
| Maximum increase due to a discharge[4,5] | 3.0 | 1.0 |

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

| Turbidity | ~~FBC.PBC.~~A&Ww.A&Wedw | A&Wc |
|---|---|---|
| Rivers, streams, and other flowing waters | 50 | 10 |
| Lakes, reservoirs, tanks, and ponds | 25 | 10 |

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

| 1. Dissolved oxygen[6] | A&Ww | A&Wc | ~~A&Wedw~~ |
|---|---|---|---|
| Single sample minimum[7,8] | 6.0 | 7.0 | ~~1.0~~ |
| 2. Dissolved oxygen in effluent-dependent waters [single sample minimum]: | | | |
| 3 hours after sunrise to sunset | | 3.0 | |
| Sunset to 3 hours after sunrise | | 1.0 | |

3. If the dissolved oxygen (mg/L) of a surface water is less than the water quality standard, 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 dissolved-oxygen water quality standard.

~~G.~~ H. 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. ~~White River,~~ 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, ~~from the confluence of the White and Black Rivers to~~ above Theodore Roosevelt Lake that are not located on tribal lands | | | |
| 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] | NNS | 0.60[b] |
| Total nitrogen | 0.30[a] | NNS | 1.00[b] |
| 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 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 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 Curtiss 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.

~~H.~~ I. The following water quality standards for radiochemicals shall not be exceeded:

1. In all ~~navigable~~ surface waters, the concentration of radiochemicals 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 ~~navigable~~ surface waters that are designated as domestic water sources, the following water quality standards for radiochemicals shall not be exceeded:
   a. 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. The concentration of combined radium-226 and radium-228 shall not exceed 5 picocuries per liter of water.
   c. The concentration of strontium-90 shall not exceed 8 picocuries per liter of water.
   d. The concentration of tritium shall not exceed 20,000 picocuries per liter of water.
   e. The average annual concentration of beta particle activity and photon emitters from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirems per year.

Footnotes:

[1] Includes A&Wc, A&Ww, and A&We.

[2] Includes A&Wc, A&Ww, A&Wedw, and A&We.

[3] There is no water quality standard for temperature for the A&We designated use.

[4] Does not apply to Cholla Lake.

[5] Does not apply to a wastewater treatment plant discharge to a dry watercourse that creates an effluent-~~dominated~~ dependent water.

[6] There is no dissolved-oxygen standard for the A&We designated use.

[7] ~~Or 90% saturation, whichever is less. If the dissolved oxygen (mg/L) of the waterbody is less than the the water quality standard, but the percent saturation of oxygen is equal to or greater than 90%, then the waterbody is in compliance with the dissolved oxygen water quality standard~~

[~~8~~7] The dissolved-oxygen water quality standard for a lake shall apply below the surface but not at a depth greater than 1 meter.

[a] means annual mean of representative composite samples taken from the surface and at 2- and 5-meter depths.

[b] means maximum for any set of representative composite samples taken from the surface and at 2- and 5-meter depths.

"NNS" means no numeric standard.

**R18-11-111. Analytical Methods**

A. Analysis of a sample taken to determine compliance with a water quality standard shall be in accordance with 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 Department of Health Services pursuant to A.A.C. ~~R9-14-607.B.~~ R9-14-607(B).

B. A test result from a sample taken to determine compliance with a water quality standard shall be valid only if the sample has been 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 classification of a ~~navigable~~ surface water as a unique water shall be by rule.

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 ~~navigable~~ surface water for classification as a unique water by filing a petition for rule adoption with the Department. A petition for rule adoption to classify a ~~navigable~~ surface water as a unique water shall include:

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

D. A ~~navigable~~ surface water may be classified as a unique water by the Director upon a finding that the ~~navigable~~ surface water is an outstanding state resource water based upon 1 of the following criteria:

1. The ~~navigable~~ 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 ~~navigable~~ surface water.
2. Threatened or endangered species are known to be associated with the ~~navigable~~ surface water and the existing water quality is essential to the maintenance and propagation of a threatened or endangered species or the ~~navigable~~ surface water provides critical habitat for a threatened

or endangered species. Endangered or threatened species are identified on the following lists which are incorporated by reference and on file with the Office of the Secretary of State and with the Department:

a. Endangered and Threatened Wildlife and Plants, 50 CFR, 17.11 and 17.12 (revised as of July 12, 1995);
b. "Threatened Native Wildlife of Arizona," Arizona Game and Fish Department (July 21, 1988);
c. ~~List of protected groups of plants prescribed in A.A.C. R3-1-615 and A.A.C. R3-1-616 (January 17, 1989)~~ List of highly safeguarded protected native plants in 3 A.A.C 6, Appendix A(A) [December 20, 1994];
~~d. List of Migratory Birds, 50 CFR §10.13 (April 5, 1985);~~
~~e~~ d. ~~"Endangered and Threatened~~ Federally Listed Threatened and Endangered Species of Arizona," U.S. Fish & Wildlife Service (~~Summer 1991~~ June 6, 1995).

E. The following ~~navigable~~ 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. ~~People's~~ Peeples Canyon Creek, tributary to Santa Maria River;
4. Burro Creek, above its confluence with Boulder Creek;
5. Francis Creek, Mohave and Yavapai counties;
6. Bonita Creek, tributary to the upper Gila River;
7. Cienega Creek, from I-10 bridge to Del Lago Dam, Pima County;
8. Aravaipa Creek, from confluence of Stowe Gulch to the downstream boundary of the Aravaipa Canyon Wilderness Area;
9. Cave Creek and South Fork of Cave Creek [Chiricahua Mountains], from headwaters to the Coronado National Forest boundary; and
10. Buehman Canyon Creek, from headwaters [Lat. 32°24'55.5", Long. 110°39'43.5"] to approximately 9.8 miles downstream [Lat. 32°24'31.5", Longitude 110°32'08"].

F. The following water quality standards ~~apply to the listed~~ are established to maintain and protect existing water quality in the listed unique waters. Water quality standards prescribed in this subsection supplement ~~or supersede~~ the water quality standards prescribed pursuant to R18-11-109.

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

| Parameter | Standard |
|---|---|
| ~~Fecal Coliform[a]~~ | ~~200 cfu/100 ml (single sample maximum)~~ |
| pH (standard units)[b] | no change due to discharge |
| Temperature[b] | no increase due to discharge |
| Dissolved oxygen[b] | no decrease due to discharge |
| Total dissolved solids[b] | no increase due to discharge |
| | Chromium (as Cr)(D)[a] 10 µg/L |
| ~~Zinc (D)[a]~~ | ~~110 µg/L~~ |

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

| Parameter | Standard |
|---|---|
| ~~Fecal coliform[a]~~ | ~~150 cfu/100 ml*~~ |
| pH (standard units)[b] | no change due to discharge |
| Nitrogen (T)[a] | 1.00 mg/L (annual mean)<br>1.50 mg/L (90th percentile)<br>2.50 mg/L (single sample max.) |
| Phosphorus (T)[a] | 0.10 mg/L (annual mean)<br>0.25 mg/L (90th percentile)<br>0.30 mg/L (single sample max.) |
| Chromium (as Cr)(D)[a] | 5 µg/L |
| Zinc (D)[a] | 50 µg/L |
| Turbidity change due to discharge[b] | 3 NTU |

~~* Geometric mean of a random set of a minimum of ten samples in any calendar month.~~

3. ~~People's~~ Peeples Canyon Creek, tributary to Santa Maria River:

| Parameter | Standard |
|---|---|
| Temperature[b] | no increase due to discharge |
| Dissolved oxygen[b] | no decrease due to discharge |
| Turbidity change due to discharge[b] | 5 NTU |
| ~~Arsenic (T)[b]~~ | ~~20 µg/L~~ |
| Manganese (T)[a] | 500 µg/L |

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

| Parameter | Standard |
|---|---|
| ~~Fecal coliform[a]~~ | ~~500 cfu/100 ml (single sample maximum)~~ |
| Manganese (T)[a] | 500 µg/L |

5. Francis Creek, Mohave and Yavapai Counties:

| Parameter | Standard |
|---|---|
| ~~Fecal coliform[a]~~ | ~~500 cfu/100 ml (single sample maximum)~~ |
| Manganese (T)[a] | 500 µg/L |

6. Cienega Creek, from I-10 bridge to Del Lago Dam, 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 |

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 |

Abbreviations:
(D) means dissolved fraction
(T) means total recoverable
NTU means nephelometric turbidity unit
mg/L means milligrams per liter
µg/L means micrograms per liter
~~cfu/ml means colony forming units per milliliter~~
~~[a] means that the numeric water quality standard supersedes a water quality standard prescribed in R18-11-109 or Appendix A.~~
~~[b] means that the numeric water quality standard supplements the water quality standards prescribed in R18-11-109 and Appendix A.~~

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

A. The classification of a ~~navigable~~ surface water as an effluent-~~dominated~~ dependent water shall be by rule.

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

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

D. The following ~~navigable~~ surface waters are classified as effluent ~~dominated~~ dependent waters:
   1. In the Colorado River Main Stem Basin:
      a. Bright Angel Wash from South Rim Grand Canyon ~~wastewater treatment plant (WWTP)~~ WWTP outfall to confluence with ~~Cataract Creek~~ Coconino Wash.
      b. Cataract Creek from Williams WWTP outfall to ~~3 kilometers~~ 1 kilometer downstream from the outfall.
      c. Holy Moses Wash from Kingman WWTP outfall to ~~5~~ 3 kilometers downstream from the outfall.
      d. ~~Unnamed wash, tributary to Bright Angel Creek, from Grand Canyon North Rim WWTP~~ Transept Canyon from North Rim Grand Canyon WWTP outfall to 1 kilometer downstream ~~from the outfall~~.
   2. In the Little Colorado River Basin:
      ~~a. Black Creek from Ft. Defiance WWTP outfall to the confluence with Rio Puerco River.~~
      ~~b.~~a. Dry Lake.
      ~~c.~~b. Lake Humphreys.
      ~~d.~~c. Lower Walnut Canyon Lake.
      ~~e.~~d. Ned Lake.
      ~~f.~~e. Pintail Lake.
      f. Telephone Lake
      g. Rio de Flag from City of Flagstaff WWTP outfall to confluence with ~~Little Colorado River~~ San Francisco Wash.
      h. ~~Telephone Lake.~~ Whale Lake
   3. In the Middle Gila River Basin:
      ~~a. Agua Fria River from Surprise WWTP outfall to 5 kilometers downstream from the outfall.~~
      a. Unnamed wash from the Town of Prescott Valley WWTP outfall to the confluence with the Agua Fria River, and the Agua Fria River below the confluence with the unnamed wash receiving treated wastewater from the Prescott Valley WWTP to State Route 169.
      b. Agua Fria River from El Mirage WWTP outfall to ~~8~~ 2 kilometers downstream from the outfall.
      ~~c. Agua Fria River from Avondale WWTP outfall to confluence with the Gila River.~~
      ~~d~~ c. Gila River from Florence WWTP outfall to ~~5 kilometers downstream from the outfall~~ Felix Road .
      ~~e~~ d. Gila River from confluence with the Salt River to Gillespie Dam.
      ~~f~~ e. Queen Creek from Superior ~~WWTP~~ Mining Division discharge outfall to ~~8 kilometers downstream from the outfall~~ confluence with Potts Canyon.
      ~~g~~ f. Unnamed wash from Gila Bend WWTP outfall to confluence with Gila River.
      ~~h~~ g. Unnamed wash from Luke AFB WWTP outfall to the confluence with Agua Fria River.
      ~~i~~ h. Unnamed wash from Queen Valley WWTP outfall to ~~3 kilometers downstream from the~~ confluence with Queen Creek.
   4. In the ~~Rio Yaqui~~ Rios de Mexico Basin:
      a. Mule Gulch, from Bisbee WWTP outfall to confluence with Whitewater Draw.
      b. Unnamed wash from Bisbee-Douglas International Airport WWTP outfall to Whitewater Draw.
   5. In the Salt River Basin:
      a. ~~Pinal Creek from Globe WWTP outfall to 5 kilometers downstream from the outfall~~ Unnamed wash from Globe WWTP outfall to confluence with Pinal Creek and from confluence of unnamed wash and Pinal Creek to Radium.
      b. Salt River from 23rd Avenue WWTP outfall to confluence with the Gila River.
   6. In the San Pedro River Basin:
      ~~a. Unnamed wash from Oracle WWTP outfall to confluence with Big Wash.~~
      ~~b.~~ Walnut Gulch from Tombstone WWTP outfall to confluence with ~~the San Pedro River~~ Tombstone Gulch.
   7. In the Santa Cruz River Basin:
      ~~a. North Branch of the Santa Cruz Wash from the Casa Grande WWTP outfall to confluence with the Santa Cruz Wash.~~
      ~~b.~~a. Santa Cruz River from ~~City of Nogales WWTP~~ Nogales International WWTP outfall to ~~Josephine Canyon~~ Tubac Bridge.
      ~~c.~~b. Santa Cruz River from Roger Road WWTP outfall to Baumgartner Road crossing.
      c. Unnamed wash from Oracle WWTP outfall to 5 kilometers downstream.
   8. In the Upper Gila River Basin:
      a. ~~Bennet~~ Bennett Wash from Arizona ~~Dept.~~ Department of Corrections-Safford WWTP outfall to Gila River.
      b. ~~Cammerman Wash~~ Unnamed wash from Arizona ~~Dept.~~ Department of Corrections-Globe WWTP outfall to ~~3 kilometers downstream from the outfall~~ the boundary of the San Carlos Indian Reservation.
   9. In the Verde River Basin:
      a. American Gulch from ~~Payson~~ Northern Gila County Sanitary District WWTP outfall to the East Verde River.
      b. Bitter Creek from Jerome WWTP outfall to 2.5 kilometers downstream from the outfall.
      c. ~~Jack's~~ Jacks Canyon Wash from Big Park WWTP outfall to confluence with Dry Beaver Creek.

E. The water quality standards that apply to an effluent-dependent water shall be used to derive discharge limitations for a point source discharge from a wastewater treatment plant to an ephemeral water which changes that ephemeral water into an effluent-dependent water.

**R18-11-114. Mixing Zones**

A. The Director may, by order, establish a mixing zone in a ~~navigable~~ surface water. 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 ~~navigable~~ surface water differs by less than 5%.
   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 the proposed mixing zone.

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.

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 conduct a public hearing on whether to establish a mixing zone pursuant to the administrative procedures prescribed in A.A.C. 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 ~~navigable~~ 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 ~~navigable~~ surface water.

F. 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 for a mixing zone shall be in writing and shall state the reasons for the denial. If the Director determines that a mixing zone should be established, he shall issue an order to establish the mixing zone. The Director may include conditions in the order that the Director deems are necessary to protect human health and the designated uses of the ~~navigable~~ surface water. A copy of the Director's decision and order shall be sent by certified mail to the applicant.

G. Any person who is adversely affected by an order of the Director pertaining to a mixing zone may appeal the Director's decision to an administrative law judge pursuant to A.R.S. § 49-321.

H. A mixing zone shall be reevaluated upon issuance, reissuance, or modification of the National Pollutant Discharge Elimination System permit for the point source or modification of the outfall structure.

I. The length of the mixing zone shall not exceed 500 meters in flowing streams. 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.

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

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

**R18-11-115. Nutrient Waivers**

A. The water quality standards for total phosphorus and total nitrogen may be waived on a discharger-specific basis for a discharge to an ephemeral water which is tributary to a ~~navigable~~ surface water for which water quality standards for total nitrogen or total phosphorus are prescribed in ~~R18-11-109.G~~ 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
   e. Discharge flow;
3. Information on the receiving ~~navigable~~ surface water, including:
   a. Name of the receiving water,
   ~~b. Months of the year the receiving water is normally dry;~~
   ~~c~~.b. Distance in river miles to the nearest downstream ~~navigable~~ surface water with perennial flow, and
   ~~d~~.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 ~~navigable water~~ nearest downstream surface water with perennial flow 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 phosphoru 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 conduct 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 A.A.C. 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, perennial ~~navigable~~ 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 shall be for a fixed term not to exceed 5 years. A nutrient waiver shall be reevaluated upon issuance, reissuance, or modification of the National Pollutant Discharge Elimination System permit for the point source.

**R18-11-117. Canals and Municipal Park Lakes**

A. Nothing in this Article shall be construed to prevent the routine physical or mechanical maintenance of canals, drains, and the municipal park lakes identified in Appendix B. Physical or mechanical maintenance includes dewatering, lining, dredging, and the physical, biological, or chemical control of weeds and

algae. Increases in turbidity that result from physical or mechanical maintenance activities are permitted in canals, drains, and the municipal park lakes identified in Appendix B.

B. The discharge of lubricating oil that is associated with the start-up of well pumps which discharge to canals shall not be considered a violation of ~~R18-11-108.B.~~ R18-11-108(B).

**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 shall not be construed as 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 such structure so as to cure or mitigate an exceedance of a water quality standard caused by another person.

C. Nothing in this Article shall be construed to require the releases of water from dams.

**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. A numeric water quality standard may be established at a concentration that is below the practical quantitation limit. In such cases, the water quality standard is enforceable at the practical quantitation limit. ~~The applicable practical quantitation limits are prescribed in Appendix C of this Article.~~

C. Compliance with acute aquatic and wildlife criteria shall be determined from the analytical test result of ~~either a one hour composite sample or~~ a grab sample. Compliance with chronic aquatic and wildlife criteria shall be determined from the arithmetic 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.

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

**R18-11-121. Schedules of Compliance**

A. A schedule to bring an existing point source into compliance with a water quality standard ~~adopted after August 13, 1986~~ may be established in a National Pollutant Discharge Elimination System permit for the existing point source. A compliance schedule for an existing point source shall require compliance with a discharge limitation based upon a water quality standard no later than 3 years after the ~~effective~~ date of issuance of the ~~water quality standard~~ National Pollutant Discharge Elimination System permit. In order 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 have been achieved and that the point source cannot comply with a discharge limitation based upon the water quality standard through the application of existing water pollution control technology, operational changes, or source reduction.

B. A schedule of compliance shall not be established in a National Pollutant Discharge Elimination System permit for a new point source. 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 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. On-site 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 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. ~~A compliance schedule shall require compliance with a water quality standard but no later than ten years after the effective date of the water quality standard.~~

**R18-11-122. Variances**

A. The Director may grant a variance from a water quality standard for a point source discharge provided the discharger demonstrates that treatment more advanced than that required to comply with technology-based effluent limitations is necessary to achieve compliance with the water quality standard and it is not technically or economically feasible to achieve compliance within the next 5 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 discharges to the surface water are required to 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 shall be for a fixed term not to exceed 5 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, the applicant shall demonstrate that reasonable progress towards achieving compliance with the water quality standard has been made during the term of the variance.

E. A variance shall be reevaluated 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 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 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 that it is not technically or economically 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;
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;
9. A person who requests a variance shall propose interim discharge limitations which represent the highest level of treatment achievable by the point source discharge 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.

H. The Department shall issue 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 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 A.R.S. § 49-321.

J. Variances shall not be granted 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**

The discharge of treated wastewater to Sabino Creek is prohibited.

**Appendix A: Table 1. Human Health and Agricultural Designated Use Numeric Water Quality Criteria**

| 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 | 8400 | 8400 | NNS | NNS |
| Acenaphthylene | 208-96-8 | NNS | NNS | NNS | NNS | NNS | NNS |
| Acrolein | 107-02-8 | 110 | 750 | 2200 | 2200 | NNS | NNS |
| Acrylonitrile | 107-13-1 | 0.06 | 0.64 | 2.6 | NNS | NNS | NNS |
| Alachlor | 15972-60-8 | 2 | NNS | 1400 | 1400 | NNS | NNS |
| Aldrin | 309-00-2 | 0.002 | 0.0003 | 0.08 | 4.2 | k | k |
| Ammonia | 7664-41-7 | NNS | NNS | NNS | NNS | NNS | NNS |
| Anthracene | 120-12-7 | 2100 | 6300 | 42000 | 42000 | NNS | NNS |
| Antimony (as Sb) | 7440-36-0 | 6 T | 140 T | 56 T | 56 T | NNS | NNS |
| Arsenic (as As) | 7440-38-2 | 50 T | 1450 T | 50 T | 50 T | 2000 T | 200 T |
| Asbestos | 1332-21-4 | a | NNS | NNS | NNS | NNS | NNS |
| Atrazine | 1912-24-9 | 3 | NNS | 4900 | 4900 | NNS | NNS |
| Barium (as Ba) | 7440-39-3 | 2000 T | NNS | 9800 D | 9800 D | NNS | NNS |

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| 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) |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 5 | 120 | 48 | NNS | NNS | NNS |
| Benzidine | 92-87-5 | 0.0002 | 0.002 | 0.006 | 420 | 0.01 | 0.01 |
| Benz (a) anthracene | 56-55-3 | 0.003 | 0.00008 | 0.12 | NNS | NNS | NNS |
| Benzo (a) pyrene | 50-32-8 | 0.2 | 0.002 | 0.2 | NNS | NNS | NNS |
| Benzo (ghi) perylene | 191-24-2 | NNS | NNS | NNS | NNS | NNS | NNS |
| Benzo (k) fluoranthene | 207-08-9 | 0.003 | 0.00001 | 0.12 | NNS | NNS | NNS |
| 3,4-Benzofluoranthene | 205-99-2 | 0.003 | 0.00004 | 0.12 | NNS | NNS | NNS |
| Beryllium (as Be) | 7440-41-7 | 4 T | 0.21 T | 4 T | 700 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 | NNS | NNS |
| Bis (2-chloroisopropyl) ether | 108-60-1 | 280 | 15000 | 5600 | 5600 | NNS | NNS |
| Boron (as B) | 7440-42-8 | 630 | NNS | 12600 | 12600 | 1000 T | NNS |
| Bromodichloromethane | 75-27-4 | TTHM | 22 | 100 | 2800 | NNS | NNS |

**Appendix A: Table 1. Human Health and Agricultural Designated Use Numeric Water Quality Criteria**

| 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) |
|---|---|---|---|---|---|---|---|
| p-Bromodiphenyl ether | 101-55-3 | NNS | NNS | NNS | NNS | NNS | NNS |
| Bromoform | 75-25-2 | TTHM | 80 | 180 | 2800 | NNS | NNS |
| Bromomethane | 74-83-9 | 9.8 | 7500 | 200 | 200 | NNS | NNS |
| Butyl benzyl phthalate | 85-68-7 | 1400 | 5000 | 28000 | 28000 | NNS | NNS |
| Cadmium (as Cd) | 7440-43-9 | 5 T | 41 T | 70 T | 70 T | 50 T | 50 T |
| Carbofuran | 1563-66-2 | 40 | NNS | 700 | 700 | NNS | NNS |
| Carbon tetrachloride | 56-23-5 | 5 | 5.5 | 11 | 98 | NNS | NNS |
| Chlordane | 57-74-9 | 2 | 0.001 | 2 | 8.4 | NNS | NNS |
| Chlorine (total residual) | 7782-50-5 | NNS | NNS | 14000 | 14000 | NNS | NNS |
| Chlorobenzene | 108-90-7 | 100 | 500 | 2800 | 2800 | 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 | 67-66-3 | TTHM | 590 | 230 | 1400 | NNS | NNS |

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| 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) |
|---|---|---|---|---|---|---|---|
| Chloromethane | 74-87-3 | 5.7 | 1800 | 230 | 2800 | NNS | NNS |
| Chloronapthalene beta | 91-58-7 | 560 | 13000 | 11000 | 11000 | NNS | NNS |
| 2-Chlorophenol | 95-57-8 | 35 | 2100 | 700 | 700 | NNS | NNS |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | NNS | NNS | NNS | NNS | NNS | NNS |
| Chromium (as Cr III) | 16065-83-1 | NNS | 67000 T | 140000 T | 140000 T | NNS | NNS |
| Chromium (as Cr VI) | 18540-29-9 | NNS | 3400 T | 700 T | 700 T | NNS | NNS |
| Chromium (Total as Cr) | 7440-47-3 | 100 T | NNS | NNS | NNS | 1000 T | 1000 T |
| Chrysene | 218-01-9 | 0.003 | .0001 | 0.12 | NNS | NNS | NNS |
| Copper (as Cu) | 7440-50-8 | 1000 D | NNS | 5200 D | 5200 D | 5000 T | 500 T |
| Cyanide | 57-12-5 | 200 T | 210000 T | 2800 T | 2800 T | NNS | 200 T |
| Dibenz (ah) anthracene | 53-70-3 | 0.003 | 0.00003 | 0.12 | NNS | NNS | NNS |
| Dibromochloromethane | 124-48-1 | TTHM | 12 | 17 | 2800 | NNS | NNS |
| 1,2-Dibromo-3-chloropropane (DBCP) | 96-12-8 | 0.2 | NNS | NNS | NNS | NNS | NNS |

**Appendix A: Table 1. Human Health and Agricultural Designated Use Numeric Water Quality Criteria**

| 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) |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.05 | NNS | 1.6 | NNS | NNS | NNS |
| Dibutyl phthalate | 84-74-2 | 700 | 2300 | 14000 | 14000 | NNS | NNS |
| 1,2-Dichlorobenzene | 95-50-1 | 600 | 2800 | 13000 | 13000 | NNS | NNS |
| 1,3-Dichlorobenzene | 541-73-1 | 94 | 2000 | 1880 | 1880 | NNS | NNS |
| 1,4-Dichlorobenzene | 106-46-7 | 75 | 1200 | 1880 | 1880 | NNS | NNS |
| 3,3'-Dichlorobenzidine | 91-94-1 | 0.08 | 0.09 | 3.1 | NNS | NNS | NNS |
| p,p'-Dichlorodiphenyldichloroethane (DDD) | 72-54-8 | 0.15 | 0.0009 | 5.8 | NNS | 0.001 | 0.001 |
| p,p'-Dichlorodiphenyldichloroethylene (DDE) | 72-55-9 | 0.1 | 0.0006 | 4.1 | NNS | 0.001 | 0.001 |
| p,p'-Dichlorodiphenyltrichloroethane (DDT) | 50-29-3 | 0.1 | 0.0005 | 4.1 | 70 | 0.001 | 0.001 |
| 1,1-Dichloroethane | 75-34-3 | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Dichloroethane | 107-06-2 | 5 | 120 | 15 | NNS | NNS | NNS |
| 1,1-Dichloroethylene | 75-35-4 | 7 | 4.5 | 7 | 1300 | NNS | NNS |
| 1,2-cis-Dichloroethylene | 156-59-2 | 70 | NNS | NNS | NNS | NNS | NNS |

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| 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) |
|---|---|---|---|---|---|---|---|
| 1,2-trans-Dichloroethylene | 156-60-5 | 100 | 13000 | 2800 | 2800 | NNS | NNS |
| Dichloromethane | 75-09-2 | 5 | 480 | 190 | 8400 | NNS | NNS |
| 2,4-Dichlorophenol | 120-83-2 | 21 | 810 | 420 | 420 | NNS | NNS |
| 2,4-Dichlorophenoxyacetic acid (2,4-D) | 94-75-7 | 70 | NNS | 1400 | 1400 | NNS | NNS |
| 1,2-Dichloropropane | 78-87-5 | 5 | NNS | NNS | NNS | NNS | NNS |
| 1,3-Dichloropropene | 542-75-6 | 0.2 | 6.6 | 7.8 | 42 | NNS | NNS |
| Dieldrin | 60-57-1 | 0.002 | 0.0002 | 0.09 | 7 | k | k |
| Diethyl phthalate | 84-66-2 | 5600 | 110000 | 110000 | 110000 | NNS | NNS |
| Di(2-ethylhexyl) phthalate | 117-81-7 | 6 | 7.4 | 100 | 2800 | NNS | NNS |
| 2,4-Dimethylphenol | 105-67-9 | 140 | 2200 | 2800 | 2800 | NNS | NNS |
| Dimethyl phthalate | 131-11-3 | 70000 | 2800000 | 1400000 | 1400000 | NNS | NNS |
| 4,6-Dinitro-o-cresol | 534-52-1 | 2.7 | 120 | 55 | 55 | NNS | NNS |
| 2,4-Dinitrophenol | 51-28-5 | 14 | 5400 | 280 | 280 | NNS | NNS |

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|---|---|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 121-14-2 | 14 | .163 | 280 | 280 | NNS | NNS |
| 2,6-Dinitrotoluene | 606-20-2 | NNS | NNS | NNS | NNS | NNS | NNS |
| Di-n-octyl phthalate | 117-84-0 | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Diphenylhydrazine | 122-66-7 | 0.04 | 0.25 | 1.8 | NNS | NNS | NNS |
| Endosulfan sulfate | 1031-07-8 | 0.35 | 0.78 | 7 | 7 | NNS | NNS |
| Endosulfan (Total) | 115-29-7 | 42 | 110 | 840 | 840 | NNS | NNS |
| Endrin | 72-20-8 | 0.2 | 1.1 | 40 | 40 | 0.004 | 0.004 |
| Endrin aldehyde | 7421-93-3 | 2.1 | 0.81 | 420 | 420 | NNS | NNS |
| Ethylbenzene | 100-41-4 | 700 | 110000 | 14000 | 14000 | NNS | NNS |
| Ethyl chloride | 75-00-3 | NNS | NNS | NNS | NNS | NNS | NNS |
| Fluoranthene | 206-44-0 | 280 | 130 | 5600 | 5600 | NNS | NNS |
| Fluorene | 86-73-7 | 280 | 580 | 5600 | 5600 | NNS | NNS |
| Fluorine | 7782 41 4 | 4000 | NNS | 8400 | 8400 | NNS | NNS |

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|---|---|---|---|---|---|---|---|
| Heptachlor | 76-44-8 | 0.4 | 0.0002 | 0.4 | 70 | NNS | NNS |
| Heptachlor epoxide | 1024-57-3 | 0.2 | 0.0001 | 0.2 | 2 | NNS | NNS |
| Hexachlorobenzene | 118-74-1 | 1 | 0.002 | 1 | 280 | NNS | NNS |
| Hexachlorobutadiene | 87-68-3 | 0.45 | 0.52 | 18 | NNS | NNS | NNS |
| Hexachlorocyclohexane alpha | 319-84-6 | 0.006 | 0.03 | 0.22 | NNS | NNS | NNS |
| Hexachlorocyclohexane beta | 319-85-7 | 0.02 | 0.02 | 0.78 | NNS | NNS | NNS |
| Hexachlorocyclohexane delta | 319-86-8 | NNS | NNS | NNS | NNS | NNS | NNS |
| Hexachlorocyclohexane gamma (lindane) | 58-89-9 | 0.2 | 0.02 | 1 | 42 | NNS | NNS |
| Hexachlorocyclopentadiene | 77-47-4 | 50 | 550 | 1000 | 1000 | NNS | NNS |
| Hexachloroethane | 67-72-1 | 2.5 | 4.8 | 100 | 140 | NNS | NNS |
| Indeno (1,2,3-cd) pyrene | 193-39-5 | 0.003 | 0.000003 | 0.12 | NNS | NNS | NNS |
| Isophorone | 78-59-1 | 36.8 | 2300 | 1500 | 28000 | NNS | NNS |
| Lead (as Pb) | 7439-97-1 | 50 T | NNS | NNS | NNS | 10000 T | 100 T |

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|---|---|---|---|---|---|---|---|
| Manganese (as Mn) | 7439-96-5 | 4900 T | NNS | 19600 T | 19600 T | 10000 | NNS |
| Mercury (as Hg) | 7439-97-6 | 2 T | 0.6 T | 42 T | 42 T | NNS | 10 T |
| Methoxychlor | 72-43-5 | 40 | NNS | 700 | 700 | NNS | NNS |
| Naphthalene | 91-20-3 | NNS | NNS | NNS | NNS | NNS | NNS |
| Nickel (as Ni) | 7440-02-0 | 100 T | 730 T | 2800 T | 2800 T | NNS | NNS |
| Nitrate (as N) | 14797-55-8 | 10000 | NNS | 224000 | 224000 | NNS | NNS |
| Nitrite (as N) | 14797-65-0 | 1000 | NNS | 14000 | 14000 | NNS | NNS |
| Nitrate/Nitrite (as Total N) | | 10000 | NNS | NNS | NNS | NNS | NNS |
| Nitrobenzene | 98-95-3 | 3.5 | 600 | 70 | 70 | 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 | 2.1 | 0.03 | NNS | NNS | NNS |
| N-nitrosodiphenylamine | 86-30-6 | 7.1 | 14 | 290 | NNS | NNS | NNS |

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|---|---|---|---|---|---|---|---|
| N-nitrosodi-n-propylamine | 621-64-7 | 0.005 | 0.51 | 0.2 | NNS | NNS | NNS |
| Pentachlorophenol | 87-86-5 | 1 | 8.2 | 11.7 | 2000 | NNS | NNS |
| Phenanthrene | 85-01-8 | NNS | NNS | NNS | NNS | NNS | NNS |
| Phenol | 108-95-2 | 4200 | 6500000 | 84000 | 84000 | NNS | NNS |
| Polychlorinatedbiphenyls (PCBs) | 1336-36-3 | 0.5 | 0.00009 | 0.5 | NNS | 0.001 | 0.001 |
| Pyrene | 129-00-0 | 210 | 1100 | 4200 | 4200 | NNS | NNS |
| Selenium (as Se) | 7782-49-2 | 50 T | 9000 T | 700 T | 700 T | 20 T | 50 T |
| Silver (as Ag) | 7440-22-4 | NNS | NNS | NNS | NNS | NNS | NNS |
| Styrene | 100-42-5 | 100 | NNS | 28000 | 28000 | 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 | 0.000000004 | 0.00009 | NNS | NNS | NNS |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.17 | 11 | 7 | NNS | NNS | NNS |
| Tetrachloroethylene | 127-18-4 | 5 | 11 | 35 | 1400 | NNS | NNS |

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|---|---|---|---|---|---|---|---|
| Thallium (as Tl) | 7440-28-0 | 2 T | 41 T | 12 T | 12 T | NNS | NNS |
| Toluene | 108-88-3 | 1000 | 90000 | 28000 | 28000 | NNS | NNS |
| Toxaphene | 8001-35-2 | 3 | 0.0008 | 3 | NNS | 0.005 | 0.005 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 70 | 155 | 1400 | 1400 | NNS | NNS |
| 1,1,1-Trichloroethane | 71-55-6 | 200 | 160000 | 12600 | 12600 | NNS | NNS |
| 1,1,2-Trichloroethane | 79-00-5 | 5 | 31 | 25 | 560 | NNS | NNS |
| Trichloroethylene | 79-01-6 | 5 | 78 | 110 | NNS | NNS | NNS |
| 2,4,6-Trichlorophenol | 88-06-2 | 3.2 | 4.9 | 130 | NNS | NNS | NNS |
| 2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP) | 93-72-1 | 50 | NNS | 1120 | 1120 | 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 | 80 | NNS | NNS | NNS |
| Xylenes (Total) | 1330-20-7 | 10000 | NNS | 280000 | 280000 | NNS | NNS |

**Appendix A: Table 1. Human Health and Agricultural Designated Use Numeric Water Quality Criteria**

| 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) |
|---|---|---|---|---|---|---|---|
| Zinc (as Zn) | 7440-66-6 | 2100 T | 22000 T | 42000 T | 42000 T | 10000 T | 25000 T |

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

| 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 | NNS | NNS | NNS | NNS | NNS | 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 700 | 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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-chlorethyl) 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| Carbofuran | 1563-66-2 | NNS | NNS | NNS | NNS | NNS | NNS | 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 | 620 | 9800 | 620 | NNS | NNS | 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 |
| Chloronapthalene 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 |

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

| 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&Wc Acute[3] (µg/L) | A&Wc Chronic[4] (µg/L) |
|---|---|---|---|---|---|---|---|---|---|
| Chromium (as Cr III) | 16065-83-1 | d D | d D | d D | d D | d D | d D | d 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 | e D | e D | e D | e D | e D | e D | e 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 |
| Dibromochloromethane | 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-Dibromoethane (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-Dichlorobenzene | 95-50-1 | 790 | 300 | 1200 | 470 | 1200 | 470 | 5900 | 2300 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 2500 | 970 | 2500 | 970 | 2500 | 970 | NNS | NNS |
| 1,4-Dichlorobenzene | 106-46-7 | 560 | 210 | 2000 | 780 | 2000 | 780 | 6500 | 2500 |
| 3,3'-Dichlorobenzidine | 91-94-1 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| p,p'-Dichlorodiphenyldichloroethane (DDD) | 72-54-8 | 1.1 | 0.001 | 1.1 | 0.02 | 1.1 | 0.02 | 1.1 | 0.02 |
| p,p'-Dichlorodiphenyldichloroethylene (DDE) | 72-55-9 | 1.1 | 0.001 | 1.1 | 0.02 | 1.1 | 0.02 | 1.1 | 0.03 |
| p,p'-Dichlorodiphenyltrichloroethane (DDT) | 50-29-3 | 1.1 | 0.001 | 1.1 | 0.001 | 1.1 | 0.001 | 1.1 | 0.006 |
| 1,1-Dichloroethane | 75-34-3 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Dichloroethane | 107-06-2 | 59000 | 41000 | 59000 | 41000 | 59000 | 41000 | NNS | NNS |
| 1,1-Dichloroethylene | 75-35-4 | 15000 | 950 | 15000 | 950 | 15000 | 950 | NNS | NNS |
| 1,2-cis-Dichloroethylene | 156-59-2 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-trans-Dichloroethylene | 156-60-5 | 68000 | 3900 | 68000 | 3900 | 68000 | 3900 | NNS | NNS |
| Dichloromethane | 75-09-2 | 97000 | 5500 | 97000 | 5500 | 97000 | 5500 | NNS | NNS |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 970 | 15000 | 970 | 15000 | 970 | NNS | NNS |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| Lead (as Pb) | 7439-97-1 | f D | f D | f D | f D | f D | f D | f 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 | 600 | 3300 | 600 | NNS | NNS |
| Nickel (as Ni) | 7440-02-0 | g D | g D | g D | g D | g D | g D | g 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 |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | 62-75-9 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| N-nitrosodiphenylamine | 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 |
| Pentachlorophenol | 87-86-5 | h | h | h | h | h | h | h | 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 |
| Polychlorinatedbiphenyls (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 | i D | NNS | i D | NNS | i D | NNS | i D | NNS |
| Styrene | 100-42-5 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Sulfides | | 100 | NNS | 100 | NNS | 100 | NNS | 100 | NNS |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-Tetrachlorodibenzo-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 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4700 | 3200 | 4700 | 3200 | 4700 | 3200 | NNS | NNS |
| Tetrachloroethylene | 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-Trichlorobenzene | 120-82-1 | 750 | 130 | 1700 | 300 | NNS | NNS | NNS | NNS |
| 1,1,1-Trichloroethane | 71-55-6 | 2600 | 1600 | 2600 | 1600 | 2600 | 1600 | NNS | NNS |
| 1,1,2-Trichloroethane | 79-00-5 | 18000 | 12000 | 18000 | 12000 | 18000 | 12000 | NNS | NNS |
| Trichloroethylene | 79-01-6 | 20000 | 1300 | 20000 | 1300 | 20000 | 1300 | NNS | NNS |
| 2,4,6-Trichlorophenol | 88-06-2 | 160 | 25 | 160 | 25 | 160 | 25 | 3000 | 460 |
| 2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP) | 93-72-1 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |

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

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 | j D | j D | j D | j D | j D | j D | j D | j D |

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&Wc acute standard: $e^{(1.128\ [\ln(\text{Hardness})]\ -\ 3.828)}$

A&Wc chronic standard: $e^{(0.7852\ [\ln(\text{Hardness})]\ -\ 3.490)}$

A&Ww acute standard: $e^{(1.128\ [\ln(\text{Hardness})]\ -\ 2.0149)}$

A&Ww chronic standard: $e^{(0.7852\ [\ln(\text{Hardness})]\ -\ 3.490)}$

A&Wedw acute standard: $e^{(1.128\ [\ln(\text{Hardness})]\ -\ 2.0149)}$

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&Wc acute standard: $e^{(0.8190\ [\ln(Hardness)]\ +\ 3.688)}$

A&Wc 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&Wc acute standard: $e^{(0.9422\ [\ln(Hardness)]\ -\ 1.464)}$

A&Wc 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&Wc acute standard: $e^{(1.2730 [\ln(Hardness)] - 1.460)}$

A&Wc 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&Wc acute standard: $e^{(0.8460 [\ln(Hardness)] + 3.3611)}$

A&Wc 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: $e^{(0.8460\ [\ln(Hardness)]\ +\ 1.1644)}$

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&Wc acute standard: $e^{(1.005\ (pH)\ -\ 4.830)}$

A&Wc 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.

5 - Hardness, expressed as mg/L CaCO3, is inserted into the equation where it says "Hardness". Hardness is determined according to the following criteria:

a. 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.

b. If the receiving water body 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 CaCO3.

6 - The pH is inserted into the equation where it says "pH". pH is determined according to the following criteria:

a. If the receiving water body 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. 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.

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.

A&Wc - ACUTE

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

| pH | Temperature in Degrees Celsius 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 25 | 30 and above | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.5 | 29 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 24 | 16.6 | 11.8 | 6.5 |
| 6.6 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 16.2 | 11.4 | 6.6 |
| 6.7 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 15.6 | 11.1 | 6.7 |
| 6.8 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 15.0 | 10.6 | 6.8 |
| 6.9 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 14.3 | 10.1 | 6.9 |
| 7.0 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20.0 | 19.9 | 19.7 | 19.6 | 19.5 | 19.4 | 19.3 | 19.2 | 13.4 | 9.5 | 7.0 |
| 7.1 | 22 | 21 | 21 | 21 | 20 | 20 | 19.9 | 19.6 | 19.5 | 19.3 | 19.1 | 18.9 | 18.8 | 18.6 | 18.5 | 18.4 | 18.3 | 18.2 | 18.1 | 18.0 | 17.9 | 12.5 | 8.9 | 7.1 |
| 7.2 | 19.8 | 19.6 | 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 | 16.9 | 16.8 | 16.7 | 16.7 | 16.6 | 16.5 | 11.6 | 8.2 | 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 | 15.4 | 15.3 | 15.2 | 15.2 | 15.1 | 15.0 | 10.6 | 7.5 | 7.3 |
| 7.4 | 16.2 | 16.0 | 15.7 | 15.5 | 15.3 | 15.1 | 15.0 | 14.8 | 14.6 | 14.5 | 14.4 | 14.3 | 14.1 | 14.0 | 13.9 | 13.8 | 13.8 | 13.7 | 13.6 | 13.6 | 13.5 | 9.5 | 6.7 | 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 | 12.3 | 12.2 | 12.1 | 12.1 | 12.1 | 12.0 | 8.4 | 6.0 | 7.5 |
| 7.6 | 12.5 | 12.3 | 12.2 | 12.0 | 11.9 | 11.7 | 11.6 | 11.5 | 11.4 | 11.2 | 11.2 | 11.1 | 11.0 | 10.9 | 10.8 | 10.8 | 10.7 | 10.6 | 10.6 | 10.5 | 10.5 | 7.4 | 5.3 | 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 | 9.3 | 9.2 | 9.2 | 9.2 | 9.1 | 9.1 | 6.4 | 4.6 | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 5.5 | 4.0 | 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 | 6.7 | 6.7 | 6.7 | 6.7 | 6.6 | 6.6 | 4.7 | 3.4 | 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 | 5.7 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 4.0 | 2.9 | 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 | 4.5 | 4.5 | 4.9 | 4.5 | 4.5 | 4.5 | 3.2 | 2.3 | 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 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 2.6 | 1.89 | 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 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.1 | 1.55 | 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 | 2.4 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 1.71 | 1.27 | 8.4 |
| 8.5 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 1.98 | 1.96 | 1.95 | 1.94 | 1.93 | 1.92 | 1.91 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.91 | 1.92 | 1.41 | 1.05 | 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 | 1.54 | 1.54 | 1.55 | 1.55 | 1.56 | 1.57 | 1.16 | 0.88 | 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 | 1.25 | 1.26 | 1.26 | 1.27 | 1.28 | 1.29 | 0.96 | 0.74 | 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 | 1.03 | 1.03 | 1.04 | 1.05 | 1.06 | 1.07 | 0.81 | 0.63 | 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 | 0.85 | 0.85 | 0.86 | 0.87 | 0.88 | 0.89 | 0.69 | 0.55 | 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 | 0.70 | 0.71 | 0.72 | 0.73 | 0.74 | 0.75 | 0.59 | 0.48 | 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&Wc Acute Total Ammonia tabular values, round field measured values according to standard rounding procedures to nearest tabular value to determine ammonia standard.

A&Ww - ACUTE

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

| pH | Temperature in Degrees Celsius 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.

## Appendix B Abbreviations

River Basins (Correspond to State Water Quality Assessment Report)

B W =
Bill Williams
C M =
Colorado Mainstem (includes Red Lake)
L C =
Little Colorado
M G =
Middle Gila (includes Gila River below San Carlos Indian Reservation, Salt River below Granite Reef Dam and Phoenix area waterbodies)
R M =
Rios de Mexico (includes Rio Magdalena, Rio Sonoita, and Rio Yaqui Basins)
S C =
Santa Cruz
S P =
San Pedro
S R =
Salt River (includes Salt River and tributaries above Granite Reef Dam)
U G =
Upper Gila (includes Gila River and tributaries above San Carlos Indian Reservation)
V R =
Verde River
W P =
Wilcox Playa

Designated Uses

A & W c =
Aquatic & Wildlife coldwater
A & W w =
Aquatic & Wildlife warmwater
A & W e =
Aquatic & Wildlife ephemeral
A & W e d w =
Aquatic & Wildlife effluent dependent water
F B C =
Full Body Contact
P B C =
Partial Body Contact
D W S =
Domestic Water Source
F C =
Fish Consumption
A g I =
Agricultural Irrigation
A g L =
Agricultural Livestock Watering

Other

U =
Waterbody designated as Unique Water
E D W =
Effluent Dependent Water
W W T P =
Wastewater Treatment Plant
k m =
Kilometers

## Appendix B: Designated Uses of Arizona Water Bodies

| 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 | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Bill Williams River | Buckskin & Rawhide Mountains | | 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |
| BW | Burro Creek (U) | Above confluence with Boulder Creek | | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Coors Lake | 34°36'20"/113°11'25" | | A&Ww | | | FBC | | | FC | | |
| BW | Copper Basin Wash | Headwaters to bottom of perennial reach | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Copper Basin Wash | Bottom of perennial reach/Skull Valley Wash | | | A&We | | | PBC | | | | AgL |
| BW | Cottonwood Canyon | Tributary to the Santa Maria River | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Date Creek | Tributary to the Santa Maria River | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Francis Creek (U) | Tributary to Burro Creek | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| BW | Kirkland Creek | Tributary to Santa Maria River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| BW | Knight Creek | East of Hualapai Mountains | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Peeple's Canyon Creek (U) | Tributary to Santa Maria River | | A&Ww | | | FBC | | | FC | | AgL |
| BW | Santa Maria River | Tributary to Alamo Lake | | A&Ww | | | FBC | | | FC | AgI | AgL |
| BW | Trout Creek | Tributary to Big Sandy River | | 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 Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Big Springs Tank | 36°36'10"/112°20'58" | A&Wc | | | | FBC | | | FC | | AgL |
| CM | Boucher Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM | Bright Angel Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Bright Angel Wash (EDW) | South Rim WWTP outfall to Coconino Wash | | | | A&Wedw | | PBC | | | | AgL |
| CM | Bull Rush Canyon Wash | Tributary to Kanab Creek | | | 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&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&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 | A&Wc | | | | 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 | North rim, Grand Canyon | A&Wc | | | | 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 Dam | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| CM | Colorado River | Imperial Dam to Mexico | | A&Ww | | | FBC | | | FC | AgI | AgL |
| CM | Cottonwood Creek | Tributary to Tuxton Wash | | A&Ww | | | FBC | | | FC | | AgL |
| CM | Crystal Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Deer Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Detrital Wash | Tributary to Lake Mead | | | A&We | | | PBC | | | | |
| CM | Dogtown Reservoir | 35°12'40"/112°07'46" | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| CM | Dragon Creek | North rim, Grand Canyon | | A&Ww | | | FBC | | | FC | | |
| CM | Garden Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM | Gonzalez Lake | 35°15'26"/112°12'07" | A&Wc | | | | FBC | | | FC | AgI | AgL |
| CM | Grand Wash | Tributary to Lake Mead | | | A&We | | | PBC | | | | |
| CM | Grapevine Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Grapevine Wash | Tributary to Lake Mead | | | A&We | | | PBC | | | | |
| CM | Hakatai Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Hance Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Hermit Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Holy Moses Wash (EDW) | Kingman WWTP outfall to 3 km downstream | | | | A&Wedw | | PBC | | | | |
| CM | Horn Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Hualapai Wash | Tributary to the Colorado River | | | 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 | | A&Ww | | | FBC | | DWS | FC | | AgL |
| CM | Kwagunt Creek | Grand Canyon | A&Wc | | | | 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 | | 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 | A&Wc | | | | FBC | | | FC | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM | Mittry Lake | 32°49'11"/114°27'41" | | A&Ww | | | FBC | | | FC | | |
| CM | Mohave Wash | Tributary to Lake Havasu | | | A&We | | | PBC | | | | |
| CM | Monument Creek | Grand Canyon | | A&Ww | | | FBC | | | FC | | |
| CM | Nankoweap Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | National Canyon Creek | South rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | North Canyon Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Nortons Lake | 33°02'35"/114°37'58" | | A&Ww | | | FBC | | | FC | | |
| CM | Olo Creek | South rim, Grand Canyon | | A&Ww | | | FBC | | | FC | | |
| CM | Paria River | Paria Plateau, Northern AZ Border | A&Wc | | | | FBC | | | FC | | |
| CM | Phantom Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Pipe Creek | Grand Canyon | A&Wc | | | | 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 | | 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 Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Rock Canyon | Tributary to Truxton Wash | | | A&We | | | PBC | | | | |
| CM | Royal Arch Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Ruby Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Russell Tank | 34°52'22"/111°52'44" | A&Wc | | | | FBC | | | FC | | AgL |
| CM | Sacramento Wash | Tributary to Topock Marsh | | | A&We | | | PBC | | | | |
| CM | Saddle Canyon Creek | West rim, Marble Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Santa Fe Reservoir | 35°14'26"/112°11'04" | A&Wc | | | | FBC | | DWS | FC | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM | Sapphire Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Sawmill Canyon | Headwaters to abandoned gaging station | | A&Ww | | | FBC | | | FC | | AgL |
| CM | Sawmill Canyon | Below abandoned gaging station | | | A&We | | | PBC | | | | AgL |
| CM | Serpentine Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Shinumo Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Short Creek | Tributary to the Virgin River | | | A&We | | | PBC | | | | |
| CM | Slate Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Spring Canyon Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Stone Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Tapeats Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Thunder River | Tributary to Tapeats Creek | A&Wc | | | | FBC | | | FC | | |
| CM | Topock Marsh | 34°47'30"/114°31'00" | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| CM | Trail Canyon Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Transept Canyon (EDW) | North Rim WWTP outfall to 1 km downstream | | | | A&Wedw | | PBC | | | | |
| CM | Travertine Falls Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Truxton Wash | Tributary to Red Lake | | | A&We | | | PBC | | | | |
| CM | Turquoise Creek | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Unkar Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Vasey's Paradise | Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Virgin River | NW of Virgin Mtns; NW Arizona Border | | A&Ww | | | FBC | | | FC | AgI | AgL |
| CM | Vishnu Creek | North rim, Grand Canyon | A&Wc | | | | FBC | | | FC | | |
| CM | Warm Springs Creek | Grand Canyon | | A&Ww | | | FBC | | | FC | | |
| CM | Wellton Canal | Yuma Canal System | | | | | | | DWS | | AgI | AgL |
| CM | Wellton Ponds | | | A&Ww | | | FBC | | | FC | | |
| CM | West Cataract Creek | Tributary to Cataract Lake | A&Wc | | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM | White Creek | Grand Canyon | | A&Ww | | | FBC | | | FC | | |
| CM | Wia Manua Park Lake | In Kingman | | A&Ww | | | FBC | | | FC | | |
| CM | Wright Canyon Creek | Tributary to Truxton Wash | | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Barbershop Canyon Creek | Tributary to East Clear Creek | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Bear Canyon Creek | Tributary to Blue Ridge Reservoir | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Bear Canyon Creek | Tributary to Willow Creek | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Black Canyon Creek | Tributary to Chevelon Creek | 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 | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC | Chevelon Canyon Lake | 34°30'39"/110°49'28" | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Chevelon Creek | Mogollon Plateau | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Chevelon Creek, West Fork | Tributary to Chevelon Creek | 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 | 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 | 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 | | 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 Little Colorado | 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 | 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 | | | | | | |
| LC | Ducksnest Lake | 34°59'15"/111°23'53" | | A&Ww | | | FBC | | | FC | | AgL |
| LC | East Clear Creek | Tributary to Clear Creek Reservoir | 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 Little Colorado | A&Wc | | | | FBC | | | FC | | |
| LC | Fool's Hollow Lake | 34°16'14"/110°04'15" | A&Wc | | | | FBC | | | FC | | AgL |
| LC | General Springs Creek | Tributary to Blue Ridge Reservoir | A&Wc | | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC | Geneva Reservoir | 34°01'44"/109°31'44" | | A&Ww | | | FBC | | | FC | | AgL |
| LC | Hall Creek | Tributary to White Mountain Reservoir | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Hart Canyon Creek | Tributary to Willow Creek | 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 | A&Wc | | | | FBC | | | FC | | |
| LC | Hulsey Lake | 33°55'57"/109°09'33" | A&Wc | | | | FBC | | | FC | | |
| LC | Indian Lake | 35°00'38"/111°22'37" | | A&Ww | | | FBC | | | FC | | AgL |
| LC | Jack's Canyon Creek | Tributary to the Little Colorado | | 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 | Tributary to Colter Reservoir | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Leonard Canyon Creek, East Fork | Tributary to Leonard Canyon Creek | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Leonard Canyon Creek, Middle Fork | Tributary to Leonard Canyon, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Leonard Canyon Creek, West Fork | Tributary to Leonard Canyon, East Fork | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Lily Creek | Escudilla Mountain | A&Wc | | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC | Little Colorado River | Above Lyman Reservoir | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Little Colorado River | Below Lyman Reservoir | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| LC | Little Colorado River, East Fork | White Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Little Colorado River, South Fork | White Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Little Colorado River, West Fork | Below Government Springs; White Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Little Colorado Rv, West Fork (U) | Above Government Springs; White Mountains | A&Wc | | | | FBC | | | FC | | |
| 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 | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Marshall Lake | 35°07'10"/111°32'01" | A&Wc | | | | FBC | | | FC | | AgL |
| LC | McKay Reservoir | Apache-Sitgreaves National Forest | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Merritt Draw Creek | Tributary to Barbershop Canyon Creek | 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 | A&Wc | | | | FBC | | | FC | | |
| LC | Miller Canyon Creek | Tributary to East Clear Creek | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Miller Canyon Creek, East Fork | Tributary to Miller Canyon Creek | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Mineral Creek | Near Vernon, Sitgreaves National Forest | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | 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 | A&Wc | | | | FBC | | | FC | AgI | AgL |
| LC | Paddy Creek | Tributary to Nutrioso Creek | A&Wc | | | | FBC | | | FC | | |
| LC | Phoenix Park Wash | Tributary to Dry Lake | | | 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 | A&Wc | | | | FBC | | | FC | | |
| 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 | | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| LC | Rio de Flag (EDW) | Flagstaff WWTP outfall to the confluence with San Francisco Wash | | | | 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 | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC | Show Low Creek | Tributary to Silver Creek | 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 Little Colorado; near Holbrook | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Water Canyon Creek | Tributary to the Little Colorado | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Water Canyon Reservoir | 34°00'15"/109°20'05" | | A&Ww | | | FBC | | | FC | AgI | AgL |
| LC | Whale Lake | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| LC | Willow Springs Canyon Creek | Tributary to Chevelon Creek | 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 | A&Wc | | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |
| LG | Columbus Wash | Tributary to the Gila River | | | A&We | | | PBC | | | | |
| LG | Gila River | Painted Rock Dam to the Colorado River | | 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 confluence with unnamed EDW wash receiving treated wastewater from the Prescott Valley WWTP outfall | | | A&We | | | PBC | | | | AgL |
| MG | Agua Fria River (EDW) | Below confluence with unnamed wash receiving treated wastewater from the Prescott Valley WWTP outfall 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 outfall | | | A&We | | | PBC | | | | AgL |
| MG | Agua Fria River (EDW) | El Mirage WWTP outfall to 2 km downstream | | | | A&Wedw | | PBC | | | | |
| MG | Agua Fria River | Below 2 km downstream of the El Mirage WWTP outfall to State Highway 85 | | | A&We | | | PBC | | | | |
| MG | Agua Fria River | Below State Highway 85 | | A&Ww | | | FBC | | | FC | | |
| MG | Alvord Park Lake | 35th Avenue & Baseline Road; Phoenix | | A&Ww | | | | PBC | | FC | | |
| MG | Antelope Creek | Tributary to Martinez Creek | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | Arlington Canal | Above Wilson Avenue | | | | | | | | | | AgL |
| MG | Ash Creek | Tributary to the Agua Fria River | | 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | Black Canyon Creek | Tributary to the Agua Fria River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | Blind Indian Creek | Tributary to the Hassayampa River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | Bonsall Park Lake | 59th Avenue & Bethany Home Road; Phoenix | | A&Ww | | | | PBC | | FC | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MG | Canal 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 | | | A&We | | | PBC | | | | |
| MG | Centennial Wash | Tributary to the Gila River; west of Hassayampa | | | A&We | | | PBC | | | | |
| MG | Centennial Wash Ponds | 33°55'10"/113°23'05" | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Chaparral Park Lake | Scottsdale | | A&Ww | | | | PBC | | FC | AgI | |
| MG | Cortez Park Lake | 35th Avenue & Dunlap; Glendale | | A&Ww | | | | PBC | | FC | AgI | |
| MG | Desert Breeze Lake | West Chandler | | A&Ww | | | | PBC | | FC | | |
| MG | Dobson Lake | Dobson Park; Mesa | | A&Ww | | | | PBC | | FC | | |
| MG | Eldorado Park Lake | Miller Road & Oak Street; Tempe | | A&Ww | | | | PBC | | FC | | |
| MG | Encanto Park Lake | 15th Avenue & Encanto; Phoenix | | A&Ww | | | | PBC | | FC | AgI | |
| MG | Galena Gulch | Tributary to the Agua Fria River | | | 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 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 | 6505 North 20th Street; Phoenix | | A&Ww | | | | PBC | | FC | | |
| MG | Groom Creek | Tributary to the Hassayampa River | A&Wc | | | | FBC | | DWS | FC | | |
| 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | 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 | | A&Ww | | | | PBC | | FC | | |
| MG | Indian Bend Wash Lakes | Scottsdale | | A&Ww | | | | PBC | | FC | | |
| MG | Indian School Park Lake | Scottsdale | | A&Ww | | | | PBC | | FC | | |
| MG | Kiwanis Park Lake | 6000 South Mill Avenue; Tempe | | A&Ww | | | | PBC | | FC | AgI | |
| MG | Lake Pleasant | 33°51'15"/112°16'15" | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | Lion Canyon | Tributary to Weaver Creek | | A&Ww | | | FBC | | | FC | | |
| MG | Little Ash Creek | Tributary to Ash Creek; Prescott National Forest | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Lynx Creek | Tributary to Lynx Lake | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Lynx Lake | 34°31'08"/112°23'05" | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| MG | Martinez Creek | Tributary to the Hassayampa River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| MG | McKellips Park Lake | Scottsdale | | A&Ww | | | | PBC | | FC | AgI | |
| MG | Mineral Creek | Tributary to the Gila River | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Minnehaha Creek | Tributary to the Hassayampa River | | 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 | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Queen Creek | Headwaters to the Superior Mining Division discharge outfall | | A&Ww | | | | PBC | DWS | FC | | AgL |
| MG | Queen Creek (EDW) | Superior Mining Division discharge outfall to confluence with Potts Canyon | | | | A&Wedw | | PBC | | | | |
| MG | Queen Creek | Potts Canyon to El Camino Viejo Road | | A&Ww | | | FBC | | | FC | | AgL |
| MG | Queen Creek | Below El Camino Viejo Road | | | A&We | | | PBC | | | | AgL |
| MG | Riverview Park Lake | Dobson Road & 8th Street; Mesa | | A&Ww | | | | PBC | | FC | | |
| MG | Roadrunner Park Lake | 36th Street & Cactus; Phoenix | | A&Ww | | | | PBC | | FC | | |
| MG | Salt River | Granite Reef Dam to 2 km downstream | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| MG | Sycamore Creek | Tributary to the Agua Fria River | A&Wc | | | | FBC | | | FC | | AgL |
| MG | Turkey Creek | Tributary to Black Canyon Creek | | 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 | Scottsdale | | A&Ww | | | | PBC | | FC | | |
| MG | Vista Del Camino Park South | Scottsdale | | A&Ww | | | | PBC | | FC | | |
| MG | Weaver Creek | Tributary to Martinez Creek | | A&Ww | | | FBC | | | FC | | |
| RM | Abbot Canyon | Mule Mountains | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| RM | Ash Creek | Chiricahua Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| RM | Blackwater Draw | San Bernardino Valley | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| RM | Buck Canyon | Chiricahua Mountains | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | 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 | | | 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 outfall | | A&Ww | | | | PBC | | FC | AgI | AgL |
| RM | Mule Gulch (EDW) | Below the Bisbee WWTP outfall | | | | A&Wedw | | PBC | | | | AgL |
| RM | Ruby Lakes | Near the town of Ruby | | A&Ww | | | FBC | | | FC | | AgL |
| RM | Rucker Canyon Creek | Chiricahua Mountains | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| RM | Unnamed Wash (EDW) | Bisbee-Douglas International Airport WWTP outfall to Whitewater Draw | | | | A&Wedw | | PBC | | | | |
| RM | Whitewater Draw | Sulpher Springs Valley | | A&Ww | | | FBC | | | FC | AgI | AgL |
| SC | Agua Caliente Lake | Urban Lake; Tucson | | A&Ww | | | | FBC | | FC | | |
| SC | Agua Caliente Wash | Tributary to Tanque Verde Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Aguirre Wash | Aguirre Valley | | | A&We | | | PBC | | | | |
| SC | Alambre Wash | Tributary to Brawley Wash | | | A&We | | | PBC | | | | |
| SC | Alamo Wash | Tributary to Rillito Creek | | | A&We | | | PBC | | | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC | Altar Wash | Altar Valley | | | A&We | | | PBC | | | | |
| SC | Alum Gulch | Headwaters to T22S R16E Sec 19 CBA SW1/4 | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Alum Gulch | Below T22S R16E Sec 19 CBA SW1/4 | | | A&We | | | PBC | | | | AgL |
| SC | Arivaca Creek | Tributary to Arivaca Lake | | 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 | | | A&We | | | PBC | | | | |
| SC | Bear Grass Tank | 31°33'01"/111°11'32" | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Big Wash | Tributary to Cañada del Oro | | | A&We | | | PBC | | | | |
| SC | Bog Hole Tank | 31°28'34"/110°37'07" | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Brawley Wash | Avra Valley | | | A&We | | | PBC | | | | |
| SC | Cañada del Oro | Headwaters to Highway 89 | | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Cienega Creek (U) | Interstate 10 to Del Lago Dam | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Cienega Creek | Below Del Lago Dam | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Davidson Canyon | Tributary to Cienega Creek | | | A&We | | | PBC | | | | AgL |
| SC | Empire Gulch | Headwaters to Empire Ranch Spring | | | A&We | | | PBC | | | | |
| SC | Empire Gulch | Below Empire Ranch Spring | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Flux Canyon | Tributary to Alum Canyon | | | A&We | | | PBC | | | | AgL |
| SC | Fort Lowell Lake | Urban Lake; Tucson | | A&Ww | | | | PBC | | FC | | |
| SC | Gardner Canyon Creek | Tributary to Cienega Creek | | A&Ww | | | FBC | | | FC | | |
| SC | Greene Wash | Tributary to the Santa Cruz River | | | A&We | | | PBC | | | | |
| SC | Harshaw Wash | Headwaters to Corral Canyon confluence | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Harshaw Wash | Below Corral Canyon confluence | | | A&We | | | PBC | | | | AgL |
| SC | Hit Tank | 32°43'57"/111°03'18" | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC | Huachuca Tank | 31°21'11"/110°30'12" | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Julian Wash | Tributary to the Santa Cruz River | | | A&We | | | PBC | | | | |
| SC | Kennedy Lake | Urban Lake; Tucson | | A&Ww | | | | PBC | | FC | | |
| SC | Lakeside Lake | Urban Lake; Tucson | | A&Ww | | | | PBC | | FC | | |
| SC | Lemmon Canyon Creek | Tributary to Sabino Canyon Creek | A&Wc | | | | FBC | | | FC | | |
| SC | Los Robles Wash | Tributary to the Santa Cruz River | | | A&We | | | PBC | | | | |
| SC | Madera Canyon Creek | Tributary to the Santa Cruz River | | A&Ww | | | FBC | | | FC | | AgL |
| SC | Nogales Wash | Tributary to the Santa Cruz River | | A&Ww | | | | PBC | | | AgI | AgL |
| SC | Oak Tree Canyon | Tributary to Cienega Creek | | | A&We | | | PBC | | | | |
| SC | Palisade Canyon Creek | Tributary to Sabino Canyon Creek | A&Wc | | | | FBC | | | FC | | |
| SC | Paradise Lake | Near Arizona City | | A&Ww | | | FBC | | | | AgI | |
| SC | Pantano Wash | Tributary to Tanque Verde Creek | | | A&We | | | PBC | | | | |
| SC | Parker Canyon Creek | Tributary to Parker Canyon Lake | | 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 | Puertocito Wash | Tributary to Altar Wash | | | A&We | | | PBC | | | | |
| SC | Redrock Canyon Creek | Tributary to Sonoita Creek | | A&Ww | | | FBC | | | FC | | |
| SC | Reid Park Lake | Urban Lake; Tucson | | A&Ww | | | | PBC | | FC | | |
| SC | Rillito Creek | Tributary to the Santa Cruz River | | | A&We | | | PBC | | | | AgL |
| SC | Romero Canyon Creek | Tributary to Cañada del Oro | A&Wc | | | | FBC | | | FC | | |
| SC | Rose Canyon Creek | Tributary to Rose Canyon Lake | | 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 | A&Wc | | | | FBC | | DWS | FC | AgI | |
| SC | Salero Ranch Tank | 31°35'42"/110°53'22" | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC | Santa Cruz River | Headwaters to the International Boundary | | 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 | | | | AgL |
| 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 | | | A&We | | | PBC | | | | AgL |
| SC | Santa Cruz River, N. Fork | Tributary to the Santa Cruz River | | | A&We | | | PBC | | | | |
| SC | Santa Rosa Wash | Below Papago Indian Reservation | | | A&We | | | PBC | | | | |
| SC | Silver Bell Lake | Urban Lake; Tucson | | A&Ww | | | | PBC | | FC | | |
| SC | Soldier Lake | 32°25'34"/110°44'41" | A&Wc | | | | FBC | | | FC | | AgL |
| SC | Sonoita Creek | Headwaters to the Patagonia WWTP outfall | | A&Ww | | | | PBC | | FC | AgI | AgL |
| SC | Sonoita Creek | Below the 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 | | | A&We | | | PBC | | | | |
| SC | Sycamore Reservoir | 32°20'57"/110°44'52" | A&Wc | | | | FBC | | | FC | | AgL |
| SC | Tanque Verde Creek | Tributary to Rillito Creek | | A&Ww | | | FBC | | | FC | | 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 | | A&Ww | | | FBC | | | FC | | |
| SC | Three R Canyon | Bottom of perennial reach to Sonoita Creek | | | A&We | | | PBC | | | | |
| 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 | | | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC | Vekol Wash | Tributary to Santa Cruz Wash | | | A&We | | | PBC | | | | |
| SC | Williams Ranch Tanks | 31°55'15"/110°25'30" | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Aravaipa Creek | Tributary to the San Pedro River | | A&Ww | | | FBC | | DWS | FC | | AgL |
| SP | Babocomari Creek | Tributary to the San Pedro River | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Bass Canyon Creek | Muleshoe Preserve | | A&Ww | | | FBC | | | FC | | |
| 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 Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Buehman Canyon Creek | Southeast slope, Santa Catalina Mountains | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Bull Tank | 32°31'15"/110°12'45" | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Carr Canyon Creek | Tributary to the San Pedro River | A&Wc | | | | FBC | | | FC | | AgL |
| SP | Copper Creek | Headwaters to Prospect Canyon | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Copper Creek | Below Prospect Canyon | | | A&We | | | PBC | | | | AgL |
| SP | Deer Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | East Gravel Pit Pond | Fort Huachuca Military Reservation | | A&Ww | | | FBC | | | FC | | |
| SP | Fly Pond | Fort Huachuca Military Reservation | | A&Ww | | | FBC | | | FC | | |
| SP | Fourmile Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Garden Canyon Creek | Eastern Slope, Huachuca Mountains | | 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 Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Hot Springs Canyon Creek | Muleshoe Preserve | | 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 Mountains | A&Wc | | | | FBC | | DWS | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP | Oak Grove Creek | Tributary to Turkey Creek; Aravaipa Basin | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Officers Club Pond | Fort Huachuca Military Reservation | | A&Ww | | | FBC | | | FC | | |
| SP | Parsons Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Ramsey Canyon Creek | Huachuca Mountains | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SP | Rattlesnake Canyon | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Redfield Canyon Creek | Southwest slope, Galiuro Mountains | | 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 | | A&Ww | | | FBC | | | FC | | |
| 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |
| SP | Virgus Creek | Tributary to Aravaipa Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SP | Walnut Gulch (EDW) | Tombstone WWTP outfall to the confluence of Tombstone Gulch | | | | 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 | | 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 | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Bear Wallow Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Bear Wallow Creek, North Fork | Tributary to Bear Wallow Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Bear Wallow Creek, South Fork | Tributary to Bear Wallow Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Beaver Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | 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 | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Black River, East Fork | Tributary to the Black River | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Black River, N Fork of E Fork | Tributary to Black River, East Fork | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Black River, West Fork | Tributary to the Black River | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Bloody Tanks Wash | Headwaters to Schultze Ranch | | | A&We | | | PBC | | | | AgL |
| SR | Bloody Tanks Wash | Schultze Ranch to Miami Wash | | | A&We | | | PBC | | | | |
| SR | Boggy Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Boneyard Creek | Tributary to Black River, East Fork | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Boulder Creek | Tributary to LaBarge Creek | | A&Ww | | | FBC | | | FC | | |
| SR | Campaign Creek | Tributary to Roosevelt Lake | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Canyon Creek | Tributary to the Salt River | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Canyon Lake | 33°33'15"/111°26'30" | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Centerfire Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Chambers Draw Creek | Tributary to Black River, N Fork of E Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Cherry Creek | Tributary to the Salt River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Christopher Creek | Tributary to Tonto Creek | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Cold Spring Canyon Creek | Tributary to Cherry Creek | A&Wc | | | | FBC | | | FC | | |
| SR | Conklin Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Coon Creek | Salt River Canyon Wilderness Area | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Corduroy Creek | Tributary to Fish Creek, Apache National Forest | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Coyote Creek | Tributary to the Black River, East Fork | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Del Shay Creek | Tributary to Gun Creek, Del Shay Basin | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR | Devils Chasm Creek | Tributary to Cherry Creek | A&Wc | | | | FBC | | | FC | | |
| SR | Dipping Vat Reservoir | 33°55'54"/109°25'15" | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Double Cienega Creek | Tributary to Fish Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Fish Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Fish Creek | Superstition Wilderness Area | | A&Ww | | | FBC | | | FC | | |
| SR | Gold Creek | Tributary to Tonto Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Gordon Canyon Creek | Tributary to Haigler Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Haigler Creek | Tributary to Tonto Creek; Hellsgate Wilderness | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Hannagan Creek | Tributary to Beaver Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Hay Creek | Tributary to the Black River, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Home Creek | Tributary to the Black River, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Horse Creek | Tributary to the Black River, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Horse Camp Creek | Tributary to Cherry Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Horton Creek | Tributary to Tonto Creek | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Houston Creek | Tributary to Tonto Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Hunter Creek | Tributary to Christopher Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | LaBarge Creek | Superstition Wilderness Area | | 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 | | | A&We | | | PBC | | | | |
| SR | Mule Creek | Tributary to Canyon Creek | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| SR | Open Draw Creek | Tributary to the Black River, East Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | P B Creek | Tributary to Cherry Creek | A&Wc | | | | 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 | | | | |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR | Pinal Creek | Radium to Setka Ranch | | | A&We | | | PBC | | | | AgL |
| SR | Pinal Creek | Setka Ranch to Salt River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| SR | Pine Creek | Superstition Wilderness Area | | A&Ww | | | FBC | | | FC | | |
| SR | Pinto Creek | Tributary to the Salt River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| SR | Pueblo Canyon Creek | Tributary to Cherry Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Reavis Creek | Tributary to Pine Creek | | A&Ww | | | FBC | | | FC | | |
| SR | Reservation Creek | Tributary to the Black River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Reynolds Creek | Tributary to Workman Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Riverview Park Lake | Dobson Road & 8th Street; Mesa | | A&Ww | | | | PBC | | FC | | |
| SR | Roadrunner Park Lake | 36th Street & Cactus; Phoenix | | A&Ww | | | | PBC | | FC | | |
| SR | Roosevelt Lake | 33°40'45"/111°09'15" | | A&Ww | | | FBC | | DWS | FC | AgI | AgL |
| SR | Rye Creek | Tributary to Tonto Creek | | 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 | A&Wc | | | | 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 | Confluence of Verde River to 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 outfall | | A&Ww | | | | PBC | | FC | | |
| SR | Salt River (EDW) | 23rd Ave WWTP outfall to confluence with Gila River | | | | A&Wedw | | PBC | | FC | AgI | AgL |
| SR | Slate Creek | Tributary to Tonto Creek | | A&Ww | | | FBC | | | FC | | AgL |
| SR | Spring Creek | Tributary to Tonto Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Stinky Creek | Tributary to the Black River, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Thomas Creek | Tributary to Beaver Creek | A&Wc | | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR | Thompson Creek | Tributary to the Black River, West Fork | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Tonto Creek | Tributary to Roosevelt Lake | A&Wc | | | | FBC | | | FC | AgI | AgL |
| SR | Turkey Creek | Tributary to Rock Creek; Sierra Ancha Mtns | | A&Ww | | | FBC | | | FC | | |
| SR | Unnamed Wash (EDW) | Globe WWTP outfall discharge to Pinal Creek | | | | A&Wedw | | PBC | | | | |
| SR | Wildcat Creek | Tributary to Centerfire Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Willow Creek | Tributary to Beaver Creek | A&Wc | | | | FBC | | | FC | | AgL |
| SR | Workman Creek | Tributary to Salome Creek | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| UG | Apache Creek | Tributary to the Gila River | | A&Ww | | | FBC | | | FC | | AgL |
| UG | Ash Creek | Tributary to the Gila River | A&Wc | | | | 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 | | A&Ww | | | | PBC | | FC | | |
| UG | Blue River | Tributary to the San Francisco River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| UG | Bonita Creek (U) | San Carlos Indian Reservation to the Gila River | | A&Ww | | | FBC | | DWS | FC | | AgL |
| UG | Buckalou Creek | Tributary to Castle Creek | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Campbell Blue Creek | Tributary to the upper Blue River | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Castle Creek | Tributary to Campbell Blue Creek | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Cave Creek | Eastern slope, Chiricahua Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| UG | Cave Creek, South Fork | Tributary to Cave Creek; Chiricahua Mtns | 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 Phelps-Dodge Morenci Mine | | | A&We | | | PBC | | | | |
| UG | Chitty Canyon Creek | Tributary to Salt House Creek | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Cima Creek | Tributary to Cave Creek; Chiricahua Mtns | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UG | Coleman Creek | Tributary to Campbell Blue Creek | 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 | A&Wc | | | | FBC | | DWS | FC | | AgL |
| UG | Devils Canyon | Tributary to Mineral Creek | | A&Ww | | | FBC | | | FC | | |
| UG | Eagle Creek | Tributary to the Gila River; below Clifton | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| UG | East Eagle Creek | Tributary to Eagle Creek | A&Wc | | | | FBC | | | FC | | AgL |
| UG | East Turkey Creek | Eastern slope, Chiricahua Mountains | A&Wc | | | | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Foote Creek | Tributary to the upper Blue River | | A&Ww | | | FBC | | | FC | | AgL |
| UG | Frye Creek | Eastern slope, Pinaleno Mountains | A&Wc | | | | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Gila River | New Mexico border to the San Carlos Indian Reservation | | A&Ww | | | FBC | | | FC | AgI | AgL |
| UG | Grant Creek | Tributary to the upper Blue River | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Judd Lake | 33°51'15"/109°09'15" | A&Wc | | | | FBC | | | FC | | |
| UG | K P Creek | Tributary to the upper Blue River | A&Wc | | | | FBC | | DWS | FC | | AgL |
| UG | Lanphier Canyon Creek | Tributary to the upper Blue River | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Little Blue Creek | Tributary to the upper Blue River | | A&Ww | | | FBC | | | FC | | AgL |
| UG | Little Creek | Tributary to the San Francisco River | A&Wc | | | | FBC | | | FC | | |
| UG | Lower George's Reservoir | Near Alpine | 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 | A&Wc | | | | FBC | | | FC | AgI | AgL |
| UG | Markham Creek | Tributary to the Gila River | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UG | Pigeon Creek | Tributary to the lower Blue River | | A&Ww | | | FBC | | | FC | | AgL |
| UG | Raspberry Creek | Tributary to the upper Blue River | | 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 | A&Wc | | | | FBC | | | FC | AgI | AgL |
| UG | San Francisco River | New Mexico border to the Gila River | | A&Ww | | | FBC | | | FC | AgI | AgL |
| UG | San Simon River | Tributary to the upper Gila River | | | 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 | | A&Ww | | | FBC | | | FC | | AgL |
| UG | Stone Creek | Tributary to the San Francisco River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| UG | Strayhorse Creek | Tributary to the Blue River | A&Wc | | | | FBC | | | FC | | |
| UG | Thomas Creek | Tributary to the upper Blue River | | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| UG | Unnamed Wash (EDW) | ADOC-Globe WWTP outfall to the San Carlos Reservation | | | | A&Wedw | | PBC | | | | |
| UG | Walnut Canyon Creek | Tributary to the upper Gila River | | A&Ww | | | FBC | | | FC | | |
| UG | White Canyon Creek | Tributary to Walnut Canyon Creek | | A&Ww | | | FBC | | | FC | | |
| 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 | | A&Ww | | | FBC | | | FC | | AgL |
| VR | Ashbrook Wash | Headwaters to the Ft McDowell Reservation | | | A&We | | | PBC | | | | |
| VR | Aspen Creek | Near Prescott | | A&Ww | | | FBC | | | FC | | |
| VR | Bar Cross Tank | 35°00'40"/112°05'34" | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| VR | Big Chino Wash | Tributary to Sullivan Lake | | | A&We | | | PBC | | | | AgL |
| VR | Bitter Creek | Headwaters to the Jerome WWTP outfall discharge | | A&Ww | | | | PBC | | FC | | AgL |
| VR | Bitter Creek (EDW) | Jerome WWTP outfall discharge to 2.5 km downstream | | | | A&Wedw | | PBC | | | | |
| VR | Bitter Creek | Below 2.5 km downstream of the Jerome WWTP outfall discharge | | A&Ww | | | FBC | | | FC | AgI | AgL |
| VR | Black Canyon Creek | Mingus Mountains | | A&Ww | | | FBC | | | FC | | AgL |
| VR | Bonita Creek | Tributary to Perley Creek; Tonto National Forest | A&Wc | | | | FBC | | DWS | FC | | |
| VR | Bray Creek | Tributary to Webber Creek | | A&Ww | | | FBC | | | FC | | AgL |
| VR | Carter Tank | 34°52'27"/112°57'28" | | A&Ww | | | FBC | | | FC | | AgL |
| VR | Chase Creek | Tributary to the East Verde River | A&Wc | | | | FBC | | DWS | FC | | |
| VR | Clover Creek | Tributary to headwaters of West Clear Creek | A&Wc | | | | FBC | | | FC | | AgL |
| VR | Dead Horse Lake | 34°45'00"/112°00'30" | A&Wc | | | | FBC | | | FC | | |
| VR | Deadman Creek | Tributary to Horseshoe Reservoir | | 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 | | A&Ww | | | FBC | | | FC | AgI | AgL |
| VR | Dude Creek | Tributary to the East Verde River | A&Wc | | | | FBC | | | FC | AgI | AgL |
| VR | East Verde River | Tributary to the Verde River | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| VR | Ellison Creek | Tributary to the East Verde River | A&Wc | | | | FBC | | | FC | | AgL |
| VR | Fossil Creek | Tributary to the Verde River | | 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 |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VR | Fry Lake | 35°03'45"/111°48'02" | | A&Ww | | | FBC | | | FC | | AgL |
| VR | Gap Creek | Tributary to the Verde River; Prescott National Forest | A&Wc | | | | 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 | | 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 | | | 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 | 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 | | 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 (U) | Tributary to the Verde River | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |
| VR | Oak Creek, West Fork (U) | Tributary to Oak Creek | 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 | A&Wc | | | | FBC | | DWS | FC | AgI | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | 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 | | 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 | | 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 National Forest | A&Wc | | | | FBC | | | FC | AgI | AgL |
| VR | Sycamore Creek | Tributary to Verde River; Tonto National Forest | | A&Ww | | | FBC | | | FC | AgI | AgL |
| VR | Tangle Creek | Tributary to the Verde River | | 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 | Watson Lake | 34°35'15"/112°25'05" | | A&Ww | | | FBC | | | FC | AgI | AgL |
| VR | Webber Creek | Tributary to the East Verde River | A&Wc | | | | FBC | | | FC | | AgL |
| VR | West Clear Creek | Tributary to the Verde River | A&Wc | | | | FBC | | | FC | | AgL |
| VR | Wet Beaver Creek | Tributary to Beaver Creek | A&Wc | | | | 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 | | | A&We | | | PBC | | | | AgL |
| VR | Williamson Valley Wash | Confluence of Mint Wash to 10.5 km dwnstm | | A&Ww | | | FBC | | | FC | | AgL |

## Appendix B: Designated Uses of Arizona Water Bodies

| BASIN | SEGMENT | LOCATION | A&Wc | A&Ww | A&We | A&Wedw | FBC | PBC | DWS | FC | AgI | AgL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VR | Williamson Valley Wash | Below 10.5 km downstream of the 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 | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| WP | Goudy Canyon Creek | Pinaleno Mountains | A&Wc | | | | FBC | | | FC | | AgL |
| WP | Grant Creek | Pinaleno Mountains | A&Wc | | | | FBC | | DWS | FC | | AgL |
| WP | High Creek | Galiuro Mountains | | A&Ww | | | FBC | | | FC | | AgL |
| WP | Moonshine Creek | Tributary to Post Creek | A&Wc | | | | FBC | | | FC | | AgL |
| WP | Pinery Creek | Chiricahua Mountains | | A&Ww | | | FBC | | DWS | FC | | AgL |
| WP | Post Creek | Tributary to Grant Creek | 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 | | 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 | A&Wc | | | | FBC | | | FC | | AgL |
| WP | Turkey Creek (formerly in UG) | Western slope, Chiricahua Mountains | A&Wc | | | | FBC | | | FC | AgI | AgL |
| WP | Ward Canyon Creek | Tributary to Turkey Creek | A&Wc | | | | FBC | | | FC | | AgL |
| WP | Wilcox Playa | Sulphur Springs Valley | | A&Ww | | | FBC | | | FC | | AgL |

~~Appendix A. Numeric water quality criteria~~

| PARAMETERS | | DWS[1] (µg/L) | FC[1] (µg/L) | FBC[1] (µg/L) | PBC[1] (µg/L) | A&Wc Acute[2] (µg/L) | A&Wc Chronic[3] (µg/L) | A&Ww Acute[2] (µg/L) | A&Ww Chronic[3] (µg/L) | A&Wedw Acute[2] (µg/L) | A&Wedw Chronic[3] (µg/L) | A&We Acute[2] (µg/L) | A&We Chronic[3] (µg/L) | AgI[1] (µg/L) | AgL[1] (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | | 420 | 2600 | 8400 | 8400 | 850 | 550 | 850 | 550 | 850 | 550 | NNS | NNS | NNS | NNS |
| Acenaphthylene | | 0.003 | 0.002 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Acrolein | | 110 | 750 | 1300 | 1300 | 34 | 30 | 34 | 30 | 34 | 30 | NNS | NNS | NNS | NNS |
| Acrylonitrile | c | 0.06 | 0.64 | 2.6 | 1400 | 3800 | 250 | 3800 | 250 | 3800 | 250 | NNS | NNS | NNS | NNS |
| Alachlor | c1 | 2 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Aldrin | c | 0.002 | 0.0003 | 0.08 | 4.2 | 2.0 | NNS | 2.0 | NNS | 2.0 | NNS | 4.5 | NNS | 1 | 1 |
| Ammonia | | NNS | NNS | NNS | NNS | b | b | b | b | NNS | NNS | NNS | NNS | NNS | NNS |
| Anthracene | | 2100 | 6300 | 420000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Antimony (as Sb) | | 2.8 T | 140 T | 56 T | 56 T | 88 D | 30 D | 88 D | 30 D | 1000 D | 600 D | NNS | NNS | NNS | NNS |
| Arsenic (as As) | c2 | 50 T | 3.1 T | 50 T | 2800 T | 360 D | 190 D | 360 D | 190 D | 360 D | 190 D | 440 D | 230 D | 2000 T | 200 T |
| Asbestos | c | a | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Atrazine | | 3 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Barium (as Ba) | | 1000 D | NNS | 1000 D | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Benzene | c1 | 5 | 120 | 48 | 470 | 2700 | 180 | 2700 | 180 | 11000 | 700 | NNS | NNS | NNS | NNS |
| Benzidine | c | 0.0002 | 0.0007 | 0.006 | 420 | 1300 | 89 | 1300 | 89 | 1300 | 89 | 10000 | 640 | 0.01 | 0.01 |
| Benzo (a) anthracene | c | 0.003 | 0.00008 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Benzo (a) pyrene | c | 0.003 | 0.002 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Benzo (ghi) perylene | | 0.003 | 0.00001 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Benzo (k) fluoranthene | c | 0.003 | 0.00001 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 3,4-Benzofluoranthene | c | 0.003 | 0.00004 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Beryllium (as Be) | c | 0.008 T | 0.21 T | 0.33 T | 700 T | 65 D | 5.3 D | 65 D | 5.3 D | 65 D | 5.3 D | NNS | NNS | NNS | NNS |
| BHC-alpha | c | 0.006 | 0.03 | 0.22 | NNS | 1600 | 130 | 1600 | 130 | 1600 | 130 | 1600 | 130 | NNS | NNS |
| BHC-beta | c | 0.02 | 0.02 | 0.78 | NNS | 1600 | 130 | 1600 | 130 | 1600 | 130 | 1600 | 130 | NNS | NNS |
| BHC-delta | c | NNS | NNS | NNS | NNS | 1600 | 130 | 1600 | 130 | 1600 | 130 | 1600 | 130 | NNS | NNS |
| BHC-gamma (lindane) | c | 0.20 | 0.02 | 1 | 2500 | 2.0 | 0.08 | 3.4 | 0.28 | 7.6 | 0.61 | 11 | 0.9 | NNS | NNS |
| Bis(2-chloroethoxy) methane | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Bis(2-chloroethyl) ether | c | 0.03 | 1.4 | 1.3 | NNS | 120000 | 6700 | 120000 | 6700 | 120000 | 6700 | NNS | NNS | NNS | NNS |
| Bis(2-chloroisopropyl) ether | | 280 | 15000 | 5600 | 5600 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Bis-(2-ethylhexyl) phthalate | c | 2.5 | 7.4 | 100 | 280000 | 400 | 360 | 400 | 360 | 400 | 360 | 3100 | 360 | NNS | NNS |
| Boron (as B) | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | 1000 T | NNS |
| Bromoform | | TTHM | 80 | 180 | 2800 | 15000 | 10000 | 15000 | 10000 | 15000 | 10000 | NNS | NNS | NNS | NNS |
| 4-Bromophenyl phenyl ether | | NNS | NNS | NNS | NNS | 180 | 14 | 180 | 14 | 180 | 14 | NNS | NNS | NNS | NNS |
| Butyl benzyl phthalate | | 1400 | 5000 | 28000 | 28000 | 1700 | 130 | 1700 | 130 | 1700 | 130 | NNS | NNS | NNS | NNS |
| Cadmium (as Cd) | | 5 T | 83 T | 70 T | 70 T | d D | d D | d D | d D | d D | d D | d D | d D | 50 T | 50 T |
| Carbofuran | | 40 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Carbon tetrachloride | c2 | 5 | 5.5 | 11 | 8000 | 18000 | 1100 | 18000 | 1100 | 18000 | 1100 | NNS | NNS | NNS | NNS |
| Chlordanec3 | | 2 | 0.001 | 2 | 110 | 2.4 | 0.004 | 2.4 | 0.21 | 2.4 | 0.21 | 3.2 | 0.45 | NNS | NNS |
| Chlorine (Total residual) | | NNS | NNS | NNS | NNS | 11 | 5.0 | 11 | 5.0 | 11 | 5.0 | NNS | NNS | NNS | NNS |
| Chlorobenzene | | 100 | 500 | 2800 | 2800 | 9800 | 620 | 9800 | 620 | NNS | NNS | NNS | NNS | NNS | NNS |
| Chlorodibromomethane | | TTHM | 12 | 17 | 2800 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Chloroethane | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 2-Chloroethyl vinyl ether | | NNS | NNS | NNS | NNS | 180000 | 9800 | 180000 | 9800 | 180000 | 9800 | NNS | NNS | NNS | NNS |
| Chloroform | | TTHM | 590 | 230 | 1400 | 14000 | 900 | 14000 | 900 | 14000 | 900 | NNS | NNS | NNS | NNS |
| 2-Chloronaphthalene | | 560 | 13000 | 11000 | 11000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 2-Chlorophenol | | 35 | 2100 | 700 | 700 | 2200 | 150 | 2200 | 150 | 2200 | 150 | NNS | NNS | NNS | NNS |

| PARAMETERS | | DWS[1] (µg/L) | FC[1] (µg/L) | FBC[1] (µg/L) | PBC[1] (µg/L) | A&Wc Acute[2] (µg/L) | A&Wc Chronic[3] (µg/L) | A&Ww Acute[2] (µg/L) | A&Ww Chronic[3] (µg/L) | A&Wedw Acute[2] (µg/L) | A&Wedw Chronic[3] (µg/L) | A&We Acute[2] (µg/L) | A&We Chronic[3] (µg/L) | AgI[1] (µg/L) | AgL[1] (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-methyl-4-Chlorophenol | | NNS | NNS | NNS | NNS | 15 | 4.7 | 15 | 4.7 | 15 | 4.7 | 48000 | 15000 | NNS | NNS |
| 4-Chlorophenyl phenyl ether | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Chromium (as Cr) | | 100 T | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | 1000 T | 1000 T |
| Chromium (as Cr III) | | NNS | 67000 T | 140000 T | 140000 T | e D | e D | e D | e D | e D | e D | e D | e D | NNS | NNS |
| Chromium (as Cr VI) | | NNS | 3400 T | 700 T | 700 T | 16 D | 11 D | 16 D | 11 D | 16 D | 11 D | 34 D | 23 D | NNS | NNS |
| Chrysene | c | 0.005 | 0.0001 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Copper (as Cu) | | 1000 D | NNS | 5200 D | 5200 D | f D | f D | f D | f D | f D | f D | f D | f D | 5000 T | 500 T |
| Cyanide | | 140 T | 210000 T | 3100 T | 3100 T | 22 T | 5.2 T | 41 T | 9.7 T | 41 T | 9.7 T | 84 T | 19 T | NNS | 200 T |
| DDD | c | 0.15 | 0.0009 | 5.8 | NNS | 1.1 | 0.001 | 1.1 | 0.02 | 1.1 | 0.02 | 1.1 | 0.02 | 0.001 | 0.001 |
| DDE | c | 0.1 | 0.0006 | 4.1 | NNS | 1.1 | 0.001 | 1.1 | 0.02 | 1.1 | 0.02 | 1.1 | 0.03 | 0.001 | 0.001 |
| DDT | c | 0.1 | 0.0005 | 4.1 | 700 | 1.1 | 0.001 | 1.1 | 0.001 | 1.1 | 0.001 | 1.1 | 0.006 | 0.001 | 0.001 |
| Dibenzo (ah) anthracene | c | 0.003 | 0.00003 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Dichlorobenzene | | 600 | 2800 | 13000 | 13000 | 790 | 300 | 1200 | 470 | 1200 | 470 | 5900 | 2300 | NNS | NNS |
| 1,3-Dichlorobenzene | | 94 | 1200 | 13000 | 13000 | 2500 | 970 | 2500 | 970 | 2500 | 970 | NNS | NNS | NNS | NNS |
| 1,4-Dichlorobenzene | | 75 | 1200 | 13000 | 13000 | 560 | 210 | 2000 | 780 | 2000 | 780 | 6500 | 2500 | NNS | NNS |
| 3,3-Dichlorobenzidine | c | 0.08 | 0.09 | 3.1 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Dichlorobromomethane | | TTHM | 10 | 11 | 2800 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Dichlorobromopropane | c3 | 0.2 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,1-Dichloroethane | | NNS | NNS | 14000 | 14000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Dichloroethane | c4 | 5 | 120 | 15 | 10000 | 59000 | 41000 | 59000 | 41000 | 59000 | 41000 | NNS | NNS | NNS | NNS |
| 1,1-Dichloroethylene | c5 | 7 | 4.5 | 7 | 1300 | 15000 | 950 | 15000 | 950 | 15000 | 950 | NNS | NNS | NNS | NNS |
| 1,2-cis-Dichloroethylene | | 70 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-trans-Dichloroethylene | | 100 | 13000 | 2800 | 2800 | 68000 | 3900 | 68000 | 3900 | 68000 | 3900 | NNS | NNS | NNS | NNS |
| 2,4-Dichlorophenol | | 21 | 810 | 420 | 420 | 1000 | 88 | 1000 | 88 | 1000 | 88 | NNS | NNS | NNS | NNS |
| Dichlorophenoxyacetic acid | | 70 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2-Dichloropropane | c6 | 5 | NNS | 200 | 200 | 26000 | 9200 | 26000 | 9200 | 26000 | 9200 | NNS | NNS | NNS | NNS |
| 1,3-Dichloropropene | | 2.1 | 360 | 60 | 60 | 3000 | 1100 | 3000 | 1100 | 3000 | 1100 | NNS | NNS | NNS | NNS |
| Dieldrin | c | 0.002 | 0.0002 | 0.09 | 7 | 2.5 | 0.002 | 2.5 | 0.002 | 2.5 | 0.005 | 4.0 | 0.9 | 1 | 1 |
| Diethyl phthalate | | 5600 | 110000 | 110000 | 110000 | 26000 | 1600 | 26000 | 1600 | 26000 | 1600 | NNS | NNS | NNS | NNS |
| Dimethyl phthalate | | 70000 | 2800000 | 14000000 | NNS | 17000 | 1000 | 17000 | 1000 | 17000 | 1000 | NNS | NNS | NNS | NNS |
| 2,4-Dimethylphenol | | 140 | 2200 | 28000 | NNS | 1000 | 310 | 1000 | 310 | 1100 | 310 | 150000 | 43000 | NNS | NNS |
| 2,4-Dinitrophenol | | 14 | 5400 | 280 | 280 | 110 | 9.2 | 110 | 9.2 | 110 | 9.2 | NNS | NNS | NNS | NNS |
| 2-methyl-4,6-Dinitrophenol | | 2.7 | 120 | 550 | NNS | 310 | 24 | 310 | 24 | 310 | 24 | NNS | NNS | NNS | NNS |
| 2,4-Dinitrotoluene | c | 0.009 | 0.02 | 0.38 | NNS | 15000 | 970 | 15000 | 970 | 15000 | 970 | NNS | NNS | NNS | NNS |
| 2,6-Dinitrotoluene | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 2,3,7,8-TCDD (Dioxin) | c | 0.0000002 | 0.000000004 | 0.000009 | NNS | 0.01 | 0.005 | 0.01 | 0.005 | 0.12 | 0.01 | 0.1 | 0.01 | NNS | NNS |
| 1,2-Diphenylhydrazine | c | 0.04 | 0.25 | 1.8 | NNS | 130 | 11 | 130 | 11 | 130 | 11 | NNS | NNS | NNS | NNS |
| Di-n-butyl phthalate | | 700 | 2300 | 14000 | 14000 | 470 | 35 | 470 | 35 | 470 | 35 | 1100 | 84 | NNS | NNS |
| Di-n-octyl phthalate | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Endosulfan sulfate | | 0.35 | 0.78 | 70 | NNS | 0.22 | 0.06 | 0.22 | 0.06 | 0.22 | 0.06 | 3.0 | 1.5 | NNS | NNS |
| Endosulfan-alpha | | 0.35 | 0.92 | 70 | NNS | 0.22 | 0.06 | 0.22 | 0.06 | 0.22 | 0.06 | 3.0 | 1.5 | NNS | NNS |
| Endosulfan-beta | | 0.35 | 0.92 | 70 | NNS | 0.22 | 0.06 | 0.22 | 0.06 | 0.22 | 0.06 | 3.0 | 1.5 | NNS | NNS |
| Endrin | | 0.2 | 1.1 | 40 | 40 | 0.18 | 0.002 | 0.2 | 0.08 | 0.2 | 0.08 | 0.7 | 0.3 | 0.004 | 0.004 |
| Endrin aldehyde | | 2.1 | 0.81 | 420 | NNS | 0.18 | 0.002 | 0.2 | 0.08 | 0.2 | 0.08 | 0.7 | 0.3 | NNS | NNS |
| Ethylbenzene | | 700 | 110000 | 64000 | 64000 | 23000 | 1400 | 23000 | 1400 | 23000 | 1400 | NNS | NNS | NNS | NNS |
| Ethylene dibromide | c7 | 0.05 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Fluoranthene | | 280 | 130 | 5600 | 5600 | 2000 | 1600 | 2000 | 1600 | 2000 | 1600 | NNS | NNS | NNS | NNS |

| PARAMETERS | | DWS[1] (µg/L) | FC[1] (µg/L) | FBC[1] (µg/L) | PBC[1] (µg/L) | A&Wc Acute[2] (µg/L) | A&Wc Chronic[3] (µg/L) | A&Ww Acute[2] (µg/L) | A&Ww Chronic[3] (µg/L) | A&Wedw Acute[2] (µg/L) | A&Wedw Chronic[3] (µg/L) | A&We Acute[2] (µg/L) | A&We Chronic[3] (µg/L) | AgI[1] (µg/L) | AgL[1] (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | | 280 | 580 | 5600 | 5600 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Fluoride | | 4000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Heptachlor | c8 | 0.400 | 0.0002 | 0.31 | 20 | 0.52 | 0.004 | 0.52 | 0.004 | 0.58 | 0.013 | 0.9 | 0.1 | NNS | NNS |
| Heptachlor epoxide | c8 | 0.200 | 0.0001 | 0.15 | 2 | 0.52 | 0.004 | 0.52 | 0.004 | 0.58 | 0.013 | 0.9 | 0.1 | NNS | NNS |
| Hexachlorobenzene | c | 0.02 | 0.002 | 0.83 | 100 | 6.0 | 3.7 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Hexachlorobutadiene | c | 0.45 | 0.52 | 18 | 280 | 45 | 8.2 | 45 | 8.2 | 45 | 8.2 | NNS | NNS | NNS | NNS |
| Hexachlorocyclopentadiene | | 49 | 550 | 1000 | 1000 | 3.5 | 0.3 | 3.5 | 0.3 | 3.5 | 0.3 | NNS | NNS | NNS | NNS |
| Hexachloroethane | c | 2.5 | 4.8 | 100 | 140 | 490 | 350 | 490 | 350 | 490 | 350 | 850 | 610 | NNS | NNS |
| Indeno (1,2,3-cd) pyrene | c | 0.003 | 0.000003 | 0.12 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Isophorone | c | 8.5 | 520 | 340 | 28000 | 59000 | 43000 | 59000 | 43000 | 59000 | 43000 | NNS | NNS | NNS | NNS |
| Lead (as Pb) | | 50 T | NNS | NNS | NNS | g D | g D | g D | g D | g D | g D | g D | g D | 10000 T | 100 T |
| Manganese (as Mn) | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | 10000 | NNS |
| Mercury (as Hg) | | 2.1 T | 0.6 T | 42 T | 42 T | 2.4 D | 0.01 D | 2.4 D | 0.01 D | 2.6 D | 0.2 D | 5.0 D | 2.7 D | NNS | 10 T |
| Methoxychlor | | 40 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Methyl bromide | | 9.8 | 7500 | 200 | 200 | 5500 | 360 | 5500 | 360 | 5500 | 360 | NNS | NNS | NNS | NNS |
| Methyl chloride | c | 5.7 | 1800 | 230 | 2800 | 270000 | 15000 | 270000 | 15000 | 270000 | 15000 | NNS | NNS | NNS | NNS |
| Methylene chloride | c | 4.7 | 480 | 190 | 27000 | 97000 | 5500 | 97000 | 5500 | 97000 | 5500 | NNS | NNS | NNS | NNS |
| Naphthalene | | NNS | NNS | 560 | 560 | 1100 | 210 | 3300 | 600 | 3300 | 600 | NNS | NNS | NNS | NNS |
| Nickel (as Ni) | | 140 T | 400 T | 2800 T | 2800 T | h D | h D | h D | h D | h D | h D | h D | h D | NNS | NNS |
| Nitrate (as N) | | 10000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Nitrate/nitrite (Total as N) | | 10000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Nitrite (as N) | | 1000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Nitrobenzene | | 3.5 | 600 | 70 | 70 | 13000 | 850 | 13000 | 850 | 13000 | 850 | NNS | NNS | NNS | NNS |
| 2-Nitrophenol | | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 4-Nitrophenol | | NNS | NNS | NNS | NNS | 4100 | 3000 | 4100 | 3000 | 4100 | 3000 | NNS | NNS | NNS | NNS |
| N-nitrosodimethylamine | c | 0.0007 | 2.1 | 0.03 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| N-nitrosodiphenylamine | c | 7.1 | 12 | 290 | NNS | 2900 | 200 | 2900 | 200 | 2900 | 200 | NNS | NNS | NNS | NNS |
| N-nitrosodi-n-propylamine | c | 0.005 | 0.51 | 0.2 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| PCBs | c9 | 0.5 | 0.00009 | 0.18 | NNS | 2.0 | 0.01 | 2.0 | 0.02 | 2.0 | 0.02 | 11 | 2.5 | 0.001 | 0.001 |
| Pentachlorophenol | | 210 | 29000 | 2000 | 2000 | i | i | i | i | i | i | i | i | NNS | NNS |
| Phenanthrene | | 0.003 | 0.0005 | 0.12 | NNS | 30 | 6.3 | 30 | 6.3 | 30 | 6.3 | NNS | NNS | NNS | NNS |
| Phenol | | 4200 | 6500000 | 84000 | 84000 | 5100 | 730 | 7000 | 1000 | 7000 | 1000 | 180000 | 26000 | NNS | NNS |
| Pyrene | | 210 | 1100 | 4200 | 4200 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Selenium (as Se) | | 50 T | 9000 | 420 | 420 T | 20 T | 2.0 T | 20 T | 2.0 T | 50 T | 2 T | 33 T | 2.0 T | 20 T | 50 T |
| Silver (as Ag) | | NNS | NNS | NNS | NNS | J D | NNS | J D | NNS | J D | NNS D | J D | NNS D | NNS | NNS |
| Styrene | c9 | 100 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Sulfides | | NNS | NNS | NNS | NNS | 100 | NNS | 100 | NNS | 100 | NNS | 100 | NNS | NNS | NNS |
| 1,1,2,2-Tetrachloroethane | c | 0.17 | 11 | 7 | 450 | 4700 | 3200 | 4700 | 3200 | 4700 | 3200 | NNS | NNS | NNS | NNS |
| Tetrachloroethylene | c10 | 5.00 | 11 | 35 | 4000 | 2600 | 280 | 6500 | 680 | 6500 | 680 | 15000 | 1600 | NNS | NNS |
| Thallium (as Tl) | | 0.63 T | 44 T | 3700 T | 3700 T | 700 D | 150 D | 700 D | 150 D | 700 D | 150 D | NNS | NNS | NNS | NNS |
| Toluene | | 1000 | 90000 | 42000 | 42000 | 8700 | 180 | 8700 | 180 | 8700 | 180 | NNS | NNS | NNS | NNS |
| Toxaphene | c9 | 3.0 | 0.0008 | 3.0 | 1000 | 0.73 | 0.0002 | 0.73 | 0.02 | 0.73 | 0.02 | 11 | 1.5 | 0.005 | 0.005 |
| 2,4,5-TP (m) | | 50 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,2,4-Trichlorobenzene | | NNS | NNS | 2800 | 2800 | 750 | 130 | 1700 | 300 | NNS | NNS | NNS | NNS | NNS | NNS |
| 1,1,1-Trichloroethane | | 200 | 160000 | 13000 | 13000 | 2600 | 1600 | 2600 | 1600 | 2600 | 1600 | NNS | NNS | NNS | NNS |
| 1,1,2-Trichloroethane | c11 | 0.61 | 31 | 25 | 560 | 18000 | 12000 | 18000 | 12000 | 18000 | 12000 | NNS | NNS | NNS | NNS |
| Trichloroethylene | c12 | 5.0 | 78 | 110 | NNS | 20000 | 1300 | 20000 | 1300 | 20000 | 1300 | NNS | NNS | NNS | NNS |

| PARAMETERS | | DWS[1] (µg/L) | FC[1] (µg/L) | FBC[1] (µg/L) | PBC[1] (µg/L) | A&Wc Acute[2] (µg/L) | A&Wc Chronic[3] (µg/L) | A&Ww Acute[2] (µg/L) | A&Ww Chronic[3] (µg/L) | A&Wedw Acute[2] (µg/L) | A&Wedw Chronic[3] (µg/L) | A&We Acute[2] (µg/L) | A&We Chronic[3] (µg/L) | AgI[1] (µg/L) | AgL[1] (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | c | 3.2 | 4.9 | 130 | NNS | 160 | 25 | 160 | 25 | 160 | 25 | 3000 | 460 | NNS | NNS |
| Trihalomethanes, Total | c | 100 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Uranium (as Ur) | | 35 D | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Vinyl chloride | c13 | 2.0 | 620 | 80 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Xylenes (Total) | | 10000 | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS | NNS |
| Zinc (as Zn) | | 5000 T | NNS | 28000 | 28000 | k D | k D | k D | k D | k D | k D | k D | k D | 10000 T | 25000 T |

µg/L - micrograms per liter

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 - Indicates that the parameter is a known, probable or possible human carcinogen and that the standards to protect DWS, FC and FBC are based on carcinogenicity. A "c" by itself indicates that the excess cancer risk level for the DWS designated use is $1 \times 10^{-6}$. A "c" followed by a number indicates that the excess cancer risk level for the DWS designated use only is greater than $1 \times 10^{-6}$. These excess cancer risk levels, multiplied by $10^{-6}$ are: c1=5; c2=17; c3=67; c4=13; c5=117; c6=10; c7=125; c8=50; c9=100; c10=7; c11=8; c12=2; and c13=133. The excess cancer risk level for the FC and FBC designated uses is $1 \times 10^{-6}$.

d - Cadmium -
A&Wc acute standard: $e^{(1.128 [\ln(\text{Hardness})] - 3.828)}$
A&Wc chronic standard: $e^{(0.7852 [\ln(\text{Hardness})] - 3.490)}$
A&Ww acute standard: $e^{(1.128 [\ln(\text{Hardness})] - 2.0149)}$
A&Ww chronic standard: $e^{(0.7852 [\ln(\text{Hardness})] - 3.490)}$
A&Wedw acute standard: $e^{(1.128 [\ln(\text{Hardness})] - 2.0149)}$
A&Wedw chronic standard: $e^{(0.7852 [\ln(\text{Hardness})] - 3.490)}$
A&We acute standard: $e^{(1.128 [\ln(\text{Hardness})] - 0.9691)}$
A&We chronic standard: $e^{(0.7852 [\ln(\text{Hardness})] - 3.490)}$
(See Footnote 4)

e - Chromium III -
A&Wc acute standard: $e^{(0.8190 [\ln(\text{Hardness})] + 3.688)}$
A&Wc chronic standard: $e^{(0.8190 [\ln(\text{Hardness})] + 1.561)}$
A&Ww acute standard: $e^{(0.8190 [\ln(\text{Hardness})] + 3.688)}$
A&Ww chronic standard: $e^{(0.8190 [\ln(\text{Hardness})] + 1.561)}$
A&Wedw acute standard: $e^{(0.8190 [\ln(\text{Hardness})] + 4.9361)}$
A&Wedw chronic standard: $e^{(0.8190 [\ln(\text{Hardness})] + 1.561)}$
A&We acute standard: $e^{(0.8190 [\ln(\text{Hardness})] + 3.688)}$
A&We chronic standard: $e^{(0.8190 [\ln(\text{Hardness})] + 1.561)}$
(See Footnote 4)

f - Copper -
A&Wc acute standard: $e^{(0.9422 [\ln(\text{Hardness})] - 1.464)}$
A&Wc chronic standard: $e^{(0.8545 [\ln(\text{Hardness})] - 1.465)}$
A&Ww acute standard: $e^{(0.9422 [\ln(\text{Hardness})] - 1.464)}$
A&Ww chronic standard: $e^{(0.8545 [\ln(\text{Hardness})] - 1.465)}$
A&Wedw acute standard: $e^{(0.9422 [\ln(\text{Hardness})] - 1.464)}$
A&Wedw chronic standard: $e^{(0.8545 [\ln(\text{Hardness})] - 1.465)}$
A&We acute standard: $e^{(0.9422 [\ln(\text{Hardness})] - 1.1514)}$
A&We chronic standard: $e^{(0.8545 [\ln(\text{Hardness})] - 1.1448)}$
(See Footnote 4)

~~g Lead A&Wc acute standard: $e^{(1.2730 [\ln(Hardness)] - 1.460)}$~~
~~A&Wc 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 4)~~

~~h Nickel A&Wc acute standard: $e^{(0.8460 [\ln(Hardness)] + 3.3611)}$~~
~~A&Wc 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: $e^{(0.8460 [\ln(Hardness)] + 1.1644)}$~~
~~A&We acute standard: $e^{(0.8460 [\ln(Hardness)] + 4.4389)}$~~
~~A&We chronic standard: $e^{(0.8460 [\ln(Hardness)] + 2.2417)}$~~
~~(See Footnote 4)~~

~~i Pentachlorophenol A&Wc acute standard: $e^{(1.005 (pH) - 4.830)}$~~
~~A&Wc 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 5)~~

~~j Silver A&Wc acute standard: $e^{(1.72 (\ln) - 6.52)}$~~
~~A&Ww acute standard: $e^{(1.72 (\ln) - 6.52)}$~~
~~A&Wedw acute standard: $e^{(1.72 (\ln) - 6.52)}$~~
~~A&Ww acute standard: $e^{(1.72 (\ln) - 6.52)}$~~
~~(See Footnote 4)~~

~~k Zinc A&Wc acute standard: $e^{(0.8473 (\ln) + 0.860)}$~~
~~A&Wc chronic standard: $e^{(0.8473 (\ln) + 0.761)}$~~
~~A&Ww acute standard: $e^{(0.8473 (\ln) + 0.860)}$~~
~~A&Ww chronic standard: $e^{(0.8473 (\ln) + 0.761)}$~~
~~A&Wedw acute standard: $e^{(0.8473 (\ln) + 0.860)}$~~
~~A&Wedw chronic standard: $e^{(0.8473 (\ln) + 0.761)}$~~
~~A&We acute standard: $e^{(0.8473 (\ln) + 3.1342)}$~~
~~A&We chronic standard: $e^{(0.8473 (\ln) + 3.0484)}$~~

~~l The standard to protect this use is 0.003 µg/l aldrin/dieldrin.~~
~~m 2,4,5 Trichlorophenoxyacetic acid~~

~~1 The numeric standards to protect this use shall not be exceeded.~~
~~2 Determination of compliance with acute standards shall be as prescribed in R18-11-120(C).~~
~~3 Determination of compliance with chronic standards shall be as prescribed in R18-11-120(C).~~
~~4 Hardness is determined pursuant to the methods specified for the definition of hardness Section 101. Hardness is determined from a sample taken at the same time and place that the sample for the metal is taken. Hardness, expressed as mg/l $CaCO_3$, is then inserted into the equation where it says "Hardness".~~
~~5 The pH at the time and location that the sample for pentachlorophenol was taken is inserted into the equation where it says "pH".~~

~~NNS No numeric standard.~~
~~D Dissolved~~
~~T Total recoverable~~
~~TTHM Indicates that the chemical is a trihalomethane. See trihalomethanes for DWS standard.~~

A&Wc - ACUTE

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

| pH | Temperature in Degrees Celsius 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 25 | 30 and above | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.5 | 29 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 24 | 16.6 | 11.8 | 6.5 |
| 6.6 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 16.2 | 11.4 | 6.6 |
| 6.7 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 15.6 | 11.1 | 6.7 |
| 6.8 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 15.0 | 10.6 | 6.8 |
| 6.9 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 14.3 | 10.1 | 6.9 |
| 7.0 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20.0 | 19.9 | 19.7 | 19.6 | 19.5 | 19.4 | 19.3 | 19.2 | 13.4 | 9.5 | 7.0 |
| 7.1 | 22 | 21 | 21 | 21 | 20 | 20 | 19.9 | 19.6 | 19.5 | 19.3 | 19.1 | 18.9 | 18.8 | 18.6 | 18.5 | 18.4 | 18.3 | 18.2 | 18.1 | 18.0 | 17.9 | 12.5 | 8.9 | 7.1 |
| 7.2 | 19.8 | 19.6 | 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 | 16.9 | 16.8 | 16.7 | 16.7 | 16.6 | 16.5 | 11.6 | 8.2 | 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 | 15.4 | 15.3 | 15.2 | 15.2 | 15.1 | 15.0 | 10.6 | 7.5 | 7.3 |
| 7.4 | 16.2 | 16.0 | 15.7 | 15.5 | 15.3 | 15.1 | 15.0 | 14.8 | 14.6 | 14.5 | 14.4 | 14.3 | 14.1 | 14.0 | 13.9 | 13.8 | 13.8 | 13.7 | 13.6 | 13.6 | 13.5 | 9.5 | 6.7 | 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 | 12.3 | 12.2 | 12.1 | 12.1 | 12.1 | 12.0 | 8.4 | 6.0 | 7.5 |
| 7.6 | 12.5 | 12.3 | 12.2 | 12.0 | 11.9 | 11.7 | 11.6 | 11.5 | 11.4 | 11.2 | 11.2 | 11.1 | 11.0 | 10.9 | 10.8 | 10.8 | 10.7 | 10.6 | 10.6 | 10.5 | 10.5 | 7.4 | 5.3 | 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 | 9.3 | 9.2 | 9.2 | 9.2 | 9.1 | 9.1 | 6.4 | 4.6 | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 5.5 | 4.0 | 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 | 6.7 | 6.7 | 6.7 | 6.7 | 6.6 | 6.6 | 4.7 | 3.4 | 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 | 5.7 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 4.0 | 2.9 | 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 | 4.5 | 4.5 | 4.9 | 4.5 | 4.5 | 4.5 | 3.2 | 2.3 | 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 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 2.6 | 1.89 | 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 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.1 | 1.55 | 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 | 2.4 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 1.71 | 1.27 | 8.4 |
| 8.5 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 1.98 | 1.96 | 1.95 | 1.94 | 1.93 | 1.92 | 1.91 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.91 | 1.92 | 1.41 | 1.05 | 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 | 1.54 | 1.54 | 1.55 | 1.55 | 1.56 | 1.57 | 1.16 | 0.88 | 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 | 1.25 | 1.26 | 1.26 | 1.27 | 1.28 | 1.29 | 0.96 | 0.74 | 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 | 1.03 | 1.03 | 1.04 | 1.05 | 1.06 | 1.07 | 0.81 | 0.63 | 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 | 0.85 | 0.85 | 0.86 | 0.87 | 0.88 | 0.89 | 0.69 | 0.55 | 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 | 0.70 | 0.71 | 0.72 | 0.73 | 0.74 | 0.75 | 0.59 | 0.48 | 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&Wc Acute Total Ammonia tabular values, round field measured values according to standard rounding procedures to nearest tabular value to determine ammonia standard.

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.

~~Appendix B. List of Navigable Waters and Designated Uses~~

| ~~Navigable water~~ | ~~Designated Use~~ |
|---|---|
| ~~COLORADO MAIN STEM RIVER BASIN~~ | |
| ~~A-10 Backwater~~ | ~~A&Ww, FBC, FC~~ |
| ~~A-7 Backwater~~ | ~~A&Ww, FBC, FC~~ |
| ~~Agate Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Alamo Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Big Sandy River~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Big Springs Tank~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Bill Williams River~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Blue Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Boucher Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Boulder Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Bright Angel Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Bright Angel Wash[1] (Grand Canyon WWTP to Cataract Creek)~~ | ~~A&Wedw, PBC~~ |
| ~~Bull Rush Canyon Wash~~ | ~~A&We, PBC~~ |
| ~~Burro Creek[2] (above confluence with Boulder Creek)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Cataract Creek (Headwaters to Williams WWTP)~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Cataract Creek[1] (Williams WWTP to 3 km downstream)~~ | ~~A&Wedw, PBC~~ |
| ~~Cataract Creek (Below 3 km downstream of Williams WWTP)~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cataract Lake~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Chuar Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Cibola Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~City Reservoir~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Clear Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Colorado River (Lake Powell to Topock)~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Colorado River (Topock to Mexico)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Coors Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Cottonwood Creek~~ | ~~A&Ww, FBC, DWS~~ |
| ~~Crystal Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Deer Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Detrital Wash~~ | ~~A&We, PBC~~ |
| ~~Diamond Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Dogtown Reservoir~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Dragon Creek~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Francis Creek[2]~~ | ~~A&Ww, FBC, DWS, FC, AgL~~ |
| ~~Garden Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Gila River (See listing in Middle Gila River Basin)~~ | |
| ~~Grand Wash~~ | ~~A&We, PBC~~ |
| ~~Granite Park Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Grapevine Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Grapevine Wash~~ | ~~A&We, PBC~~ |
| ~~Hakatai Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Hance Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Havasu Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Hermit Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Holy Moses Wash[1] (Kingman WWTP to 5 km downstream)~~ | ~~A&Wedw, PBC~~ |
| ~~Horn Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Hualapai Wash~~ | ~~A&Ww, PBC~~ |
| ~~Hunter's Hole Backwater~~ | ~~A&Ww, FBC, FC~~ |
| ~~Imperial Reservoir~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Jacob Lake~~ | ~~A&Ww, FBC~~ |
| ~~Kaibab Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Kaibito Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Kanab Creek~~ | ~~A&Ww, FBC, DWS, FC, AgL~~ |
| ~~Kirkland Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Kwagunt Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Laguna Reservoir~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Lake Havasu~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Lake Mead~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Lake Mohave~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Lake Powell~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Lonetree Canyon Creek~~ | ~~A&Ww, PBC, DWS~~ |
| ~~Martinez Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Matkatamiba Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Mittry Lake~~ | ~~A&Ww, FBC, FC~~ |

| | |
|---|---|
| ~~Mohave Wash~~ | ~~A&We, PBC~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~COLORADO MAIN STEM RIVER BASIN (cont.)~~ | |
| ~~Monument Creek~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Nankoweap Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~National Canyon Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Navajo Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~North Canyon Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Olo Creek~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Paria River~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~People's Canyon Creek[2]~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Phantom Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Pipe Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Pretty Water Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Quigley Ponds~~ | ~~A&Ww, FBC, FC~~ |
| ~~Red Canyon Creek~~ | ~~A&Ww, FBC, DWS~~ |
| ~~Redondo Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Roaring Springs Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Royal Arch Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Ruby Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Sacramento Wash~~ | ~~A&We, PBC~~ |
| ~~Saddle Canyon Creek~~ | ~~A&We, FBC, FC~~ |
| ~~Santa Fe Reservoir~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Santa Maria River~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Sapphire Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Sawmill Wash~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Serpentine Creek~~ | ~~A&We, PBC, DWS, FC~~ |
| ~~Shinumo Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Short Creek~~ | ~~A&We, PBC~~ |
| ~~Slate Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Spencer Canyon Creek~~ | ~~A&We, FBC, FC~~ |
| ~~Spring Canyon Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Stone Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Tapeats Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Three Springs Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Thunder River~~ | ~~A&We, FBC, DWS, FC, AgL~~ |
| ~~Topock Marsh~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Trail Canyon Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Travertine Falls Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Trout Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Turquoise Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Unkar Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Unnamed Wash[1] (Grand Canyon, North Rim WWTP to 1 km downstream)~~ | ~~A&Wedw, PBC~~ |
| ~~Upper City Reservoir~~ | ~~A&Ww, FBC, FC~~ |
| ~~Vasey's Paradise~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Virgin River~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Vishnu Creek~~ | ~~A&We, FBC, DWS, FC~~ |
| ~~Warm Springs Creek~~ | ~~A&Ww, FBC, DWS~~ |
| ~~Wellton Canal~~ | ~~DWS, AgI, AgL~~ |
| ~~Wellton Ponds~~ | ~~A&Ww, FBC, FC~~ |
| ~~White Creek~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Wia Manua Park Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~YPG Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Yuma Area Canals above municipal water treatment plant intakes~~ | ~~DWS, AgI, AgL~~ |
| ~~Yuma Area Canals below water treatment plant intakes and all drains~~ | ~~AgI, AgL~~ |
| | |
| ~~LITTLE COLORADO RIVER BASIN~~ | |
| ~~Antelope Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Ashurst Lake~~ | ~~A&We, FBC, FC, AgI, AgL~~ |
| ~~Barbershop Canyon Creek~~ | ~~A&We, FBC, FC, AgL~~ |
| ~~Bear Canyon Creek (Tributary to Blue Ridge Reservoir)~~ | ~~A&We, FBC, FC, AgL~~ |
| ~~Bear Canyon Creek (Tributary to Willow Creek)~~ | ~~A&We, FBC, FC, AgL~~ |
| ~~Bear Canyon Lake~~ | ~~A&We, FBC, FC, AgI, AgL~~ |
| ~~Becker Lake~~ | ~~A&We, FBC, FC, AgL~~ |
| ~~Billy Creek~~ | ~~A&We, FBC, FC, AgL~~ |

| | |
|---|---|
| ~~Black Canyon Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Black Canyon Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Black Creek (New Mexico Border to Fort Defiance WWTP)~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~LITTLE COLORADO RIVER BASIN (cont.)~~ | |
| ~~Black Creek[1] (Fort Defiance WWTP to the Puerco River)~~ | ~~A&Wedw, PBC~~ |
| ~~Blue Ridge Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Boot Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Buck Springs Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Bunch Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Camillo Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Carnero Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Chevelon Canyon Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Chevelon Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Chevelon Creek, West Fork~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Chilson Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Cholla Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Clear Creek~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Clear Creek Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Coconino Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Colter Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Colter Reservoir~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Concho Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Concho Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cow Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Coyote Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Crisis Lake (Snake Tank #2)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Dane Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Daves Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Deep Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Dry Lake[1]~~ | ~~A&Wedw~~ |
| ~~East Clear Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Fish Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Fool's Hollow Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Ganado Lake~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~General Springs Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Hall Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Hart Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Hidden Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Horse Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Huffer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Hulsey Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Hulsey Lake~~ | ~~A&Wc, FBC, FC~~ |
| ~~Jack's Canyon Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Kinnikinick Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Knoll Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Lake Humphreys[1]~~ | ~~A&Wedw, PBC~~ |
| ~~Lake Mary, lower~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Lake Mary, upper~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Lake of the Woods~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Lee Valley Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Lee Valley Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Leonard Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Leonard Canyon Creek, East Fork~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Leonard Canyon Creek, Middle Fork~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Leonard Canyon Creek, West Fork~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Little Colorado River (Below Lyman Reservoir)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Little Colorado River (West Fork below Government Springs)~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Little Colorado River[2] (West Fork above Government Springs)~~ | ~~A&Wc, FBC, FC~~ |
| ~~Little Colorado River, East Fork~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Little Colorado River, South Fork~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Little George Reservoir~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Little Mormon Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Little Ortega Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Long Lake, lower~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |

| | |
|---|---|
| ~~Long Lake, upper~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Long Tom Tank~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Lower Walnut Canyon Lake[1]~~ | ~~A&Wedw, PBC~~ |
| ~~Lyman Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Mamie Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~LITTLE COLORADO RIVER BASIN (cont.)~~ | |
| ~~Marshall Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Merritt Draw Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Mexican Hay Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Milk Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Miller Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Miller Canyon Creek, East Fork~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Mineral Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Mormon Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Morton Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Mud Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Ned Lake[1]~~ | ~~A&Wedw, PBC,~~ |
| ~~Nelson Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Nutrioso Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Paddy Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Pasture Canyon Lake~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Phoenix Park Wash~~ | ~~A&Wc, PBC~~ |
| ~~Pine Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Pintail Lake[1]~~ | ~~A&Wedw, PBC~~ |
| ~~Porter Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Potato Lake~~ | ~~A&Wc, FBC, AgL~~ |
| ~~Pratt Lake~~ | ~~A&Wc, FBC, FC~~ |
| ~~Puerco River~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Quarter Circle Bar Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Rainbow Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Red Lake~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Rio de Flag[1]~~ | ~~A&Wedw, PBC~~ |
| ~~River Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Rogers Reservoir~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Russell Tank~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Sawmill Lakes~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Scott's Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Show Low Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Show Low Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Silver Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Soldiers Annex Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Soldiers Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Spaulding Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Sponseller Lake~~ | ~~A&Ww, FBC~~ |
| ~~St. Johns Reservoir (Little Reservoir)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Telephone Lake[1]~~ | ~~A&Wedw, PBC,~~ |
| ~~Trout Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Tunnel Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Turkey Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Vail Lake~~ | ~~A&Wc, FBC, AgL~~ |
| ~~Walnut Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Water Canyon Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Whipple Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~White Mountain Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~White Mountain Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Willow Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Willow Springs Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Willow Springs Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Woodland Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Woods Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Woods Canyon Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Zuni River~~ | ~~A&Ww, FBC, AgI, AgL~~ |

~~MIDDLE GILA RIVER BASIN~~

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|---|---|
| ~~Agua Fria River (Above confluence with unnamed wash receiving treated wastewater from Prescott Valley WWTP)~~ | ~~A&We, PBC, AgI, AgL~~ |
| ~~Unnamed wash (From Prescott Valley WWTP to confluence with Agua Fria River)~~ | ~~A&Wedw, PBC~~ |
| ~~Agua Fria River (Below confluence with unnamed wash receiving treated wastewater from Prescott Valley WWTP to State Route 169)~~ | ~~A&Wedw, PBC, AgI, AgL~~ |
| ~~Agua Fria River (State Route 169 to Lake Pleasant)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~MIDDLE GILA RIVER BASIN (cont.)~~ | |
| ~~Agua Fria River (Lake Pleasant to the Surprise WWTP)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Agua Fria River[1] (Surprise WWTP to Camelback Road)~~ | ~~A&Wedw, PBC~~ |
| ~~Agua Fria River (Camelback Road to Avondale WWTP)~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Agua Fria River[1] (Avondale WWTP to Gila River confluence)~~ | ~~A&Wedw, PBC~~ |
| ~~Antelope Creek~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Ash Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Beehive Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Big Bug Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Black Canyon Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Blind Indian Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Cave Creek (Headwaters to Cave Creek Dam)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Cave Creek (Cave Creek Dam to the Arizona Canal)~~ | ~~A&We, PBC~~ |
| ~~Centennial Wash~~ | ~~A&We, PBC~~ |
| ~~Centennial Wash Ponds~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Galena Gulch~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Gila River (Ashurst-Hayden Dam to the Florence WWTP)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Gila River[1] (Florence WWTP to Felix Road)~~ | ~~A&Wedw, PBC~~ |
| ~~Gila River (Felix Road to the Salt River)~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Gila River[1] (Salt River to the Gillespie Dam)~~ | ~~A&Wedw, PBC, FC, AgI, AgL~~ |
| ~~Gila River (Gillespie Dam to the Painted Rock Dam)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Gila River (Painted Rock Dam to the Colorado River)~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Groom Creek~~ | ~~A&Wc, FBC, DWS, FC,~~ |
| ~~Hank Raymond Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Hassayampa Lake~~ | ~~A&Wc, FBC, DWS,~~ |
| ~~Hassayampa River (Headwaters to 8 miles south of Wickenburg)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Hassayampa River (from 8 miles south of Wickenburg to the Buckeye Irrigation Company canal)~~ | ~~A&We, PBC~~ |
| ~~Hit Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Horsethief Basin Lake~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Lake Pleasant~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Little Ash Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Lynx Creek~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Lynx Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Martinez Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~New River~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Painted Rock Lake~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Painted Rock Reservoir~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Perry Mesa Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Picacho Reservoir~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Queen Creek (Headwaters to the Superior WWTP)~~ | ~~A&Ww, PBC, DWS, AgL~~ |
| ~~Queen Creek[1] (Superior WWTP to Potts Canyon)~~ | ~~A&Wedw, PBC~~ |
| ~~Queen Creek (Below Potts Canyon)~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Sycamore Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Turkey Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Unnamed Wash[1] (Gila Bend WWTP to the Gila River)~~ | ~~A&Wedw, PBC~~ |
| ~~Unnamed Wash[1] (Luke Air Force Base WWTP to the Agua Fria River)~~ | ~~A&Wedw, PBC~~ |
| ~~Unnamed Wash[1] (Queen Valley WWTP to Queen Creek)~~ | ~~A&Wedw, PBC~~ |
| ~~RED LAKE BASIN~~ | |
| ~~Red Lake~~ | ~~A&Ww, FBC~~ |
| ~~Rock Canyon Creek~~ | ~~A&We, PBC~~ |
| ~~Truxton Wash~~ | ~~A&We, PBC~~ |
| ~~Wright Canyon Creek~~ | ~~A&We, PBC~~ |
| ~~RIO MAGDALENA BASIN~~ | |
| ~~Holden Canyon Creek~~ | ~~A&Ww, PBC~~ |

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|---|---|
| ~~Sycamore Canyon Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~RIO SONOITA BASIN~~ | |
| ~~San Simon Wash~~ | ~~A&We, PBC~~ |
| ~~Vamori Wash~~ | ~~A&We, PBC~~ |
| ~~RIO YAQUI BASIN~~ | |
| ~~Abbot Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Blackwater Draw~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~RIO YAQUI BASIN (cont.)~~ | |
| ~~Buck Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Dixie Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Dry Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Gadwell Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Glance Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Gold Gulch~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Johnson Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Leslie Creek~~ | ~~A&Ww, FBC, DWS, FC, AgL~~ |
| ~~Mexican Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Mule Gulch (Headwaters to Bisbee WWTP)~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Mule Gulch[1] (Below Bisbee WWTP)~~ | ~~A&Wedw, PBC, AgL~~ |
| ~~Rucker Canyon Creek~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Rucker Canyon Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Soto Canyon~~ | ~~A&Ww, FBC, DWS, AgI, AgL~~ |
| ~~Unnamed Wash[1] (Bisbee-Douglas International Airport WWTP to Whitewater Draw)~~ | ~~A&Wedw, PBC~~ |
| ~~Whitewater Draw~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~SALT RIVER BASIN~~ | |
| ~~A-1 Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Ackre (Judge) Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Alvord Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Apache Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Arlington Canal (above Wilson Avenue)~~ | ~~AgL~~ |
| ~~B.S. Gap Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Ball Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Basin Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Baskin Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bear Cienega Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Bear Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Bear Wallow Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Bear Wallow Creek, North Fork~~ | ~~A&Wc, FBC, FC~~ |
| ~~Bear Wallow Creek, South Fork~~ | ~~A&Wc, FBC, FC~~ |
| ~~Beaver Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Becker Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Big Bonito Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Big Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Black River~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Black River, East Fork~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Black River, North Fork of East Fork~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Black River, West Fork~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Bloody Tanks Wash (Headwaters to Schultze Ranch)~~ | ~~A&We, PBC, AgL~~ |
| ~~Bloody Tanks Wash (Schultze Ranch to Miami Wash)~~ | ~~A&We, PBC~~ |
| ~~Blue Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Bobcat Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bog Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Bog Tank~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Boggy Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Boneyard Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Bonsall Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Bootleg Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Canal Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Canyon Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Canyon Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |

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|---|---|
| ~~Carrizo Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cedar Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Centerfire Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Chambers Draw Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Chaparral Park Lake[3]~~ | ~~A&Ww, PBC, FC, AgI~~ |
| ~~Cherry Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Chino Tank~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Christmas Tree Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Christopher Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cibecue Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Clover Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~SALT RIVER BASIN (cont.)~~ | |
| ~~Cold Springs Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Conklin Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cooley Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Coon Creek~~ | ~~A&Ww, FBC~~ |
| ~~Corduroy Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Corn Tank~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Cortez Park Lake[3]~~ | ~~A&Ww, PBC, FC, AgI~~ |
| ~~Coyote Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Crescent Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Crooked Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Cyclone Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Deep Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Deer Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Deer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Desert Breeze Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Devil's Chasm Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Diamond Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Dobson Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Double Cienega Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Drift Fence Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Earl Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Earl Park Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~East Bonito Praire Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~East Deer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Eldorado Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Elwood Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Encanto Park Lake[3]~~ | ~~A&Ww, PBC, FC, AgI~~ |
| ~~Fish Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Flash Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~George's Basin Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Glade Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Gold Creek~~ | ~~A&Ww, FBC~~ |
| ~~Gomez Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Gooseberry Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Gordon Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Granada Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Haigler Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Halfway Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Hannagan Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Hawley Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Hay Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Herrington Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Highway Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Home Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Horse Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Horseshoe Cienega Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Horseshoe Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Horton Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Houston Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Hunter Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Hurricane Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Hurricane Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |

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|---|---|
| ~~Indian Bend Wash~~ | ~~A&Ww, PBC, FC~~ |
| ~~Indian Bend Wash Lakes[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Indian School Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Kiwanis Park Lake[3]~~ | ~~A&Ww, PBC, FC, AgI~~ |
| ~~Lake Sierra Blanca~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Little Bonito Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Little Diamond Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Lofer Cienega Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Lost Basin Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Lost Mule Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Martin Luther Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~McDonald Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~McKellips Park Lake[3]~~ | ~~A&Ww, PBC, FC, AgI~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~SALT RIVER BASIN (cont.)~~ | |
| ~~McNary Mill Pond~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Miami Wash~~ | ~~A&We, PBC~~ |
| ~~Moon Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Morman Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Mule Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Nash Creek Reservoir~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Navajo Pit Tank~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~North Bonito Praire Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Open Draw Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Ord Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Pacheta Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Pacheta Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Paddy Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Papago Park Ponds[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Paradise Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Perry Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Phillips Park Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Phoenix Area Canals (Granite Reef Dam to municipal WTP)~~ | ~~DWS, AgI, AgL~~ |
| ~~Phoenix Area Canals (Below WTP intakes and all other locations)~~ | ~~AgI, AgL~~ |
| ~~Pickett Corral Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Pinal Creek (Headwaters to Globe WWTP)~~ | ~~A&We, PBC, AgI, AgL~~ |
| ~~Pinal Creek[1] (Globe WWTP to Radium)~~ | ~~A&Wedw, PBC~~ |
| ~~Pinal Creek (Radium to Setka Ranch)~~ | ~~A&We, PBC, AgI, AgL~~ |
| ~~Pinal Creek (Setka Ranch to the Salt River)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Pinto Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Pole Corral Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Powerline Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Pueblo Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Reservation Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Reservation Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Reynolds Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Riverview Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Roadrunner Park Lake[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Roosevelt Lake~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Rye Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Saguaro Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Salome Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Salt River (Above Roosevelt Lake)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Salt River (Stewart Mountain Dam to the Verde River)~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Salt River (Verde River to 2 km below Granite Reef Dam)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Salt River (2 km below Granite Reef Dam to the I-10 bridge)~~ | ~~A&We, PBC~~ |
| ~~Salt River (I-10 bridge to the 23rd Avenue WWTP)~~ | ~~A&Ww, PBC~~ |
| ~~Salt River[1] (23rd Avenue WWTP to the Gila River confluence)~~ | ~~A&Wedw, PBC, FC, AgI, AgL~~ |
| ~~Sand Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sawmill Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Sawmill Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Seneca Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Shush Be Tou Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Shush Bezahze Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Slate Creek~~ | ~~A&Ww, PBC, FC, AgL~~ |

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|---|---|
| ~~Snake Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Soldier Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Spring Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Spur Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Squaw Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Steele Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Stinky Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Stove Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Sun Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sunrise Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sycamore Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Tanks Canyon Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Thomas Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Thompson Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Tonto Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~SALT RIVER BASIN (cont.)~~ | |
| ~~Tonto Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Trout Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Turkey Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Tuttle Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Upper Corn Creek Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Upper Highway Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Vista Del Camino Park North[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Vista Del Camino Park South[3]~~ | ~~A&Ww, PBC, FC~~ |
| ~~Weaning Pen Tank~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~White River~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~White River, East Fork~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~White River, North Fork~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Wild Steer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Wildcat Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Williams Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Willow Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Workman Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~SAN JUAN RIVER BASIN~~ | |
| ~~Chinle Wash~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Laguna Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Many Farms Reservoir~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Round Rock Lake~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Tsaile Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Tsaile Lake~~ | ~~A&Wc, FBC, FC, AgI~~ |
| ~~Walker Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Wheatfields Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Wheatfields Lake~~ | ~~A&Wc, FBC, FC, AgI~~ |
| ~~Whiskey Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~SAN PEDRO RIVER BASIN~~ | |
| ~~Aravaipa Creek~~ | ~~A&Ww, FBC, DWS, FC, AgL~~ |
| ~~Babocomari Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bass Canyon Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Blacktail Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Buehman Canyon Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Bull Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Carr Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Copper Creek~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~East Gravel Pit Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Fly Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Garden Canyon Creek~~ | ~~A&Ww, FBC, DWS, AgI~~ |
| ~~Golf Course Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Gravel Pit Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Hidden Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Hotsprings Canyon Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Lower Garden Canyon Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Miller Canyon Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |

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| ~~Officers Club Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Ramsey Canyon Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Redfield Canyon Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~San Pedro River (Mexico border to Redington)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~San Pedro River (Redington to the Gila River)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Sycamore Pond I~~ | ~~A&Ww, FBC, FC~~ |
| ~~Sycamore Pond II~~ | ~~A&Ww, FBC, FC~~ |
| ~~Turkey Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Unnamed Wash[1] (Oracle WWTP to Big Wash)~~ | ~~A&Wedw, PBC~~ |
| ~~Walnut Gulch[1] (Tombstone WWTP to the San Pedro River)~~ | ~~A&Wedw, PBC~~ |
| ~~Woodcutters Pond~~ | ~~A&Ww, FBC, FC~~ |
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| ~~SANTA CRUZ RIVER BASIN~~ | |
| ~~Agua Caliente Wash~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Aguirre Wash~~ | ~~A&We, PBC~~ |
| ~~Alambre Wash~~ | ~~A&We, PBC~~ |
| ~~Alamo Wash~~ | ~~A&We, PBC~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~SANTA CRUZ RIVER BASIN (cont.)~~ | |
| ~~Altar Wash~~ | ~~A&We, PBC~~ |
| ~~Alum Gulch~~ | ~~A&We, PBC~~ |
| ~~Arivaca Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Arivaca Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Atterbury Wash~~ | ~~A&We, PBC~~ |
| ~~Bear Grass Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Big Wash~~ | ~~A&We, PBC~~ |
| ~~Bog Hole Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Brawley Wash~~ | ~~A&We, PBC~~ |
| ~~Cañada del Oro (Headwaters to Highway 89)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Cañada del Oro (Below Highway 89)~~ | ~~A&We, PBC, AgI, AgL~~ |
| ~~Cienega Creek (Headwaters to I-10)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Cienega Creek[2] (I-10 to Del Lago dam)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Cienega Creek (Below Del Lago dam)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Davidson Canyon (Headwaters to I-10)~~ | ~~A&We, PBC~~ |
| ~~Davidson Canyon (I-10 to Cienega Creek)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Empire Gulch (Headwaters to Empire Ranch Spring)~~ | ~~A&We, PBC~~ |
| ~~Empire Gulch (Below Empire Ranch Spring)~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Fagen Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Flux Canyon~~ | ~~A&We, PBC~~ |
| ~~Gardner Canyon Creek~~ | ~~A&Ww, FBC~~ |
| ~~Greene Wash~~ | ~~A&We, PBC~~ |
| ~~Harshaw Wash~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Huachuca Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Julian Wash~~ | ~~A&We, PBC~~ |
| ~~Lemmon Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Los Robles Wash~~ | ~~A&We, PBC~~ |
| ~~Madera Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Nogales Wash~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Oak Tree Canyon~~ | ~~A&We, PBC~~ |
| ~~Palisade Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Pantano Wash~~ | ~~A&We, PBC~~ |
| ~~Parker Canyon Creek~~ | ~~A&Ww, PBC, FC~~ |
| ~~Parker Canyon Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Patagonia Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Pena Blanca Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Puertocito Wash~~ | ~~A&We, PBC~~ |
| ~~Redrock Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Rillito Creek~~ | ~~A&We, PBC, AgL~~ |
| ~~Romero Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Rose Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Rose Canyon Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sabino Canyon Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Salero Ranch Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Santa Cruz River (Headwaters to the International Boundary)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Santa Cruz River (International Boundary to Nogales WWTP)~~ | ~~A&Ww, DWS, FBC, AgI, AgL~~ |

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| ~~Santa Cruz River[1] (Nogales WWTP to Tubac)~~ | ~~A&Wedw, PBC~~ |
| ~~Santa Cruz River (Tubac to the Roger Rd WWTP)~~ | ~~A&We, PBC, AgL~~ |
| ~~Santa Cruz River[1] (Roger Rd WWTP to Baumgartner Rd)~~ | ~~A&Wedw, PBC~~ |
| ~~Santa Cruz River (Wash) (Baumgartner Rd to the Gila River Reservation)~~ | ~~A&We, PBC, AgL~~ |
| ~~Santa Cruz River (Wash) (Gila River Reservation to the Gila River)~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Santa Cruz River, West Branch~~ | ~~A&We, PBC~~ |
| ~~Santa Cruz Wash, N Branch[1] (Casa Grande WWTP to the Santa Cruz River)~~ | ~~A&Wedw, PBC~~ |
| ~~Santa Rosa Wash~~ | ~~A&We, PBC~~ |
| ~~Soldier Lake~~ | ~~A&Wc, FBC, AgI, AgL~~ |
| ~~Sonoita Creek (Above the town of Patagonia)~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Sonoita Creek (Below the town of Patagonia)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Split Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Stock Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Sutherland Wash~~ | ~~A&We, PBC~~ |
| ~~Sycamore Spring Reservoir~~ | ~~A&Wc, FBC, FC~~ |
| ~~Tanque Verde Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~The Lake Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Tinaja Wash~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~SANTA CRUZ RIVER BASIN (cont.)~~ | |
| ~~Vekol Wash~~ | ~~A&We, PBC~~ |
| ~~Williams Ranch Tanks~~ | ~~A&Ww, FBC, AgL~~ |
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| ~~UPPER GILA RIVER BASIN~~ | |
| ~~Apache Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Armstrong Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Arrowhead Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Arsenic Tub~~ | ~~A&Ww, FBC, FC~~ |
| ~~Ash Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Barlow Pass Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bennet Wash[1] (Arizona Department of Corrections Safford WWTP to the Gila River)~~ | ~~A&Wedw, PBC~~ |
| ~~Big Bonita Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Big Brushy Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bitter Creek~~ | ~~A&Ww, PBC~~ |
| ~~Bloody Basin Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Blue River~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Boni Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Bonita Creek[2]~~ | ~~A&Ww, FBC, DWS, FC, AgL~~ |
| ~~Brushy Basin Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Buckalou Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Burdette Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Cammerman Wash[1] (Arizona Department of Corrections Globe WWTP to 3 km downstream)~~ | ~~A&Wedw, PBC~~ |
| ~~Campbell Blue Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Castle Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Cave Creek and Ponds~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Chapman Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Chase Creek~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Chitty Canyon Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Cluff Ranch Pond #1~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Cluff Ranch Pond #2~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Cluff Ranch Pond #3~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Coleman Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Cox Corral Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Dankworth Lake~~ | ~~A&Wc, FBC, FC~~ |
| ~~Deadman Canyon Creek~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Deadman Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Dry Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Dry Prong Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Eagle Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~East Eagle Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~East Salt Shed Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~East Shortline Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |

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| ~~Evans Pond~~ | ~~A&Ww, FBC~~ |
| ~~Foote Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Four Mile Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Frye Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Frye Mesa Reservoir~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Geronimo Tank (Concrete)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Geronimo Tank (Earth Dam)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Gibson Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Gila River (New Mexico border to San Carlos Lake)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Gila River (San Carlos Lake to San Pedro River)~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Gila River (San Pedro River to Mineral Creek)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Gila River (Mineral Creek to Ashurst-Hayden Dam)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Gimme Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Grant Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Green Mountain Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Headquarters Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Homer J. Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~IDT Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Juniper Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~K P Creek~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~Kidde Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~UPPER GILA RIVER BASIN (cont.)~~ | |
| ~~Lasley Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Little Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Loafer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Lower Georges Reservoir~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Luna Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Maggie Jones Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Marijilda Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Markham Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Mineral Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Nine Mile Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Pigeon Creek~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Pima Gap Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Pine Flat Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Point of Pines Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Point-O-Pines Charco Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Prairie Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Raspberry Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~Riggs Reservoir~~ | ~~A&Ww, FBC, FC~~ |
| ~~Rodeo Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Roper Lake~~ | ~~A&Ww, FBC, FC~~ |
| ~~Salt Creek Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Salt Shed Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~San Carlos Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~San Carlos River~~ | ~~A&Ww, FBC, FC~~ |
| ~~San Francisco River (Headwaters to New Mexico border)~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~San Francisco River (New Mexico border to the Gila River)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~San Simon River~~ | ~~A&Ww, PBC, AgI, AgL~~ |
| ~~Seven Mile Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Sheep Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Shortline Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Slaughter Camp Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Smith Pond~~ | ~~A&Ww, FBC, FC~~ |
| ~~Soldier Hole Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~South Headquarters Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~South Summit Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Stone Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Strayhorse Creek~~ | ~~A&Wc, FBC, FC~~ |
| ~~Summit Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Sweetmeat Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Talkali Lake~~ | ~~A&Ww, FBC, FC, AgI~~ |
| ~~Tarantula Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Tinny Pond~~ | ~~A&Ww, FBC, FC, AgL~~ |

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| ~~Turkey Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Turkey Roost Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Turtle Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~University Charco Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Upper Cienega Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Walnut Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
| ~~White Canyon Creek~~ | ~~A&Ww, FBC, FC~~ |
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| ~~VERDE RIVER BASIN~~ | |
| ~~American Gulch (Headwaters to the Payson WWTP)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~American Gulch[1] (Payson WWTP to the East Verde River)~~ | ~~A&Wedw, PBC~~ |
| ~~Aspen Creek~~ | ~~A&Ww, PBC~~ |
| ~~Bar Cross Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Barrata Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Bartlett Lake~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Beaver Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Bitter Creek (Headwaters to the Jerome WWTP)~~ | ~~A&Ww, PBC, AgL~~ |
| ~~Bitter Creek[1] (Jerome WWTP to 2.5 km downstream)~~ | ~~A&Wedw, PBC~~ |
| ~~Bitter Creek (Below 2.5 km downstream of the Jerome WWTP)~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Bonita Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Bray Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Carter Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Cement Dam Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |
| ~~VERDE RIVER BASIN (cont.)~~ | |
| ~~Chase Creek~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Dead Horse Lake~~ | ~~A&Wc, FBC, FC~~ |
| ~~Deadman Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Del Rio Dam Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Dry Beaver Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Dude Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~East Verde River~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~El Paso Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Ellison Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Fossil Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Fossil Springs~~ | ~~A&Ww, FBC, DWS~~ |
| ~~Foxboro Lake~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Fry Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Gap Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Garrett Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Goldwater Lake~~ | ~~A&Wc, FBC, DWS, FC~~ |
| ~~Granite Basin Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Granite Creek~~ | ~~A&Ww, FBC, AgI, AgL~~ |
| ~~Heifer Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Hell Canyon Tank~~ | ~~A&Ww, PBC, FC, AgL~~ |
| ~~Homestead Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Horse Park Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Horseshoe Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Jacks Canyon Wash[1] (Big Park WWTP to Dry Beaver Creek)~~ | ~~A&Wedw, PBC~~ |
| ~~J.D. Dam Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~McLellan Reservoir~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Meath Dam Tank~~ | ~~A&Ww, FBC, AgL~~ |
| ~~Mullican Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Oak Creek[2]~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Oak Creek, West Fork[2]~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Peck's Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Perkins Lake~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Pine Creek~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Red Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Reservoir #1~~ | ~~A&Ww, FBC, FC~~ |
| ~~Reservoir #2~~ | ~~A&Ww, FBC, FC~~ |
| ~~Scholze Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Spring Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Steel Dam Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Stehr Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |

| | |
|---|---|
| ~~Stoneman Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sullivan Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Sycamore Creek (Coconino Forest)~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Sycamore Creek (Tonto Forest)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Tangle Creek~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Trinity Tank~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Verde River (Above Bartlett Dam)~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Verde River (Below Bartlett Dam)~~ | ~~A&Ww, FBC, DWS, FC, AgI, AgL~~ |
| ~~Watson Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Webber Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~West Clear Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Wet Beaver Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Whitehorse Lake~~ | ~~A&Wc, FBC, DWS, FC, AgI, AgL~~ |
| ~~Williscraft Lake~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Willow Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Willow Lake~~ | ~~A&Ww, FBC, FC, AgI, AgL~~ |
| ~~Willow Valley Lake~~ | ~~A&Ww, FBC, AgL~~ |

~~WILLCOX PLAYA~~

| | |
|---|---|
| ~~Ash Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Big Canyon Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Grant Creek~~ | ~~A&Wc, FBC, DWS, FC, AgL~~ |
| ~~High Creek~~ | ~~A&Ww, FBC~~ |
| ~~Moonshine Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Pinery Creek~~ | ~~A&Ww, FBC, DWS, FC~~ |
| ~~Navigable water~~ | ~~Designated Use~~ |

~~WILLCOX PLAYA (cont.)~~

| | |
|---|---|
| ~~Post Creek~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Riggs Flat Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Rock Creek~~ | ~~A&Ww, FBC, FC, AgL~~ |
| ~~Snow Flat Lake~~ | ~~A&Wc, FBC, FC, AgI, AgL~~ |
| ~~Soldier Creek~~ | ~~A&Wc, FBC, FC, AgL~~ |
| ~~Willcox Playa~~ | ~~A&Ww, FBC, AgL~~ |

~~ABBREVIATIONS:~~

~~A&Wc = Aquatic and Wildlife (cold water fishery).~~

~~A&Wc = Aquatic and Wildlife (ephemeral).~~

~~A&Wedw = Aquatic and Wildlife (effluent dominated water).~~

~~A&Ww = Aquatic and Wildlife (warm water fishery).~~

~~AgL = Agricultural Livestock Watering.~~

~~AgI = Agricultural Irrigation.~~

~~DWS = Domestic Water Source.~~

~~FBC = Full Body Contact.~~

~~PBC = Partial Body Contact.~~

~~FC = Fish Consumption.~~

~~WTP = Water Treatment Plant.~~

~~WWTP = Wastewater Treatment Plant.~~

~~NOTES:~~

~~1 = An effluent dominated water.~~

~~2 = A unique water: Limits developed on a site-specific basis for each stream segment or lake. See R18-11-112 for applicable criteria.~~

~~3 = Municipal Park Lake.~~

**Appendix C.** ~~Practical Quantitation Limits (PQLs)~~

| ~~PARAMETER~~ | ~~PQLs (µg/L)~~ |
|---|---|
| ~~Acenaphthylene~~ | ~~10~~ |
| ~~Acrylonitrile~~ | ~~5~~ |
| ~~Aldrin~~ | ~~0.05~~ |
| ~~Anthracene~~ | ~~10~~ |
| ~~Antimony~~ | ~~5~~ |
| ~~Arsenic~~ | ~~10~~ |
| ~~Benzidine~~ | ~~20~~ |
| ~~Benzo (a) anthracene~~ | ~~10~~ |
| ~~Benzo (a) pyrene~~ | ~~6~~ |
| ~~Benzo (ghi) perylene~~ | ~~10~~ |
| ~~Benzo (k) fluoranthene~~ | ~~10~~ |
| ~~3,4 Benzofluoranthene~~ | ~~10~~ |
| ~~Beryllium~~ | ~~0.5~~ |
| ~~BHC alpha~~ | ~~0.05~~ |
| ~~BHC beta~~ | ~~0.05~~ |
| ~~BHC gamma (lindane)~~ | ~~0.05~~ |
| ~~Bis(2 chloroethyl) ether~~ | ~~10~~ |
| ~~Bis (2 ethylhexyl) phthalate~~ | ~~10~~ |
| ~~Chlordane~~ | ~~0.1~~ |
| ~~Chlorodibromomethane~~ | ~~1~~ |
| ~~3 methyl 4 chlorophenol~~ | ~~5~~ |
| ~~Chrysene~~ | ~~10~~ |
| ~~Cyanide~~ | ~~20~~ |
| ~~DDD~~ | ~~0.1~~ |
| ~~DDE~~ | ~~0.1~~ |
| ~~DDT~~ | ~~0.1~~ |
| ~~Dibenzo (ah) anthracene~~ | ~~10~~ |
| ~~3,3 Dichlorobenzidine~~ | ~~20~~ |
| ~~Dichlorobromomethane~~ | ~~0.5~~ |
| ~~1,3 Dichloropropene~~ | ~~0.5~~ |
| ~~Dieldrin~~ | ~~0.1~~ |
| ~~2,4 Dinitrophenol~~ | ~~50~~ |
| ~~2 methyl 4,6 Dinitrophenol~~ | ~~50~~ |
| ~~2,4 Dinitrotoluene~~ | ~~10~~ |
| ~~2,3,7,8 TCDD (Dioxin)~~ | ~~0.005~~ |
| ~~Endosulfan sulfate~~ | ~~0.2~~ |
| ~~Endosulfan alpha~~ | ~~0.1~~ |
| ~~Endosulfan beta~~ | ~~0.05~~ |
| ~~Endrin~~ | ~~0.1~~ |
| ~~Endrin aldehyde~~ | ~~0.2~~ |
| ~~Fluorene~~ | ~~10~~ |
| ~~Heptachlor~~ | ~~0.05~~ |
| ~~Heptachlor epoxide~~ | ~~0.1~~ |
| ~~Hexachlorobenzene~~ | ~~0.5~~ |
| ~~Hexachlorobutadiene~~ | ~~5~~ |
| ~~Hexachlorocyclopentadiene~~ | ~~5~~ |
| ~~Indene (1,2,3 cd) pyrene~~ | ~~10~~ |
| ~~Mercury~~ | ~~0.5~~ |
| ~~N nitrosodimethylamine~~ | ~~10~~ |
| ~~N nitrosodi n propylamine~~ | ~~10~~ |
| ~~PCBs~~ | ~~0.5~~ |
| ~~Phenanthrene~~ | ~~10~~ |
| ~~Pyrene~~ | ~~10~~ |
| ~~Selenium~~ | ~~5~~ |
| ~~Silver~~ | ~~1~~ |
| ~~Sulfides~~ | ~~10000~~ |
| ~~1,1,2,2 Tetrachloroethane~~ | ~~5~~ |
| ~~Toxaphene~~ | ~~2~~ |
| ~~2,4,6 Trichlorophenol~~ | ~~5~~ |

~~µg/L - micrograms per liter~~