Advanced Water Purification Program
"Implementation Update" Rulemaking
Draft Rules
6/22/26

ADEQ welcomes comments on these draft rules starting on Monday, 6/22/26 and ending on Monday, 7/20/26.
Please send comments to AWP@azdeq.gov.
When commenting, please provide:

- the commenter's name;
- the commenter's contact information (for ADEQ follow-up as necessary);
- the citation to the specific rule/section/subsection;
- the specific comment/issue;
- any proposed changes, if applicable; and
- a justification for the comment.

The focus of this rulemaking is primarily to revise R18-9-B804 (AWP Operator Certification), R18-9-C817 (Demonstration Permit), and R18-9-E826 (Tier 2 Chemical Control; AWP-Specific Chemicals) in order to directly address implementation challenges related to early program administration, while maintaining the protection of public health. In addition to the rulemaking's primary focus, a number of miscellaneous revisions can be found throughout the AWP rules represented below.

KEY:

- Underlined language represents language proposed to be added.
- ~~Stricken~~ language represents language proposed to be removed.
- Language highlighted in light green represents a proposal to significantly change the language or rule structure at this location.
    - In these cases, a judgment call was made to not utilize underline / ~~strikethrough~~ in the interest of draft language presentation clarity.
    - Where language is highlighted in light green, the existing language in rule is proposed to be completely replaced by the light green highlighted language in this document.
        - For a comparison between the existing language and the proposed language, please reference the published AWP rules in the Arizona Administrative Code:
            - Chapter 1, Article 5 Link;
            - Chapter 5, Article 1 Link;
            - Chapter 9, Article 8 Link;
            - Chapter 14, Article 3 Link.
    - While sections highlighted in light green may represent significant language changes, it may also represent non-significant structural revisions that nonetheless modified the original rule enough to render an underline / ~~strikethrough~~ version of those changes unclear or messy.
    - Light green highlighted language can be found in the document at the following locations:
        - R18-9-A803 Applicability and Prohibitions
        - R18-9-C817 Demonstration Permit
        - R18-9-E824 Enhanced Source Control
        - R18-9-E826 Tier 2 Chemical Control; Advanced Water Purification-Specific Chemicals
        - R18-9-F832 Minimum Design Requirements
- Rule section titles followed by the language – (No Change) – signify no language changes exist in this draft.
- Ellipses (...) are used throughout this document to generally signify that not all AWP rule language was recreated in this draft, only the language necessary to convey proposed changes.
    - To this end, an ellipses in this document signifies that existing language is not being recreated or is being skipped over at that location.

DRAFT

TABLE OF CONTENTS:

DRAFT

ARIZONA ADMINISTRATIVE CODE
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 1. DEPARTMENT OF ENVIRONMENTAL QUALITY - ADMINISTRATION

ARTICLE 5. LICENSING TIME-FRAMES

…

Table 10. Water Permit Licensing Time-Frames (Business Days)

ADVANCED WATER PURIFICATION PERMITS				
Full-Scale Permit No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 249 294[1]	 284 329
Full-Scale Permit Renewal No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 186 231[1]	 221 266
Full-Scale Permit Significant Amendment No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 249 294[1]	 284 329
Demonstration Permit No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 ~~249~~145 ~~294~~195[1]	 ~~284~~180 ~~329~~220
Demonstration Permit Renewal No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 109 154[1]	 144 189
Demonstration Permit Significant Amendment No public hearing Public hearing	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	 35 35	 ~~186~~109 ~~231~~154[1]	 ~~221~~144 ~~266~~189
Minor Amendment - Full-Scale and Demonstration Permit	A.R.S. §§ 49-211 18 A.A.C. 9, Article 8	35	100	135

[1] A request for a public hearing allows the Department 60 days to publish the notice of public hearing and for the official comment period. Forty-five business days are added to the substantive review time-frame.

…

DRAFT

ARIZONA ADMINISTRATIVE CODE
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 5. DEPARTMENT OF ENVIRONMENTAL QUALITY - ENVIRONMENTAL REVIEWS AND CERTIFICATIONS

ARTICLE 1. CLASSIFICATION OF WATER AND WASTEWATER FACILITIES AND CERTIFICATION OF OPERATORS

…

R18-5-103. Certification Committee

A. Upon the effective date of this rule, the Director shall establish a certification committee to make recommendations and to provide the Department with technical advice and assistance related to this Article and Chapter 9, Article 8 when requested.

B. The certification committee shall consist of members appointed to ~~11~~12 ~~members~~ positions as follows:

1. One employee of the Department~~;~~.
2. One currently employed wastewater treatment plant operator with Grade 4 certification that additionally represents a wastewater treatment facility with a design flow of greater than 5 million gallons per day (MGD) and may participate in the National Pretreatment Program~~;~~.
3. One currently employed water treatment plant operator with Grade 4 certification~~;~~.
4. One currently employed wastewater collection system operator with Grade 4 certification~~;~~.
5. One currently employed water distribution system operator with Grade 4 certification~~;~~.
6. One faculty member teaching sanitary sciences or environmental engineering at an Arizona university or community college~~;~~.
7. One professional engineer, registered and residing in Arizona, engaged in consulting in the field of sanitary engineering or environmental engineering~~;~~.
8. One elected or appointed municipal official~~;~~.
9. One representative of an investor-owned water or wastewater facility~~;~~.
10. One representative of a small public water system~~;~~ ~~and~~
11. One currently employed remote operator representative~~;~~ and
12. One currently employed and certified AWP operator.

C. The Director shall appoint each certification committee member.

D. The Director may appoint a single person to represent two listed positions if qualified, but may not appoint a single person to represent three or more listed positions.

~~**D**~~**E.** The certification committee shall meet at least twice a year. At the first meeting of each calendar year, the certification committee shall select, from its membership, a chairperson and other officers as necessary. The Department's certification committee member is the executive secretary, who is responsible for keeping records of all meetings.

~~**E**~~**F.** The term of a certification committee member is three years.

~~**F**~~**G**. A meeting quorum consists of the chairperson or the chairperson's designated representative, the executive secretary or the executive secretary's designated representative, and three other members of the committee.

~~**G**~~**H.** In the event of a vacancy caused by death, resignation, or removal for cause, the Director shall appoint a successor for the unexpired term.

~~**H**~~**I.** A certification committee member may be reappointed, but a member shall not serve more than three consecutive terms.

…

DRAFT

ARIZONA ADMINISTRATIVE CODE
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER POLLUTION CONTROL

ARTICLE 8. ADVANCED WATER PURIFICATION

PART A. GENERAL PROVISIONS

R18-9-A801. Definitions

In addition to the definitions in A.R.S. § 49-201, the following terms apply to this Article:

…

6. " ~~Raw~~ Advanced treated water augmentation" means introducing advanced treated water into the ~~raw~~ drinking water supply upstream of ~~a drinking water treatment facility~~ an entry point to the distribution system for further treatment or blending.

~~6~~7. "Advanced Water Purification" or "AWP" means the treatment or processing of treated wastewater to advanced treated water or finished water standards for advanced treated water augmentation or finished water augmentation ~~the purpose of delivery to a drinking water treatment facility or a drinking water distribution system~~.

8. "Advanced Water Purification permit" or "AWP permit" means a full-scale permit for human consumption of advanced treated water or finished water pursuant to R18-9-C816 of this Article and, unless otherwise specified, includes an AWP demonstration permit for limited human consumption of advanced treated water pursuant to R18-9-C817 of this Article.

~~7~~9. "Advanced Water Purification Responsible Agency" or "AWPRA" means the applicant or permittee, comprising one or more AWPRA Partners, responsible for compliance with the requirements of the AWP program for a particular AWP project and formed pursuant to R18-9-B805. An AWPRA must be a "person" under A.R.S. § 49-201(33).

~~8~~10. "Advanced Water Purification Responsible Agency Partner" or "AWPRA Partner" means any entity that collects or provides treated wastewater to the AWP project, performs wastewater source control or treatment pursuant to this Article, or utilizes AWP project water as a source for delivery to a drinking water distribution system.

~~9~~11. "Advanced Water Purification project" or "AWP project" means all facilities related to the advanced treatment of treated wastewater to drinking water standards operating under an AWP permit or demonstration permit.

~~10~~12. "AWP project treatment train" means a treatment train designed to meet the requirements contained in this Article. In addition to the advanced water treatment facility (AWTF), portions of the water reclamation facility or drinking water treatment facility can be part of an AWP project treatment train.

~~11~~13. "AWPRA facility" or "facility" means a drinking water treatment facility, advanced water treatment facility (AWTF), demonstration facility, or other AWPRA Partner facility ~~collection system, or wastewater treatment plant~~ involved in the production of advanced treated water or finished water under this Article.

~~12~~14. "Advanced Water Treatment Facility" or "AWTF" means a facility where treated wastewater is treated pursuant to the requirements of this article, including a demonstration facility.

~~13~~15. "Alert level" means a value or criterion established in an AWP permit at a critical control point that, when exceeded, alerts an operator that a potential problem may require a response.

~~14~~16. "Amendment" means a change to the permit language resulting from a modification event.

~~15~~17. "Aquifer Protection Permit" or "APP" means an individual permit or a general permit issued under A.R.S. §§ 49-203, 49-241 through 49-252, and Articles 1, 2, and 3 of this Chapter.

18. "Available testing method" means any matching drinking water or wastewater method available through the following sources: EPA, ASTM, Standard Methods, or other sources prescribed by the Department.

~~16~~19. "AWP" means Advanced Water Purification ~~(*See* R18-9-A801(6))~~.

~~17~~20. "Barrier" means a measure (technical, operational or managerial) implemented to control microbial or chemical constituents in advanced treated water.

21. "Bench scale" means an isolated, small, laboratory-based testing environment where water treatment processes are simulated using volumetric equipment that fits entirely on a standard lab bench or inside a fume hood.

~~18~~22. "Best Management Practices" or "Best Practices" means a set of principles, guidelines and standards that an AWPRA follows to ensure high levels of quality, safety, efficiency and reliability. The principles, guidelines and standards in an AWP guidance document constitute Best Management Practice or Best Practice.

~~19~~23. "Bioassay" means tests performed using live cell cultures or mixtures of cellular components in which the potency of a chemical or water concentrate is tested based on its effect on a measurable constituent, such as inhibition or the induction of a response (including carcinogenicity and mutagenicity). Bioassays can be used to measure synergistic, additive, and antagonistic interactions between compounds that may be present in a mixture.

~~20~~24. "Blending" means the mixing of advanced treated water with another water source prior to the entry point to the distribution system ~~that will result in raw water augmentation or treated water augmentation directly to the distribution system~~. Blending does not apply to an Engineered ~~Storage Buffer~~ storage buffer where storage of only advanced treated water takes place.

~~21~~25. "Challenge test" means a study comparing a pathogen, surrogate parameter, or indicator compound concentration between the influent and effluent of a treatment process to determine the removal capacity of the treatment process. The concentration in the influent must be high enough to ensure that a measurable concentration is detected in the effluent (i.e., filtrate detection limit).

~~22~~26. "Chemical" means any substance, used in or produced by a reaction involving changes to atoms or molecules, that has a defined composition and which is either naturally occurring or manufactured.

~~23~~27. "Chemical peak" means an abnormal increase in the level of a chemical that represents a potential human health hazard that is the result of intentional or unintentional illicit discharges of chemicals to the sewershed. Chemical peaks are different from normal facility variation in water quality.

28. "Class-representative" means a potentially impactful non-domestic discharger that best represents a group or class of reasonably uniform potentially impactful non-domestic dischargers in terms of discharge characteristics. Class uniformity shall be based on similarity of business type, industrial classification code, chemicals used in production, and expected discharge volume and concentration ranges, as applicable. Class examples may include restaurants, home improvement, grocery stores, and clothing retail.

~~24~~29. "Compliance schedule" means a list of required items assigned by the Department to the ~~Permittee~~ permittee to be completed in the AWP permit.

~~25~~30. "Constituent of ~~Concern~~ concern" means a potentially harmful or difficult to treat substance that could cause treatment interference, pass-through, or a violation of a treatment technique requirement, action level, or Maximum Contaminant Level in the advanced treated water or finished water. Constituents of concern include Tiers 1, 2, and 3 chemicals.

~~26~~31. "Constituent" means any physical, chemical, biological, or radiological substance or matter found in water and/or wastewater.

~~27~~32. "Continuous online analyzers" means a monitoring sensor or device that monitors continuously or in real time (intervals of 15 minutes or less) and is positioned directly in the process flow or sample line to measure treatment performance.

~~28~~33. "Critical ~~Control Point~~ control point" means a point in the treatment train that is specifically designed to reduce, prevent, or eliminate process failure, and for which controls exist to ensure the proper performance of that process, verified via monitoring.

~~29~~34. "Demonstration permit" means an AWP permit that does not include distribution of finished water to drinking water consumers.

~~30~~35. "Department" means the Arizona Department of Environmental Quality.

~~31. "Direct integrity test" means a physical test applied to a membrane unit in order to identify and isolate integrity breaches, such as leaks that could result in contamination of the filtrate.~~

~~32~~36. "Director" *means the ~~D~~director ~~of the Arizona Department of~~ ~~E~~environmental ~~Q~~quality or the director's designee.* A.R.S. § 49-201(11).

~~33~~37. "Disinfection treatment process" means a treatment process that either physically or chemically eliminates or inactivates pathogenic microorganisms.

~~34~~38. "Distribution" means the act of delivering finished water through a network of pipes or other constructed conveyances from a facility to a consumer for human consumption.

~~35~~39. "Distribution system" means the infrastructure used to carry out distribution.

~~36~~40. "Draft permit" means a preliminary draft of a permit upon which the Director has not yet made a final permit determination.

~~37~~41. "Drinking ~~Water Treatment Facility~~ water treatment facility" means a water treatment facility that is designed and operated to meet the requirements of the Safe Drinking Water Act.

~~38~~42. "Engineered ~~Storage Buffer~~ storage buffer" means a storage facility used to provide retention time before advanced treated water is introduced into a drinking water treatment facility or distribution system.

~~39~~43. "Enhanced ~~Source Control~~ source control" means a program that enables the AWPRA to prevent constituents of concern, including target chemicals, from negatively impacting the AWTF, or the water it produces, by controlling them at their source.

44. "Entry point to the distribution system" or "EPDS" has the same meaning as defined in R18-4-103(B).

~~40~~45. "Exceedance" means an increase in the concentration of a constituent of concern beyond an established level such as an MCL, alert level, or action level.

~~41~~46. "Excursion" means a deviation from established water quality boundaries for a process or at any point in a treatment train.

47. "Existing validation study" means a validation study conducted by an equipment manufacturer, a state or federal agency, a research institution, a water utility, or another entity, in any state, territory, or country, that establishes pathogen log reduction values for a treatment barrier using industry standard methods.

~~42~~48. "Failure" means a condition in which an excursion or loss of performance occurs in one or more of the unit processes that results in a treatment train to not meet a performance metric or deviate from an approved operational range for parameters, necessitating a shutdown of a specific train or the entire plant for compliance.

DRAFT

~~43~~49. "Failure ~~Response Time~~ response time" means the maximum possible time from when a failure occurs in the treatment system to when the quality of the final product water is no longer affected by the failure. Failure response time is calculated as a sum of the sampling interval, sample turnaround time and system reaction time, with overall failure response time based on the treatment process with the highest individual failure response time.

~~44~~50. "Filtration treatment process" means a treatment process that physically separates a constituent of concern from water.

~~45~~51. "Finished water" or "finished drinking water" means water produced by an AWTF (advanced treated water), or a drinking water treatment facility, and which is introduced into a distribution system or served for human consumption without additional treatment, except for measures required to uphold water quality within the distribution system.

52. "Finished water augmentation" means finished drinking water from an AWTF, permitted as a drinking water treatment facility, which is directly introduced at the entry point to the distribution system.

~~46~~53. "Full scale" means the complete implementation and operation of an AWP system that is designed to treat treated wastewater to advanced treated water or finished water standards and to meet the finished water demand of the community.

~~47~~54. "Good engineering practice" means a set of principles, guidelines, and standards that engineers follow to ensure their work meets high levels of quality, safety, efficiency and reliability. ~~-~~The principles, guidelines, and standards in an ADEQ-issued AWP guidance document constitute good engineering practice.

~~48~~55. "Health Advisory" or "HA" means an estimate of acceptable levels for a chemical substance in drinking water based on health effects information ~~that is:~~

~~a. Published by EPA;~~

~~b. Established in credible peer-reviewed literature or state or Federal databases;~~

~~c. Established by the Department; or~~

~~d. Established by another state's drinking water program as a "notification level"~~.

~~49~~56. "Impactful non-domestic dischargers" means a non-domestic discharger that has been determined by the AWPRA to discharge in such a way that will or does significantly impact the AWPRA's treatment processes and may or does significantly impact public health. ~~-~~Such determinations are made through a significant impact analysis pursuant to R18-9-E824~~(C)~~(D)(2)(b).

~~50~~57. "Indicator compound" or "Indicator" or "Performance Based Indicator" means a chemical found in treated wastewater that serves as a representative substance for a particular group of trace organic compounds, embodying their physical, chemical, and biodegradation properties.

~~51~~58. "Initial Source Water Characterization" or "ISWC" means baseline monitoring of chemicals and pathogens performed on the treated wastewater effluent of a Water Reclamation Facility pursuant to R18-9-C814.

~~52~~59. "Interference" means a discharge which alone, or in conjunction with a discharge or discharges from other sources, both:

a. ~~inhibits~~ Inhibits or disrupts the Water ~~Reclamation Facility~~ reclamation facility or the ~~Advanced Water Treatment Facility~~ AWTF, and

b. ~~is~~ Is the cause of a violation of any requirement of the AWP permit.

~~53~~60. "Local limit" means a set of specific, local, relevant, and enforceable limits, control measures, and best management practices established to protect AWPRA Facilities from pass-through or interference that could result in a threat to public health.

~~54~~61. "Log reduction value" means the measure of a treatment train's or a treatment process's ability to remove or inactivate microorganisms such as bacteria, protozoa and viruses. A log reduction value is the log reduction validated or credited for a treatment process or treatment train.

~~55~~62. "Log reduction" means the logarithm base 10 of the ratio of the levels of a pathogenic organism or other contaminant before and after treatment or a reduction in the concentration of a contaminant or microorganism by a factor of 10. One log reduction corresponds to a 90-percent reduction from the original concentration.

~~56~~63. "Maximum Contaminant Level" or "MCL" has the same meaning set forth in Title 18, Chapter 4, Article 1 of this Title.

~~57~~64. "Modification" means a change or changes to the treatment train or operations or any other component that will result in a change in the water quality of any process, unit of operation or to the advanced treated water or finished water.

~~58~~65. "Municipal wastewater" means wastewater that contains predominantly domestic waste and may include commercial and industrial waste.

~~59~~66. "Non-domestic dischargers~~ources~~" means ~~both~~an industrial source or a ~~and~~ commercial source~~s~~.

~~60~~67. "National Pretreatment Program" or "NPP" means the federal program referred to by this name under the Clean Water Act that is meant to protect infrastructure and receiving waters to a fishable and swimmable standard. The NPP is designed to reduce conventional and toxic pollutant levels discharged by industries and other nondomestic wastewater sources into municipal sewer systems and into the environment. The National Pretreatment Program's implementing regulations are found at Title 40 of the Code of Federal Regulations, Parts 122, 123, 124, and 403 and chapter I, subchapter N.

DRAFT

~~61~~68. "National Pretreatment Program AWPRA" or "NPP AWPRA" means an AWPRA subject to R18-9-C813(B).

~~62~~69. "Non-National Pretreatment Program AWPRA" or "Non-NPP AWPRA" means an AWPRA subject to R18-9-C813(C).

~~63~~70. "Off-specification water" or "off-spec water" means water that has a quality that does not meet standards such as drinking water MCLs or other AWP programmatic requirements such as standards associated with surrogates or indicators.

71. "On-site validation study" means a validation study conducted by the applicant that follows a departmentally approved validation protocol for the purposes of determining pathogen log reduction values for a treatment barrier.

~~64~~72. "Operational barrier" means a barrier in the form of measures, including operations and monitoring plans, failure and response plans, as well as operator training and certification.

~~65~~73. "Operational parameter" means a measurable property used to characterize or partially characterize the operation of a treatment process and must confirm the treatment barriers are intact to ensure the process is meeting the water quality and pathogen/chemical removal goals.

~~66~~74. "Original drinking water" means drinking water that was being distributed prior to the introduction of advanced treated water or finished water.

~~67~~75. "Oxidized wastewater" means wastewater that is treated to a level beyond simple removal of floating and suspended solids and meets the secondary treatment levels as described in R18-9-B204(B)(1).

~~68~~76. "Ozone with biologically active filtration" or "Ozone/BAC" means an ozonation process immediately followed by biologically activated carbon.

~~69~~77. "Pass-through" means the occurrence of a constituent of concern exiting Water Reclamation Facilities or Advanced Water Treatment Facilities in quantities or concentrations that have a significant potential to have serious adverse public health effects or to cause a violation of a treatment technique requirement, an action level or an MCL in the advanced treated water or finished water.

~~70~~78. "Pathogen" means a microorganism such as bacteria, virus, or protozoa that can cause human illness.

~~71~~79. "Pilot Study" or "Pilot train" or "Pilot" means a preliminary study and treatment train, of any scale representative to the full-scale facility, which is conducted to evaluate the feasibility, duration, cost, adverse events, and to improve upon the study design prior to performance of a full-scale project.

~~72~~80. "Potentially impactful non-domestic discharger" means a non-domestic discharger that has been determined by the AWPRA to pose a potential to adversely impact treatment processes or the public health or which otherwise must be identified and tracked by the AWPRA pursuant to R18-9-E824~~(B)(4)~~(D)(2)(a).

~~73~~81. "Product water" means water exiting a specific treatment process or a combination of treatment processes.

~~74~~82. "Public water system" has the same definition as the one incorporated by reference at A.A.C. R18-4-103 (40 CFR 141.2).

~~75~~83. "Quantitative Polymerase Chain Reaction" or "qPCR" means a PCR-based technique that couples amplification of a target DNA sequence with quantification of the concentration of that DNA species in the reaction.

~~76~~84. "Raw wastewater" means wastewater that is entering a Water Reclamation Facility via a sewage collection system and which has not undergone any centralized treatment. For the purposes of pathogen log removal, raw wastewater means wastewater prior to any point in a wastewater treatment process that may be credited for disinfection.

~~77. "Raw water augmentation" means introducing advanced treated water into the raw water supply upstream of a drinking water treatment facility.~~

~~78~~85. "Real time monitoring" or "online monitoring" means treatment performance monitoring using instruments directly in the process flow or sample line that occurs continuously or semi-continuously in intervals of 15 minutes or less.

~~79~~86. "Recalcitrant Total Organic Carbon" or "rTOC" means the Total Organic Carbon (TOC) found in finished water, which once used or consumed becomes wastewater. rTOC is unlike anthropogenic TOC present in wastewater because it may not be effectively eliminated by the Water Reclamation Facility, which leaves it as a constituent of the TOC in the treated wastewater.

~~80~~87. "Redundancy" means the use of multiple treatment barriers to attenuate the same type of constituent, so that if one barrier fails, performs inadequately, or is taken offline for maintenance, the overall system will still perform effectively, reducing risk.

~~81~~88. "Reference Dose" or "RfD" means an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

~~82~~89. "Reference pathogens" means Enteric viruses (specifically norovirus), Giardia lamblia cysts, and Cryptosporidium oocysts.

~~83~~90. "Reliability" means the ability of a treatment process or treatment train to consistently achieve the desired degree of treatment, based on its inherent redundancy, robustness, and resilience.

~~84~~91. "Resilience" means the ability of a treatment train to adapt successfully and restore performance rapidly when failure occurs.

DRAFT

~~85~~92. "Robustness" means the ability of an AWP system to address a broad variety of constituents and changes in the concentrations of the constituents in the source water and resist a failure.

~~86~~93. "Safe Drinking Water Act" means the Safe Drinking Water Act (Pub. L. 93-523, as amended; 42 U.S.C. 300f et seq.).

~~87~~94. "SCADA" or "SCADA System" means Supervisory Control and Data Acquisition system.

~~88~~95. "Secondary treatment" means treated wastewater that meets the following treatment levels:

a. Five-day biochemical oxygen demand (BOD5) less than 30 mg/l (30-day average) and 45 mg/l (seven-day average), or carbonaceous biochemical oxygen demand (CBOD5) less than 25 mg/l (30-day average) or 40 mg/l (seven-day average);
b. Total suspended solids (TSS) less than 30 mg/l (30-day average) and 45 mg/l (seven-day average);
c. pH maintained between 6.0 and 9.0 standard units; and
d. A removal efficiency of 85 percent for BOD5, CBOD5, and TSS.

~~89~~96. "Source water" means water that is characterized for chemical constituents and pathogens based on which treatment or source control is designed.

~~90~~97. "Surrogate parameter" or "Surrogate" means a measurable chemical or physical property, microorganism, or chemical that has been demonstrated to provide a direct correlation with the concentration of an indicator compound or pathogen; that may be used to monitor the efficacy of constituent reduction by a treatment process; and/or that provides an indication of a treatment process failure.

~~91~~98. "Target chemical" means any unregulated chemical causing a potential human health concern that may be present in the treated wastewater.

~~92~~99. "Tier 1 chemicals" means contaminants listed ~~regulated as~~ under the National Primary Drinking Water~~Maximum Contaminant Levels (MCLs)~~ Regulations, ~~under~~40 CFR Part 141 of the Safe Drinking Water Act, as incorporated by reference in R18-4-102~~, including MCLs and treatment techniques~~.

~~93~~100. "Tier 2 chemicals" means AWP-specific contaminants pursuant to R18-9-E826 that are not regulated in the Safe Drinking Water Act, but may be present in treated wastewater and may pose human health concerns.

~~94~~101. "Tier 3 chemicals" means Performance Based Indicators that are used to monitor the performance of AWP treatment trains.

~~95~~102. "Total Organic Carbon" or "TOC" means the amount of organic carbon in a sample.

~~96~~103. "Trace Organic Compounds" or "TOrCs" means a category of compounds such as pharmaceuticals, personal care products, and hormones.

~~97~~104. "Treated wastewater" means any water or wastewater source of predominantly municipal origin coming from a Water Reclamation Facility and going to an Advanced Water Treatment Facility that has undergone treated wastewater characterization for either enhanced wastewater treatment or secondary wastewater treatment. For the purposes of the AWP program, treated wastewater originates from a Water Reclamation Facility that has liquid stream treatment processes that, at a minimum, are designed and operated to produce oxidized wastewater that achieves a defined source water quality for the purpose of additional treatment by an Advanced Water Treatment Facility.

~~98. "Treated water augmentation" means finished drinking water from an AWTF, permitted as a drinking water treatment facility, which is directly introduced into a distribution system for human consumption.~~

~~99~~105. "Treatment barrier" means a barrier in constant operation, such as a physical barrier, that can be credited with treatment performance.

~~100~~106. "Treatment interference" or "interference" means a discharge from a non-domestic source which, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the AWPRA's treatment processes or operations and has significant potential for adverse public health consequences or significant potential to cause a violation of an action level, treatment technique or an MCL in advanced treated water or finished water.

~~101~~107. "Treatment mechanism" means a physical, chemical, or biological action within each treatment process that reduces the concentration of a pathogen or a chemical contaminant.

~~102~~108. "Treatment process" means a sequence of physical, chemical, or biological procedures applied to municipal wastewater or treated wastewater to remove pathogens and/or chemical constituents.

~~103~~109. "Treatment technique" means a required process intended to reduce the level of a contaminant in water and/or drinking water.

~~104~~110. "Treatment train" means a grouping of physical, chemical, and biological treatment technologies or processes that conditions or treats water to achieve a specific water quality goal.

~~105~~111. "Upset" means unintentional and temporary noncompliance with a performance metric resulting in an excursion or loss of performance in one or more of the unit processes.

~~106~~112. "Water ~~Reclamation Facility~~ reclamation facility" or "Wastewater ~~Treatment Plant~~ treatment plant" means an arrangement of devices and structures for collecting, treating, neutralizing, stabilizing, or disposing of domestic wastewater, industrial wastes, and biosolids. For the purposes of the AWP program, a wastewater treatment plant does not include industrial wastewater treatment plants or complexes whose primary function is the treatment of industrial wastes.

DRAFT

~~107~~113. "10^{-4} cancer risk" means the concentration of a chemical in drinking water which corresponds ~~corresponding~~ to an excess estimated lifetime cancer risk of 1 in 10,000.

R18-9-A802. Program Review; Incorporation by Reference; Quality Assurance/Quality Control Methodologies

A. …

B. The following materials are incorporated by reference and applicable in this Article unless specifically stated otherwise. The materials include no future editions or amendments, and are on file with the Department and as indicated below:

…

12. 40 CFR 261.21, "Characteristic of ignitability", published July 7, 2020, available at https://www.ecfr.gov.

…

…

R18-9-A803. Applicability and Prohibitions

A. This Article applies to any person who treats, processes, and provides advanced treated water for human consumption.

B. AWP Applicability to the Safe Drinking Water Act.

1. For the purposes of the Safe Drinking Water Act, treated wastewater is presumptively considered surface water. Nothing in this section exempts a facility from applicable Safe Drinking Water Act requirements in Chapter 4 of this Title.
2. An AWTF that treats treated wastewater to advanced treated water standards for advanced treated water augmentation is a source to a public water system for the purposes of compliance with the Safe Drinking Water Act and all applicable requirements of this Title.
3. An AWTF that treats treated wastewater to finished water standards for finished water augmentation is, or is part of, a public water system for the purposes of compliance with the Safe Drinking Water Act and all applicable requirements of this Title.
4. For all AWTFs:
   a. Permitting processes of this Article supersede the public water system permitting requirements in Chapter 5, Article 5, where they conflict, and
   b. Design requirements of this Article supersede the public water system design requirements in Chapter 5, Article 5 where they conflict.

C. Treating, processing, and providing advanced treated water for human consumption is prohibited except as permitted under an AWP permit, for a full-scale facility or demonstration facility, pursuant to this Article.

D. Delivery of advanced treated water or finished water for human consumption is prohibited under an AWP permit unless approval is explicitly given to the AWPRA, either:

1. Through issuance of an AWP permit, if full-scale certification was completed and approved as part of the application; or
2. After satisfaction of the post-permit issuance compliance schedule requirements pursuant to R18-9-C816(E).

E. Delivery of advanced treated water for human consumption is prohibited under an AWP demonstration permit unless approval is explicitly given to the AWPRA, either:

1. Through issuance of a demonstration permit, if no application requirements were deferred to a post-permit issuance compliance schedule; or
2. After satisfaction of the post-permit issuance compliance schedule requirements pursuant to R18-9-C817(C)(5).

PART B. GENERAL PROGRAM REQUIREMENTS

R18-9-B804. Advanced Water Purification Operator Certification

A. Definitions. In addition to the definitions for this Article, the following terms apply to this section:

…

5. "AWPRA facility" or "facility" means a drinking water treatment facility, AWTF, collection system, or wastewater treatment plant involved in the production of advanced treated water.
6. "Chief operator ~~– Direct responsible charge~~" means an AWP operator who has overall responsibility for the day-to-day, hands-on operation of an AWTF.
7. ~~"Direct responsible charge proxy" or "proxy" means an AWP shift operator who is designated by, and acts on behalf of, the operator in direct responsible charge when the operator in direct responsible charge is not onsite.~~
8. ~~"AWPRA facility" or "facility" means a drinking water treatment facility, AWTF, collection system, or wastewater treatment plant involved in the production of advanced treated water.~~ "Onsite" means physically present at any AWPRA facility where a critical control point is operated and any AWPRA facility assigned treatment credits.
9. "Professional development hour" means one hour of participation in an organized educational activity related to engineering, biological or chemical sciences, a closely related technical or scientific discipline, or operations management.

~~10~~9. "Qualifying experience" means experience, skill, or knowledge obtained through employment that is applicable to the technical or operational control of all or part of a facility (A.A.C. R18-5-101).

~~11~~10. "Shift operator" means an AWP operator who is in direct charge of the operation of a treatment facility for a specified period of the day and must be present at the site during the duration of the shift.

~~12.~~ ~~"Shift" means an eight-hour period of time in one day.~~

…

C. Certification Committee.

1. The Certification Committee established under R18-5-103 of this Title is designated to make recommendations and provide the Department with technical advice and assistance related to the AWP operator certification in addition to the stated purpose in R18-5-103(A).
2. Beginning two years from the effective date of this rule, the committee member described in R18-5-103(B)(12) shall have AWP operator certification. Between the effective date of this rule and that time, that committee member may be an AWP provisional operator pursuant to subsection (F) of this section.

D. General Requirements.

1. An AWPRA shall ensure all of the following:
   a. Except for demonstration facilities pursuant to R18-9-C817, all facilities receiving treatment credit pursuant to R18-9-E828 are operated by AWP operators,
   b. All facilities receiving treatment credit pursuant to R18-9-E828 have a ~~full-time operator in direct responsible charge onsite for at least two full shifts per day,~~ chief operator onsite at all times during operation, unless a request for alternative operator oversight has been approved by the Department pursuant to subsection (D)(2) below,
   ~~c. All facilities receiving treatment credit pursuant to R18-9-E828 have an operator in direct responsible charge, or their proxy, onsite at all times during operation,~~
   ~~d. When any facilities receiving treatment credit pursuant to R18-9-E828 is operated by a direct responsible charge proxy, an operator in direct responsible charge must be reasonably available to provide immediate direction telephonically, if necessary,~~
   ~~c~~c. An AWP operator makes all decisions about operational process control or system integrity regarding water quality or water quantity that affects public health,
   ~~d~~d. An AWPRA administrator who is not an AWP operator may make a planning decision regarding water quality or water quantity if the decision is not a direct operational process control or system integrity decision that affects public health,
   ~~e~~e. All critical control points at any facility receiving treatment credit pursuant to R18-9-E828 are operated by an AWP operator, and
   ~~h~~f. The names of all current AWP operators are reported to the Department as a component of the Operations Plan submitted pursuant to R18-9-F836.
2. During the application period, or at any point thereafter, an AWPRA may submit a request ~~to waive~~ for alternative operator oversight to the requirement in subsection (1)(b)~~.of this section if an operations plan, or amended operations plan, submitted to ADEQ pursuant to R18-9-F836 demonstrates that alternative oversight by an operator in direct responsible charge nevertheless achieves an equivalent degree of operational oversight and treatment reliability.~~ The request shall be submitted in conjunction with an operations plan, or an amended operations plan, pursuant to R18-9-F836, that demonstrates the requested alternative achieves a reasonable degree of operational oversight for the AWTF.
3. ~~If ADEQ grants the waiver request in subsection (D)(2) above, the operator in direct responsible charge is not required to be onsite for at least two full shifts per day, but shall be able to monitor operations over the facility onsite within the period specified in the operations plan.~~
4. ~~3~~. If the owner of a facility replaces an AWP chief operator ~~operator in direct responsible charge~~ with another AWP operator, the facility owner shall notify the Department in writing within 10 days of the replacement.
5. ~~4~~. An AWP operator shall notify the Department in writing within 10 days of the date the AWP operator either ceases to operate a facility or commences operation of another facility.
6. ~~5~~. An AWP operator shall operate each facility in compliance with applicable state and federal law.

E. AWP Operator Certification.

1. The Department shall issue an AWP operator certificate to an applicant if the applicant:
   …
   b. Passes a written AWP validated ~~advanced water treatment~~ examination, and
   …
2. To apply for AWP operator certification, an applicant shall submit to the Department the following information, as applicable, on a form approved by the Director:
   …
   e. Proof of either:
      i. Valid AWP provisional operator certification pursuant to subsection (F); or
      ii. ~~successful completion of the advanced water treatment~~ Successful passage of the AWP validated examination and other applicable certificates,

DRAFT

f. Documentation of the applicant's experience required under this section, and
g. The applicable fee under R18-14-301(D)(3).

F. AWP Provisional Operator Certification.

1. A prospective AWP operator certification applicant that lacks the requisite advanced water treatment qualifying experience pursuant to subsection (L)(4) may pursue provisional certification by applying to sit for the AWP validated examination pursuant to subsection (G).
2. Upon successful passage of the AWP validated examination, a person shall submit to the Department the applicable fee under R18-14-301(D)(2) for an AWP provisional operator certification.
3. Provisional operator certifications are only valid for a three-year period.
4. AWP provisional operators are not AWP operators under this section.

~~F~~G. AWP Validated Examination.

1. The Department shall provide examinations for certification of AWP operators. The Department may contract with third party examiners for administration of examinations. The Department shall ensure that a list of approved examiners is available upon request.
2. A person applying to sit for the AWP validated examination shall submit the applicable fee in R18-14-301(D)(1).
3. An applicant shall meet the following requirements for admission to an AWP validated~~AWP operator certification~~ examination:
   a. A Grade 3 drinking water operator shall have at least two years' experience operating a Grade 3 drinking water treatment facility.
   b. A Grade 4 drinking water operator shall have at least one year of experience operating a Grade 4 drinking water treatment facility.
   c. A Grade 3 wastewater operator shall have at least two years' experience operating a Grade 3 wastewater treatment facility.
   d. A Grade 4 wastewater operator shall have at least two years' experience operating a Grade 3 or Grade 4 wastewater treatment facility.

~~2~~4. The Department shall validate all examinations before administration. Each examination shall include topics such as advanced treatment technologies, system maintenance, regulatory protocols, safety, mathematics, and general system management.

~~3~~5. The examiner shall grade the examination and make the results available to the applicant and the Department within seven days of the date of the examination.

~~4~~6. An eligible examinee ~~applicant~~ shall not be admitted to an examination without a valid picture I.D.

~~5~~7. An individual must achieve a score of at least seventy percent on the examination in order to attain a passing grade.

~~6~~8. For applicants with a Grade 3 or Grade 4 wastewater treatment operator certification, the examination shall include an additional component which tests knowledge equivalent to the Grade 3 drinking water treatment operator examination.

~~G~~H. AWP Operator Certificate Renewal.

1. If the Department renews an AWP operator certificate, ~~the certificate~~ it is renewed for a three-year period, unless the AWP operator requests a shorter renewal term in writing.
2. An AWP operator may renew their AWP operator certificate without retaking the AWP validated examination ~~exam~~ in accordance with the following:
   a. Prior to the end of their AWP operator certificate period by submitting a renewal form; or
   b. Following the expiration of the certification period, if the AWP operator submits a completed renewal form to the Department within 90 days of the expiration date.
3. To renew an AWP operator certificate, an AWP operator shall complete and submit to the Department an AWP operator certificate renewal, on a form approved by the Director, along with the applicable fee in R18-14-301(D)(5).

…

6. As an alternative to the requirements of subsection (H)(2), an AWP operator may renew an AWP operator certificate by taking and passing an AWP validated ~~operator~~ examination.

~~H~~I. AWP Operator Certificate Expiration.

…

3. A person with an expired AWP operator certificate shall re-apply in accordance with subsections (G) and (H) in order to be certified as an AWP operator.
4. An AWP operator certificate is considered expired if ~~the~~ any supporting drinking water or wastewater certificate has been denied, expired, suspended, or revoked.

~~I~~J. AWP Operator Certificate Denial, Suspension, Probation, and Revocation.

…

2. The Department shall deny an AWP operator certificate if the application is deficient, the applicant fails to obtain a passing score on the AWP validated examination, or upon any other determination that the applicant has not met the requirements of this section.
3. The Department may revoke or suspend an AWP operator certificate, or place an AWP operator on probation, if the Department determines that the AWP operator:

…

d. Obtains, or attempts to obtain, an AWP operator certificate by fraud, deceit, or misrepresentation;

…

4. The action the Department takes under subsection (J)(3) may be made at the Department's discretion upon an review ~~examination~~ of the individual facts and circumstances, the number of findings the Department makes under (J)(3), and upon consideration of other factors, such as but not limited to, additional aggravating circumstances not considered under (J)(3).

…

~~J~~K. Reciprocity. The Department shall issue an AWP operator certificate to an applicant who holds a valid certificate from another jurisdiction, if the applicant:

1. Passes a written, AWP validated ~~validated AWP operator~~ examination in Arizona or in another jurisdiction that administers an ~~AWP~~ examination that is substantially equivalent to the examination in Arizona and validated by the Department, ~~and~~
2. Submits written evidence of the experience required under subsection (L), and
3. Submits the applicable fee in R18-14-301(D)(4).

~~K~~L. Experience.

1. The Department shall consider the following criteria to determine whether an applicant has the qualifying experience required for AWP operator certification:
   a. The type of operator certification held by the applicant, ~~and~~
   b. Years of qualifying experience as a certified operator for a specific grade of facility, and
   c. Advanced water treatment qualifying experience.

…

4. An applicant shall provide evidence of at least one year of advanced water treatment qualifying experience, which may be obtained through any of the following:

…

b. Operating an AWP demonstration facility ~~that is not distributing finished water for human consumption~~;

…

~~4~~5. An applicant that meets the requirements of this section and has passed the AWP validated ~~advanced water treatment~~ examination shall be certified in accordance with the following:

…

b. An applicant with Grade 4 drinking water treatment certification with at least one year of advanced water treatment qualifying experience shall receive certification as AWP chief operator ~~in direct responsible charge~~.

…

6. Experience working at an AWTF shall count towards qualified experience at a Grade 4 drinking water plant.

~~L~~M. Class and Grade Requirements.

1. Drinking Water Treatment and Distribution Systems.

…

b. The Department shall grade water distribution system AWPRA Partners ~~partners~~ pursuant to A.A.C. R18-5-115(B).

2. …

~~**N.** Transition.~~

~~1. Beginning two years from the effective date of the AWP programmatic rules in A.A.C. Title 18, Chapter 9, Article 8, all facilities receiving treatment credit pursuant to R18-9-E828 shall be operated by AWP operators certified in accordance with this section.~~

~~2. During the two-year transition period, all AWTFs shall be operated by a Grade 4 certified drinking water operator who has completed appropriate training, approved by the Department.~~

R18-9-B805. Advanced Water Purification Responsible Agency Formation; Joint Plan

A. …

B. Joint Plan. An AWPRA shall develop a Joint Plan describing all AWPRA Partner ~~partner~~ coordination procedures, including but not limited to, the following:

1. AWPRA Partner Details.
   a. Identification of each AWPRA Partner ~~partner~~ associated with the AWP project throughout the project's expected operational life,
   b. A description of the roles and responsibilities of each AWPRA Partner ~~partner~~, including designation of a lead AWPRA Partner ~~partner~~ responsible for fulfilling the requirements under the communication plan established in accordance with subsection (B)(4), and
   c. The legal authority of each AWPRA Partner ~~partner~~ to fulfill its roles and responsibilities.

…

4. A communication plan ensuring the timely dissemination of information regarding both treated wastewater and advanced treated water or finished water quality status and monitoring among all AWPRA Partners ~~partner~~,

DRAFT

5. Procedures to provide access to the AWPRA and all AWPRA Partner ~~partner~~ facilities, operations, and records for inspection at any time by the Department,

…

8. Procedures to notify AWPRA Partners ~~partner~~ and the Department of treatment failure incidents and all corresponding corrective actions taken,
9. A plan outlining all enforcement and corrective actions taken should an AWPRA Partner ~~partner~~ fail to meet the requirements of this Article or violate the Joint Plan, and
10. Procedures to address changes to the AWPRA Partners ~~partners~~, including the addition of new AWPRA Partners ~~partner~~ and the removal of existing AWPRA Partners ~~partner~~, in accordance with the requirements of the AWP program.

C. The AWPRA and all AWPRA Partners ~~partners~~ shall sign the Joint Plan.

…

R18-9-B806. General Requirements

A. ~~Delivery of advanced treated water or distribution of finished water is prohibited unless delivery or distribution approval is explicitly given to the AWPRA, either:~~

~~1. Through issuance of the AWP permit, if full-scale certification was completed and approved as part of the application; or~~

~~2. After satisfaction of the compliance schedule requirements pursuant to R18-9-C816(E).~~

AWP permittees shall at all times properly operate the AWP project consistent with the requirements of this Article.

B. Construction materials used at the AWTF, including materials used at AWPRA Partner facilities, except for water reclamation facilities, that collect, treat, store, or distribute water for human consumption through pipes or other constructed conveyances, shall be lead-free as prescribed in A.R.S. § 49-353(B). This subsection shall not apply to leaded joints necessary for the repair of cast iron pipes.

C. Treated wastewater used to supply an AWP project shall be predominantly municipal wastewater in origin.

D. Confidentiality of Information. In accordance with A.R.S. § 49-205, any information submitted to the Director pursuant to this Article may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the Director may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in A.R.S. § 49-205.

R18-9-B807. Inspections, Violations, and Enforcement (No Change)
R18-9-B808. Recordkeeping (No Change)
R18-9-B809. Construction and Compliance with Plans (No Change)
R18-9-B810. Record Drawings (No Change)
R18-9-B811. Outreach; Public Communications Plan (No Change)

PART C. PRE-PERMIT AND PERMIT REQUIREMENTS

R18-9-C812. Pre-Application Conference; Project Advisory Committee

A. …

B. The Department may assemble a project advisory committee for the purpose of providing project-specific technical consultation to the Department ~~throughout the application process~~.

…

4. Reviews by the project advisory committee of an AWPRA's application shall be conducted within the applicable Licensing Time Frames in Chapter 1, Article 5 of this Title.

R18-9-C813. Applicant Pathways Depending on National Pretreatment Program Applicability

A. …

B. National Pretreatment Program AWPRA. ~~An AWPRA with all water reclamation facility AWPRA partners subject to the National Pretreatment Program may elect to either:~~ If the AWPRA entity responsible for permitting compliance with this Article is a publicly owned treatment works subject to the National Pretreatment Program, that AWPRA applicant may elect to either:

1. Submit the Initial Source Water Characterization Plan and the Pilot Study Plan to the Department for review and comment prior to the AWP permit application in the order and format set forth in R18-9-C814 and R18-9-C815; or
2. Submit the Initial Source Water Characterization Report and Piloting Report to the Department for approval as components of the AWP permit application pursuant to R18-9-C816.

DRAFT

C. Non-National Pretreatment Program AWPRA. ~~An AWPRA with at least one water reclamation facility AWPRA Partner partner not subject to the National Pretreatment Program shall, throughout the pre-application period and in the order and format set forth in R18-9-C814 and R18-9-C815:~~ If the AWPRA entity responsible for permitting compliance with this Article is not a publicly owned treatment works subject to the National Pretreatment Program, that AWPRA applicant shall, throughout the pre-application period and in the order and format set forth in R18-9-C814 and R18-9-C815:

1. Submit the Initial Source Water Characterization Plan and the Pilot Study Plan to the Department for review and comment, and
2. Submit the Initial Source Water Characterization Report and Pilot Report to the Department for approval pursuant to R18-9-C816.

D. An AWPRA applicant that builds a pilot facility to full-scale and develops a Hybrid Pilot and Full-Scale Verification Plan, shall follow the submission requirements pursuant to R18-9-C815(A)(1)(c) and R18-9-F835(A)(1)(c) in lieu of the submission requirements in subsections ~~B and C~~ (B) and (C) of this section.

R18-9-C814. Initial Source Water Characterization

...

C. Monitoring. An AWPRA applicant shall conduct initial source water monitoring at all water reclamation facilities delivering treated wastewater as a source to an AWTF as applicable under R18-9-A802(C).

1. Monitoring shall be ~~conducted~~ located ~~at a location~~ before any AWP-credited pathogen treatment process, if applicable ~~that will be used for a treatment credit in the AWP project and before~~. Otherwise, monitoring shall be located at the point of diversion to the AWTF, or at another Departmentally-approved location.
2. Chemical Monitoring.
   a. The AWPRA applicant shall collect a minimum of twelve monthly composite samples representative of seasonal variability.
   b. If there is wide variability in a chemical concentration, meaning the coefficient of variation is greater than fifty percent, the AWPRA applicant shall reasonably increase the sampling interval in order to evidence this variability.
   c. The AWPRA applicant shall sample for the following chemicals~~, excluding those identified on the projected chemical treatment list developed in R18-9- E826~~:
      i. Tier 1 chemicals pursuant to R18-9-E825, and
      ii. Tier 2 chemicals pursuant R18-9-E826~~(D)~~(C)(4) and (C)(6), except for chemicals identified on the Projected Tier 2 Chemical Treatment List pursuant to R18-9-E826(E) and chemicals characterized using actual daily concentration monitoring pursuant to R18-9-E826(C)(5), and
      iii. ~~Any projected Tier 3 chemicals.~~Pass-Through or Interference List chemicals pursuant to R18-9-E826(B)(3), and
      iv. Any projected Tier 3 chemical pursuant to R18-9-E827.

…

E. Report. An Initial Source Water Characterization Report shall be finalized within three years of the commencement of either initial source water monitoring pursuant to subsection (C) above, or actual daily concentration monitoring pursuant to R18-9-E826(C)(5)(a), or at the Director's discretion. The Initial Source Water Characterization Report shall be prepared pursuant to R18-9-A802(C) and shall include, but is not limited to, the following:

…

11. The Actual Daily Concentration Monitoring Report pursuant to R18-9-E826(C)(5)(c), as applicable, and

~~11~~12. A copy of the Initial Source Water Characterization Plan developed in subsection (B).

…

R18-9-C815. Pilot Study

…

B. Pilot Study Plan. A Pilot Study Plan shall be followed when constructing the pilot treatment train and piloting in accordance with this section.

…

3. The Plan shall include, but is not limited to, the following:
   …
   g. A monitoring plan which shall include, but is not limited to, the following:
      i. The proposed monitoring, instrumentation, and any additional requirements pursuant to R18-9-A802(C)~~.~~, and
      ii. The proposed chemical critical control points designated pursuant to R18-9-E827(D),
      iii. The proposed pathogen critical control points designated pursuant to R18-9-E828(D), and
      iv. An ~~advanced treated water~~ influent and effluent sampling plan, including Tier 1 chemical removal to the federal standard pursuant to R18-9-E825, Tier 2 chemical removal to the proposed action level pursuant to R18-9-E826(C)(6), and the pathogen log reduction values established in R18-9-E828, and
   h. The proposed Tier 3 chemical list and associated critical control points prepared pursuant to R18-9-E827(D),
   i. The Projected Tier 2 Chemical Treatment List prepared pursuant to R18-9-E826(~~F~~E), and

DRAFT

j. A TOC Characterization Plan of all original drinking water sources, pursuant to the Trace Organics Removal Procedure under R18-9-F834(C)(1), if the AWPRA selects the Site-Specific TOC Management Approach~~.~~, and

k. The proposed Tier 2 action and alert levels pursuant to R18-9-E826(C)(9).

5. The pilot treatment train shall b~~e selected from, and~~ optimized in accordance with~~:~~; ~~the projected chemical treatment list developed pursuant to R18-9-E826(F) and pathogen log reduction values established pursuant to R18-9-E828.~~

a. Tier 1 chemicals as prescribed in R18-9-E825,

b. Tier 2 chemicals identified in R18-9-E826(C)(4) and (C)(5),

c. Projected Tier 2 Chemical Treatment List developed pursuant to R18-9-E826(E),

d. Pass-Through or Interference Chemical List generated in R18-9-E826(B)(3), and

e. Pathogen log reduction values established pursuant to R18-9-E828.

…

R18-9-C816. Permit Application

A. An AWPRA applicant for an AWP permit shall provide the Department with the following information on an application form prescribed by the Director:

1. Application: Administrative Requirements.
   a. The names and mailing addresses of all AWPRA ~~p~~Partners,
   b. The names and mailing addresses of the representative of the AWPRA and owners and operators of all AWPRA ~~p~~Partners facilities,
   c. The legal description, including latitude and longitude, of the location of all AWPRA ~~p~~Partners facilities,
   d. The expected operational life of the AWPRA ~~p~~Partners facilities,
   e. The permit number for any other federal or state environmental permit issued to any AWPRA ~~p~~Partners for that facility or site,
   …
2. Application: Technical Requirements.
   a. Detailed construction plans, depending on whether the facility is built to full-scale at the time of permit application, ~~completed or prospective construction plans of the site,~~ presented in legible form and of sufficient scale and detail to establish construction requirements and to facilitate effective review,
   b. Record drawings pursuant to R18-9-B810, if applicable,
   c. Complete specifications to supplement the completed or prospective construction plans in subsection (A)(2)(a), including ~~vendor~~ data demonstrating validation information,
   …
   e. A Full-Scale Verification:
      i. Plan, including data demonstrating scaling feasibility, prepared pursuant to R18-9-F835, and
      ii. Report prepared pursuant to R18-9-F835, if applicable under R18-9-F835(A)(1),
   f. A draft Operations Plan prepared pursuant to R18-9-F836,
   g. The Pilot Study Plan and Report prepared pursuant to R18-9-C815, if applicable under R18-9-C815(A)(1),
   ~~h. The Full-Scale Verification Report prepared pursuant to R18-9-F835, if applicable under R18-9-C835(A)(1),~~
   ~~i~~h. A list of construction material used pursuant to R18-9-B806(B),
   ~~j~~i. A demonstration of technical, managerial, and financial capacity pursuant to R18-9-F833,
   ~~k~~j. An initial Enhanced Source Control Plan pursuant to ~~the program developed in~~ R18-9-E824,
   ~~l~~k. The Initial Source Water Characterization Plan and Initial Source Water Characterization Report prepared pursuant to R18-9-C814,
   ~~m~~l. A demonstration of compliance with all minimum design requirements pursuant to R18-9-F832,
   ~~n~~m. The proposed pathogen and chemical action and alert levels for ongoing monitoring ~~pursuant to R18-9-A802(C)~~,
   ~~o~~n. The draft Public Communications Plan pursuant to R18-9-B811,
   ~~p~~o. A Chemical Inventory List, Pass-Through or Interference List, and a Tier 2 analysis pursuant to R18-9-E826,
   ~~q~~p. A Tier 3 Chemical list, associated critical control points, and explanation pursuant to R18-9-E827,
   ~~r~~q. Evidence of an APP authorizing any discharge from an AWTF that occurred, occurs, or will occur during piloting, full-scale verification, operation, or otherwise,
   ~~s~~r. Demonstration that the AWPRA meets applicable A.A.C. Title 18, Chapter 4 and Chapter 5 requirements, and
   ~~t~~s. Any other relevant information required by the Department to determine whether to issue a permit.

…

E. Post-Permit Issuance Compliance Schedule.

…

2. The following technical components shall be submitted in the time and manner set forth in a compliance schedule which shall be established by the Department under the AWP permit:
   a. The final design documents including as-built construction and configuration reports of all engineered elements of the facility prepared pursuant to R18-9-B810 and any document changes from what was proposed in the pre-construction application requirements~~.~~,

…

R18-9-C817. Demonstration Permit

A. An AWPRA shall apply for an AWP demonstration permit when showcasing an AWTF that offers advanced treated water for public outreach, education, water tasting, or other related purposes resulting in human consumption.

B. Prohibitions.
1. Connection of a demonstration AWTF to a drinking water distribution system is prohibited under an AWP demonstration permit, and
2. Bench scale demonstration AWTFs are prohibited unless adequate pathogen and chemical critical control measures are included and approved by the Department.

C. Demonstration Permit Application.
1. Upon request of the AWPRA applicant, the Department shall schedule and hold pre-application conference(s) with the AWPRA applicant to discuss the application requirements of this section.
2. An AWPRA applying for an AWP demonstration permit shall comply with all requirements of this Article, except as specified in this subsection.
3. An AWPRA applicant shall submit all AWP permit application components under R18-9-C816, unless specifically excluded or included in accordance with the following:
   a. Exclusions.
      i. A Full-Scale Verification Plan and Report pursuant to R18-9-F835, and
      ii. A Public Communications Plan pursuant to R18-9-B811, and
      iii. Any other application requirement, or component of an application requirement, at the Director's discretion, unless specifically included in subsection (C)(3)(b), below.
   b. Inclusions.
      i. A demonstration of compliance with the pathogen control requirements pursuant to R18-9-E828,
      ii. Proposed pathogen and Tier 1 chemical action levels for ongoing monitoring, as applicable pursuant to subsection (D), below, and
      iii. The establishment of critical control points, as applicable pursuant to subsection (D), below.
4. The Department may include additional application requirements or substitute alternative application requirements on a reasonable, case-by-case basis.
5. All design plans, specifications, and design reports submitted under this section shall be signed, dated, and sealed by an Arizona-registered professional engineer. The Arizona-registered professional engineer shall make the following demonstration to the Department for each person principally responsible for designing the facility:
   a. Pertinent licenses or certifications held by the person,
   b. Professional training relevant to the design of an AWTF, water reclamation facility, or drinking water treatment facility,
   c. Work experience relevant to the design of AWTF, water reclamation facilities, or drinking water treatment facilities, and
   d. A verification letter from an independent party certifying the performance of a manufacturer's equipment or a product that the professional engineer is relying upon for treatment credits, along with the information required under subsection (C)(5)(a), (b) and (c) of this section, for the independent party certifying the product.
6. A demonstration permit application requirement may be deferred to a post-permit issuance compliance schedule at the Director's discretion. Satisfaction of those items is required prior to operation of the demonstration facility pursuant to subsection (A), above.

D. The Department may include any requirement when issuing a demonstration permit that is reasonably related to AWP and the protection of public health.

E. The piloting requirements and timeframe in R18-9-C815 may be abbreviated at the Director's discretion. If an applicant reports significant failures at a critical control point during abbreviated piloting, the Director may require other measures.

F. At all times during operation of a permitted AWP demonstration facility, at least one operator of the facility shall, at a minimum, be certified as an AWP provisional operator pursuant to R18-9-B804(F). Any operator may be credited with advanced water treatment qualifying experience under R18-9-B804.

G. The following apply to Demonstration Permits under this section:
1. Public notice and public participation requirements in R18-9-D819 and R18-9-D820,
2. Permit suspension, revocation, denial, and termination requirements in R18-9-D823, and
3. Permit term and permit renewal requirements in R18-9-D822.

R18-9-C818. Compliance Schedule

…

~~B.~~ ~~Distribution of advanced treated water is prohibited until the Department approves all compliance schedule items established under the AWP permit pursuant to R18-9-C816(E).~~

B~~C~~. The Department shall consider all of the following factors when setting any additional AWP permit compliance schedule requirements not prescribed under R18-9-C816(E):
1. The impact on advanced treated water quality,
2. The impact on drinking water customers,
3. The requirements for permit amendment, and

4. Any other factors determined at the Director's discretion.

PART C. PRE-PERMIT AND PERMIT REQUIREMENTS

R18-9-D819. Public Notice

A. AWP Permits.

1. The Department shall ~~provide~~ notify the entities specified in subsection (A)(2) ~~with monthly written notification~~, by regular mail or electronically, upon the occurrence of any of the following:

…

2. Entities.
   a. Each county department of health, environmental service department, or comparable department,
   b. A federal, state, local agency, or council of government, that may be affected by the permit action, and
   c. A person who requested, in writing or by electronic mail subscription, notification of the activities described in subsection (A)(1).

…

R18-9-D820. Public Participation (No Change)

R18-9-D821. Permit Amendments

A. …

B. Significant Amendment.

1. Significant AWP permit amendments may include, but are not limited to:
   a. Changes to the enhanced source control program that will result in a change in the water quality of any unit of operation or the advanced treated water,
   b. Any modification to the facility that will result in a change in the water quality of any unit of operation or the advanced treated water,
   c. Any change to the critical control points,
   d. Reductions to monitoring,
   e. Changes to any approved blending plans,
   f. Significant source water quality changes that will result in a change in the water quality of any unit of operation or the advanced treated water,
   g. The addition or removal of an AWPRA ~~p~~Partner from the AWPRA,
   h. Authorization to deliver advanced treated water or distribute finished water following completion of post-permit compliance schedule items, and
   i. The designation of additional Tier 2 chemicals requiring a modification.
2. An AWPRA shall submit, along with the detailed permit amendment request in subsection (A)(1), an explanation of the proposed change ~~modifications~~ as well as the safeguards that the AWTF will implement to ensure that the quality of the water served will not be adversely affected ~~by any modification~~.

C. Minor Amendment. Minor AWP permit amendments may include, but are not limited to:

1. Correcting typographical errors,
2. Changing non-technical administrative information,
3. Correcting minor technical errors, such as locational information and citations of law,
4. Increasing the frequency of monitoring or reporting,
5 Making changes in a recordkeeping retention requirement,
6. Changes to the treatment train, monitoring equipment, or any other component that is not a replacement of, or substantially similar to the approved components, but will not result in a change in the advanced treated water, and
7. The designation of additional Tier 2 chemicals that does not require a modification.

…

R18-9-D822. Permit Term; Permit Renewal

A. An AWP permit and AWP demonstration permit are valid for five years from the date of permit issuance ~~the permit is issued pursuant to R18-9-C816.~~

B. …

C. To renew an AWP permit issued pursuant to R18-9-C816, ~~The~~ the AWPRA shall demonstrate the following requirements to the Department in a renewal application submitted on a form prescribed by the Director:

…

3. Any proposed modification to an operation, treatment process, treatment configuration, or water quality parameter from the facility design most recently approved under an AWP permit shall result in preparation and submission of the applicable, following documents to the Department:

…

DRAFT

10. A renewed demonstration of compliance with all minimum design requirements pursuant to R18-9-F832, ~~and~~
11. An updated Monitoring Plan, prepared pursuant to R18-9-E829, including the proposed pathogen and chemical action levels~~.~~, and
12. A renewed Tier 2 analysis, including an updated Chemical Inventory List, pursuant to R18-9-E826, and

D. To renew an AWP demonstration permit issued pursuant to R18-9-C817, the AWPRA shall demonstrate the requirements in subsection (C), above, as applicable to the facility's most recently issued permit, or otherwise at the Director's discretion.

…

R18-9-D823. Permit Suspension, Revocation, Denial, or Termination (No Change)

PART E. CONSTITUENT CONTROL, MONITORING, AND REPORTING

R18-9-E824. Enhanced Source Control

A. The AWP project shall maintain an enhanced source control program for treated wastewater from a water reclamation facility used to supply an AWTF based upon the legal authority and procedural requirements of this section, which shall, at all times, be fully and effectively exercised and implemented. Constituents of concern that are not able to be controlled through treatment at an AWTF shall be controlled through the enhanced source control program.

B. An AWPRA applicant shall develop, and an AWPRA permittee shall maintain, an enhanced source control program which shall comply with the requirements of this section.

C. Legal Authority. The AWP project shall operate pursuant to legal authority enforceable in State or local courts, which authorizes or enables the AWP project to apply and enforce the enhanced source control requirements of this section.

1. Legal authority may be contained in an ordinance or series of contracts or joint powers agreements which the AWP project is authorized to enact, enter into, or implement, and which are authorized by State law.
2. At a minimum, the legal authority shall enable the AWP project to:
   a. Require compliance with applicable enhanced source control requirements and AWP program requirements by potentially impactful non-domestic dischargers,
   b. Identify, control, or eliminate constituents of concern discharged into the AWP project by each potentially impactful non-domestic discharger,
   c. Require the submission of all notices and self-monitoring reports from potentially impactful non-domestic dischargers as necessary to assess and assure compliance with the enhanced source control requirements,
   d. Carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance or noncompliance with applicable enhanced source control requirements by potentially impactful non-domestic dischargers, including authorization for representatives of the AWP project to enter any premises of any potentially impactful non-domestic discharger, and
   e. Investigate chemical peaks from any potentially impactful non-domestic discharger that have a significant impact on advanced treated water quality through investigation of all sewer lines, manholes, force mains, lift stations, and other collection system components within the AWP project as necessary.

D. Procedures. The AWP project shall develop and implement procedures to ensure compliance with the enhanced source control requirements of this section.

1. Procedures shall be established and maintained in an Enhanced Source Control Plan, submitted with the AWP application pursuant to R18-9-C816 and updated at least every five years during permit renewal pursuant to R18-9-D822.
2. The Enhanced Source Control Plan shall, at a minimum, include:
   a. An identification of potentially impactful non-domestic dischargers in the AWP project's collection system. A source is a potentially impactful non-domestic discharger if it meets one or more of the following:
      i. The source is subject to the National Pretreatment Program pretreatment standards;
      ii. The source may adversely affect the AWTF operation including pass-through or interference;
      iii. The source has a potential to have serious adverse effects on public health;
      iv. The source has a potential to prevent the AWPRA from achieving requisite treatment standards for any contaminant regulated under this Article;
      v. The source has a potential to cause a violation of a Tier 1 standard; or
      vi. The source has otherwise been designated as potentially impactful by the water reclamation facility.
   b. An identification of impactful non-domestic dischargers in the AWP project's collection system. The AWPRA shall identify an impactful non-domestic discharger by applying a significant impact analysis to each potentially impactful non-domestic discharger that considers, but is not limited to, the following factors:
      i. Average wastewater discharged into the collection system,
      ii. Dilution of discharge within the collection system,
      iii. The nature of the discharge and its constituents,
      iv. The ability of downstream treatment processes to address the discharge, and
      v. The effect the discharge will have on treatment processes and advanced treated water.
   c. The following lists, prepared in a format approved by the Department:

i. A list of non-domestic dischargers in the AWP project's collection system, which may be classified as applicable, along with a corresponding justification for each classification,
ii. A list of potentially impactful non-domestic dischargers in the AWP project's collection system, identified and maintained pursuant to subsection (D)(2)(a) of this section, and which may be classified as applicable, along with a corresponding justification for each designation and classification, and
iii. A list of impactful non-domestic dischargers in the AWP project's collection system, identified and maintained pursuant to subsection (D)(2)(b) of this section, and which shall not be classified, along with a corresponding justification for each designation, and

d. The following identifying information:
ii. A list of all water reclamation facilities in the collection system that provide treated wastewater to the AWPRA as a source under the AWP program, and
ii. A map of all collection system components, including the locations of the potentially impactful non-domestic dischargers, and a description or map of the respective boundaries of all listed water reclamation facilities, and

e. Planned or implemented activities that protect the water reclamation facility(s) and AWTF(s) from pass-through or interference from constituents of concern which may include, but are not limited to, the creation of additional local limits or routine monitoring activities,

f. Additional control measures, applied and identified, for the impactful non-domestic dischargers including, but not limited to:
i. Locally established discharge limits,
ii. Locally established monitoring, and
iii. Targeted outreach, and

g. A Pollutant Reduction and Elimination Plan that addresses both non-domestic and domestic dischargers with the goal of mitigating or eliminating constituents of concern prior to entry into the AWP project's collection system. The Plan shall include, at a minimum, the following:
i. A determination of whether targeted outreach is necessary, and if necessary, the Plan shall include the development of targeted outreach programs for impactful non-domestic dischargers identified pursuant to subsection (D)(2)(b) of this section,
ii. Education and encouragement of potentially impactful non-domestic dischargers, identified pursuant to subsection (D)(2)(a) of this section, to participate in pollution prevention programs or environmental stewardship programs that reduce or eliminate the discharge of constituents of concern into the collection system, including the requirement to consider alternatives to constituent of concern usage,
iii. A public outreach program for domestic dischargers, and
iv. Notification and public hearings on the AWP program and significant program developments, and

h. A Septage Hauler Control Program which tracks and monitors loads and shall include, at a minimum, load sampling activities with all load sampling results retained for a minimum of five years,

i. An Early Warning Program for the purpose of attaining advanced notice of incoming constituents of concern peaks. An early warning system shall include, at a minimum, the following:
i. Online monitoring instrumentation that evaluate data in real time located either in the influent to the water reclamation facility, in the AWP project's collection system, or at the discharging entity that measures constituents of concern or surrogate parameter(s) and that indicates potential treatment interference, pass-through, or a violation of an AWP action level,
ii. A process for notification to the AWPRA of any discharge that can potentially result in the release of contaminants above established source controls pursuant to this section,
iii. Cooperation with local county public health departments, as necessary, to track constituents of concern peaks from disease outbreaks or other impactful health events,
iv. A response plan developed pursuant to subsection (D)(2)(j) of this section,
v. A plan for routine calibration of early warning system equipment with the goal of reliable performance,
vi. A plan for rapid response and addressing of equipment failure, and
vii. Other early warning measures required by the Department, which are necessary to protect the operations of the AWPRA project treatment or prevent contamination of the advanced treated water, based on a review of application components submitted to the Department for review, and on the availability of such measures,

j. A Response Plan to address constituents of concern exceedances, which shall be created in partnership with all relevant AWPRA Partners, and include, at a minimum, the following:
i. A procedure for addressing constituents of concern peaks with the potential to impact advanced treated water quality,
ii. An investigation and identification of the exceedance source, or if no source is identified, the initiation of a collection system sampling program,
iii. The designation of the leading facility responsible for communication with the AWPRA Partners,
iv. A procedure for when and how to notify the Department upon a constituent of concern exceedance,
v. A procedure for the bypass and/or shutdown of the AWTF, if necessary,

vi. An effective training program ensuring the understanding of the Response Plan by the responsible personnel,
vii. A review of the operation and calibration records for online meters and any relevant analytical methods upon the detection of a constituent of concern exceedance, and
viii. Submission of a memorandum of understanding or other contractual agreement between all entities necessary to effectuate the Response Plan, and

k. Clear prohibitions on the discharge of any of the following to the water reclamation facility:
i. Pollutants which create a fire or explosion hazard, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR Part 261.21,
ii. Pollutants which will cause corrosive structural damage including discharges with a pH lower than 5.0, unless the treatment works are designed to accommodate such discharges,
iii. Solid or viscous pollutants in amounts which will cause obstruction to the flow resulting in interference,
iv. Any pollutant, including oxygen demanding pollutants (biochemical oxygen demand, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference,
v. Heat in amounts which will inhibit biological activity resulting in interference including heat in such quantities that the temperature at the water reclamation facility exceeds 40 °C (104 °F), unless the approval authority, upon request of the water reclamation facility, approves alternate temperature limits,
vi. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through,
vii. Pollutants which result in the presence of toxic gas, vapors, or fumes in a quantity that may cause acute worker health and safety problems, and
viii. Any trucked or hauled pollutants, except at discharge points designated by the water reclamation facility, and

l. Any other relevant information required by the Department.

3. The potentially impactful non-domestic dischargers list in the Enhanced Source Control Plan shall be:
a. Continuously updated with newly introduced chemicals or new potentially impactful non-domestic dischargers, or as a result of any other event that causes a change within the AWP project's collection systems impacting the advanced treated water quality, and
b. Verified through:
i. Open and ongoing communication, which may include inquiry into chemical use, potential discharges, and any potential or planned changes in operation that could impact the advanced treated water quality, and
ii. Routine site visits pursuant to subsection (C)(2) of this section.

4. The Enhanced Source Control Plan shall be audited at least every five years by an independent party to assess the effectiveness of the enhanced source control program in controlling the discharge of constituents of concern.
5. The Enhanced Source Control Plan shall be updated and reported to the Department pursuant to the Annual Report requirements in R18-9-E831.

E. An AWPRA shall form and maintain a source control committee that includes representatives from:
1. Each AWPRA Partner that is part of the AWPRA's enhanced source control program, including each AWPRA Partner that supplies treated wastewater to the AWP project or that owns and/or operates a water reclamation facility that provides treatment, and
2. Key non-domestic dischargers that may pose a risk to public health.

F. In addition to the requirements of this section, an enhanced source control program shall be developed, conducted, and maintained using good engineering practices. Methods for developing, conducting, and maintaining an enhanced source control program shall be approved if the AWPRA applicant can demonstrate that the methods are sufficiently detailed and robust for the purpose of enhanced source control, pursuant to this Article.
1. ADEQ shall develop and make available guidance on developing, conducting, and maintaining an enhanced source control program.
2. An enhanced source control program developed, conducted, and maintained in a manner consistent with the criteria contained in an applicable ADEQ guidance document shall be considered to have been conducted using good engineering practices.

R18-9-E825. Tier 1 Chemical Control~~; Maximum Contaminant Levels~~

For the purposes of this Article, Tier 1 chemicals are the chemical contaminants that have "National Primary Drinking Water Regulations~~Standards~~" under 40 CFR Part 141 as incorporated by reference in R18-4-102~~, including those with Safe Drinking Water Act-required Maximum Contaminant Levels or Treatment Techniques~~.

R18-9-E826. Tier 2 Chemical Control; Advanced Water Purification-Specific Chemicals

A. An AWPRA shall conduct a Tier 2 analysis under this section in order to determine Tier 2 chemicals, propose alert and action levels for Tier 2 chemicals at the AWTF, and to identify the chemical controls necessary to be implemented by the AWPRA in the following manner:

1. An AWPRA applicant shall conduct the analysis as a required technical component of their permit application for an AWP permit or an AWP demonstration permit, pursuant to R18-9-C816 and R18-9-C817, respectively.
2. Once permitted, an AWPRA shall update the Chemical Inventory List and conduct a new Tier 2 Analysis under this section:
    a. If the AWPRA is aware of, becomes aware of, or should reasonably be aware of:
        i. The identification of additional potentially impactful non-domestic dischargers pursuant to R18-9-E824(D)(2)(a); or
        ii. Significant volumetric adjustments to an AWPRA water reclamation facility's total daily volume of treated wastewater that are likely to impact the expected concentration of any chemical pursuant to subsection (C) of this section; or
    b. If changes to any component of the permitted AWP project occur that will result in an exceedance of an action level; or
    c. At a minimum, every five years as a component of a permit renewal application pursuant to R18-9-D822.
3. If a new Tier 2 analysis conducted in response to any trigger in subsections (A)(2) results in the designation of additional Tier 2 chemicals, the AWPRA shall request an amendment to their AWP permit pursuant to R18-9-D821.

B. Chemical Inventory List. The AWPRA applicant shall generate a list of chemicals from all potentially impactful non-domestic dischargers identified in R18-9-E824(D)(2)(a), listed individually or classified as applicable in R18-9-E824(D)(2)(c), in accordance with subsection (B)(1), below.

1. The Chemical Inventory List shall be generated in a format approved by the Department, and shall:
    a. Include chemicals that are used, that are stored, and that are discharged from all potentially impactful non-domestic dischargers,
    b. Include chemicals that are used or generated at the water reclamation facility and the AWTF, and
    c. Exclude Tier 1 chemicals as prescribed in R18-9-E825.
2. For the purposes of subsection (B)(1)(a), above:
    a. "Used" means chemicals used by a potentially impactful non-domestic discharger in actively applied manufacturing, processing, or production on-site, which have the potential to end up in the wastewater stream. Chemicals not included may be those that are used for routine janitorial or facility grounds maintenance, or used by employees as personal care products.
    b. "Stored" means chemicals stored by a potentially impactful non-domestic discharger for manufacturing, processing, sale, resale, or production that have the potential to enter the wastewater stream. Chemicals not included may be those that are stored for routine janitorial or facility grounds maintenance, stored by employees as personal care products, or stored with a physical barrier (not including a container or bottle) between the chemical and the entry point to the collection system. Chemicals stored for the primary purpose of sale or resale may be excluded so long as those chemicals are stored in amounts that, if released, would not significantly impact downstream AWP processes. Significant impact may be determined based on volume (e.g. 10 gallons or 100 lbs) or risk profile.
    c. "Discharged" means chemicals discharged by a potentially impactful non-domestic discharger as a result of actively applied manufacturing, processing, or production on-site, which normally end up in the wastewater stream. Chemicals not included may be those that are used for routine janitorial or facility grounds maintenance, or used by employees as personal care products.
3. Pass-Through or Interference Chemicals. The AWPRA applicant shall analyze the Chemical Inventory List in order to identify chemicals that are known, expected, or projected to pass-through or interfere with AWTF treatment processes. This Pass-Through or Interference List shall be considered in R18-9-C815(B)(5). Chemicals that remain as Pass-Through or Interference chemicals after piloting or full scale verification are constituents of concern that shall be controlled or eliminated in Enhanced Source Control pursuant to R18-9-E824 and/or the Operation Plan pursuant to R18-9-F836.

C. Tier 2 Analysis.

1. The AWPRA applicant shall first determine which chemicals from the Chemical Inventory List in subsection (B) also have a corresponding available testing method. Chemicals that do not have an available testing method are not Tier 2 chemicals and shall be added to the Observation List in subsection (D), below.
2. The AWPRA applicant shall determine whether the remaining chemicals from subsection (C)(1) above appear in the EPA or Departmental health advisory lists referenced in subsections (C)(4)(a) and (C)(4)(b), below,
    a. For each chemical determined to have either an EPA or Departmental health advisory in subsection (C)(2), along with each chemical with an applicant-proposed health advisory from subsection (C)(6) below, the AWPRA applicant shall develop either a projected or an actual daily concentration for each chemical utilizing one of the following two options:
        i. Option 1: Calculate the projected daily concentration pursuant to subsection (C)(3) below; or
        ii. Option 2: Derive the actual daily concentration by utilizing the monitoring method prescribed in subsection (C)(5), and
    b. Any chemical determined not to have an EPA or Departmental health advisory in subsection (C)(2), shall be analyzed pursuant to subsections (C)(6) and (C)(7), below.

3. Projected Daily Concentration. For each chemical under Option 1 from subsection (C)(2)(a)(i), the AWPRA applicant shall calculate the projected daily concentration using the Individually-Listed Approach and/or the Class-Representative Approach. A potentially impactful non-domestic discharger that has also been designated as an impactful non-domestic discharger under R18-9-E824(D)(2)(b) may neither be, nor be represented by, a class-representative. An AWPRA applicant must utilize the Individually-Listed Approach when calculating the projected daily concentration of a chemical from an impactful non-domestic discharger.
   a. Individually-Listed Approach. Calculate the chemical's projected daily load for each individually-listed potentially impactful non-domestic discharger as follows: Projected Daily Load (lb/day) = Flow (MGD) x Maximum Concentration (mg/L) x 8.34 (for unit conversion), and/or
   b. Class-Representative Approach. For each class-representative potentially impactful non-domestic discharger for a listed class:
      i. Calculate the chemical's projected daily load for each class-representative potentially impactful non-domestic discharger as follows: Projected Daily Load (lb/day) = Flow (MGD) x Maximum Concentration (mg/L) x 8.34 (for unit conversion),
      ii. Multiply the chemical's projected daily load, identified in (C)(3)(b)(i), with the number of potentially impactful non-domestic dischargers in the class, and
   c. Calculate the chemical's projected total daily load, cumulatively, for all potentially impactful non-domestic dischargers (Individually-Listed and Class-Representative) in the collection system as follows:
   Projected Total Daily Load (lb/day) = ∑ Mass loading (lb/day),
   d. Calculate the chemical's projected daily concentration in the treated wastewater by comparing the collection system's projected total daily load from subsection (C)(3)(c) against the total influent flow of treated wastewater at the headworks of the proposed AWTF using the formula below, and

$$\text{Chemical's Projected Daily Concentration (mg/L)} = \frac{\text{Chemical's Projected Total Daily Load (lb/day)}}{\text{Total AWTF Influent Flow (MGD) X 8.34}}$$

4. EPA and Departmental Health Advisory Lists. The AWPRA applicant shall compare the projected daily concentration calculated in subsection (C)(3) for the chemicals that have EPA or Departmental Health Advisories against the following corresponding health advisory values:
   a. EPA Health Advisory List. The lowest available value, from the following values in the "2018 Edition of the Drinking Water Standards and Health Advisories Tables":
      i. One-day (mg/L),
      ii. Ten-day (mg/L),
      iii. DWEL (mg/L),
      iv. Life-time (mg/L),
      v. mg/L at 10^{-4} Cancer Risk, and
   b. Departmental Health Advisory List.
      i. Trimethylbenzene (1,2,4-) (CAS No. 95-63-6): 0.33 mg/L,
      ii. Benz[a]anthracene (CAS No. 56-55-3): 0.035 mg/L,
      iii. Benzo[b]fluoranthene (CAS No. 205-99-2): 0.035 mg/L,
      iv. Benzo[g,h,i]perylene (CAS No. 191-24-2): 0.014 mg/L,
      v. Benzo[k]fluoranthene (CAS No. 207-08-9): 0.003 mg/L,
      vi. Chrysene (CAS No. 218-01-9): 3.5 mg/L,
      vii. Dimethyl phthalate (CAS No. 131-11-3): 0.70 mg/L,
      viii. Indeno[1,2,3,-cd]pyrene (CAS No. 193-39-5): 0.035 mg/L, and
      ix. Phenanthrene (CAS No. 85-01-8): 0.21 mg/L, and
   c. If the projected daily concentration exceeds the corresponding health advisory value in (C)(4)(a) or (C)(4)(b), the chemical shall be a Tier 2 chemical and the AWPRA applicant shall propose action and alert levels pursuant to subsection (C)(9), below,
   d. If the projected daily concentration does not exceed the corresponding health advisory value, the chemical is not a Tier 2 chemical, and shall be added to the Observation List in subsection (D), below.
5. Actual Daily Concentration Monitoring Chemicals. For each chemical under Option 2 from subsection (C)(2)(a)(ii), the AWPRA applicant shall conduct monitoring at all water reclamation facilities delivering treated wastewater as a source to an AWTF.
   a. Monitoring.
      i. Monitoring shall be located before any AWP-credited pathogen treatment process, if applicable. If not applicable, monitoring shall be located at the point of diversion to the AWTF, or another Departmentally-approved location, and
      ii. The AWPRA applicant shall collect a minimum of twelve monthly composite samples representative of seasonal variability, and

iii. If there is wide variability in a chemical concentration, meaning the coefficient of variation is greater than fifty percent, the AWPRA applicant shall reasonably increase the sampling interval in order to evidence this variability, and
iv. At the conclusion of the monitoring period, the actual daily concentration is the maximum monthly composite sample value recorded during that period.

b. Comparison and Tier 2 Determination.
i. The AWPRA applicant shall compare the actual daily concentration for the chemical against the corresponding EPA or Departmental health advisory values in (C)(4)(a) and (C)(4)(b), or a proposed health advisory value developed in (C)(6)(a), and
ii. If the actual daily concentration exceeds the corresponding health advisory value, the chemical shall be a Tier 2 chemical and the AWPRA applicant shall propose action and alert levels pursuant to subsection (C)(9) below, and
iii. If the actual daily concentration does not exceed the corresponding health advisory value, the chemical is not a Tier 2 chemical, and shall be added to the Observation List in subsection (D) below, and

c. Report. The AWPRA applicant shall prepare an Actual Daily Concentration Monitoring Report which includes, but is not limited to, the elements in R18-9-C814(E)(1)-(10) and identifies the chemicals determined to be Tier 2 in subsection (C)(5)(ii) above, and

6. Proposed Health Advisory Chemicals. Using the list of chemicals identified in subsection (C)(2)(b), which do not have a corresponding EPA or Departmental health advisory, the AWPRA applicant shall determine whether the chemical has an established Reference Dose (RfD) or Cancer Slope Factor (CSF) in credible peer-reviewed literature or state or Federal databases, such as EPA's Integrated Risk Information System (IRIS) and EPA's Provisional Peer-Reviewed Toxicity Values (PPRTV).
a. If the chemical has an RfD or a CSF, the AWPRA applicant shall submit the following in a report to the Department and/or Project Advisory Committee prior to conducting initial source water characterization in R18-9-C814:
i. The listed chemicals with identified RfDs or CSFs, and
ii. The associated RfD or CSF for each chemical, and
iii. The literature or database source for each chemical's RfD or CSF, and
iv. A proposed health advisory value for each chemical,
b. The Department and/or the Project Advisory Committee shall review and comment on the report,
c. For each chemical identified in the report, the AWPRA applicant shall develop either a projected daily concentration pursuant to subsection (C)(3) or an actual daily concentration pursuant to subsection (C)(5),
d. If the daily concentration exceeds the proposed health advisory, the chemical shall be a Tier 2 chemical and the AWPRA applicant shall propose action and alert levels pursuant to subsection (C)(9), below, and
e. If the daily concentration does not exceed the proposed health advisory, the chemical is not a Tier 2 chemical and shall be added to the Observation List in subsection (D), below.

7. Narrative Standard Chemicals.
a. For the chemicals determined in subsection (C)(6) above to not have an established Reference Dose (RfD) or Cancer Slope Factor (CSF) in credible peer-reviewed literature or state or Federal databases, the AWPRA applicant shall determine whether each chemical is likely to occur in treated wastewater, or be a byproduct of treated wastewater, at concentrations that may have adverse human health effects from acute toxicity (with an adequate margin of safety) and/or may pose any significant risk to human health from cancer or chronic disease. Making this determination shall be based on a consideration of available, relevant information, such as:
i. Notification levels or health-based values or an equivalent by other States or countries;
ii. Results of any analyses of wastewater or environmental waters sampled locally;
iii. Reports from advisory bodies or lists of chemicals that pose human health risks that have been developed by state or federal agencies;
iv. Published, credible and peer-reviewed scientific literature, studies or information associated with toxicity, hazardous substances, pharmaceuticals, or personal care products found in wastewater or drinking water;
v. Information on pharmaceuticals that are most often prescribed, based on readily available documentation, including results from credible sources that track pharmaceutical use, and modified, if possible, to reflect local conditions;
vi. OSHA Safety Data Sheets;
vii. Bioassays and bioanalytical studies; or
viii. Another credible source,

b. A chemical determined to meet the standard in (C)(7)(a) above shall be a Tier 2 chemical for ongoing monitoring purposes pursuant to R18-9-E829(D)(1), (2), and (9), but shall be exempt from ongoing monitoring compliance requirements under R18-9-E829(D)(3) through (8) and the Projected Chemical Treatment List in subsection (E), below, and

c. A chemical determined not to meet the standard in (C)(7)(a) is not a Tier 2 chemical and shall be added to the Observation List in subsection (D), below.

8. Elective Chemicals. An AWPRA applicant may elect to conduct ongoing monitoring for any chemical that was not determined to be a Tier 2 chemical in subsections (C)(4)(d), (C)(5)(b)(iii), (C)(6)(e), or (C)(7)(c), above. Ongoing monitoring for such chemicals shall be conducted pursuant to R18-9-E829(D)(1), (2), and (9). The AWPRA applicant may also elect to subject these chemicals and/or the chemicals determined to be Tier 2 for ongoing monitoring purposes in subsection (C)(7)(b) to the ongoing monitoring compliance requirements under R18-9-E829(D)(3) through (8). For those chemicals, the AWPRA applicant shall propose action and alert levels pursuant to subsection (C)(9), below,
9. Proposed Action and Alert Levels. An AWPRA applicant shall calculate a proposed action level and a proposed alert level for each Tier 2 chemical, except the Tier 2 chemicals established in subsections (C)(7)(b), as follows:
    a. The action level for the Tier 2 chemicals established under subsection (C)(4)(a) and (C)(5)(b)(ii) shall be set at the same value as the lowest applicable health advisory value in the table, as outlined below:
        i. One-day (mg/L),
        ii. Ten-day (mg/L),
        iii. DWEL (mg/L),
        iv. Life-time (mg/L),
        v. mg/L at 10-4 Cancer Risk, and
    b. The action level for the Tier 2 chemicals established under subsection (C)(4)(b) and (C)(5)(b)(ii) shall be set at the Departmental Health Advisory value,
    c. The action level for the Tier 2 chemicals established under subsection (C)(6) shall be set at the same value as the proposed health advisory value identified by the AWPRA applicant,
    d. The action level for the subsection (C)(8) chemicals, elected for ongoing monitoring compliance from subsections (C)(4)(d) and (C)(6)(e), shall be set in accord with subsections (C)(9)(a), (b), and (c), above,
    e. The action level for the subsection (C)(8) chemicals, elected for ongoing monitoring compliance from subsection (C)(7)(c), shall be set at a reasonably protective level based on the available, relevant information reviewed in subsection (C)(7)(a), and
    f. The alert level for all Tier 2 chemicals and the Elective Chemicals subject to ongoing monitoring compliance shall be set reasonably below the action level.

D. Observation List Chemicals. For the chemicals determined to be on the Observation List from subsections (C)(1), (C)(4), (C)(6), and (C)(7) above, the AWPRA applicant shall:
1. Retain a copy of these chemicals in a list,
2. Identify the subsection of origin for each chemical,
3. Make the list available to the Department for inspection upon request,
4. Utilize the chemicals on the list in support of collection system investigations and other enhanced source control efforts, as necessary, and
5. Conduct annual evaluations to determine whether an available testing method exists for the chemicals designated under subsection (C)(1), and:
    a. Include the evaluation as a component of the Annual Report in R18-9-E831, and
    b. Consider the results of the evaluation in the proximate Tier 2 analysis pursuant to subsection (A)(2), above.

E. Projected Tier 2 Chemical Treatment List. Based on the Tier 2 chemicals identified in this section, compile a list of Tier 2 chemicals that are projected to be treated by the proposed pilot treatment train described in R18-9-C815(B)(3)(b). During the pilot study, pursuant to R18-9-C815(B)(3)(g), the AWPRA applicant shall demonstrate chemical control of all chemicals on the Projected Tier 2 Chemical Treatment List through treatment at the pilot treatment train.

F. Method Detection Limit. When there is no reliable analytical method that is technically feasible to measure a chemical at either a proposed or established health advisory value pursuant to R18-9-E826(C), the health advisory value shall be set at the lowest Method Detection Limit of the corresponding and most sensitive available testing method.

R18-9-E827. Tier 3 Chemical Control; Performance-Based Indicators (No Change)

R18-9-E828. Pathogen Control

…

C. Site-Specific Log Reduction. An AWPRA applicant choosing a site-specific log reduction approach shall design the AWP project based on cumulative validated treatment values determined through reference pathogen monitoring pursuant to R18-9-C814(C)(3)(c) and the following:
1. Site-specific pathogen monitoring for the reference pathogens shall be conducted over a period of at least 24 consecutive months and shall include, at a minimum:

…

3. ~~Sampling shall occur at a location in the water reclamation facility treatment train before the first disinfection treatment process and before treated wastewater transference to the AWTF~~Monitoring shall be located before any AWP-credited pathogen treatment process, if applicable. Otherwise, monitoring shall be located at the point of diversion to the AWTF, or at another Departmentally-approved location.

…

R18-9-E829. Ongoing Monitoring Requirements

…

D. Tier 2 Chemical Control Monitoring.

…

8. Advanced Response Procedure.
   a. Under subsection (D)(7)(a) of this section, an AWPRA shall:

      …

      ii. If the advanced treated water compliance location is the same as the entry point to the distribution system compliance location, report ~~Report~~ the detection in the applicable public water system's annual consumer confidence report.

…

R18-9-E830. Reporting Requirements

…

E. Tier 3 Reporting. An AWPRA shall report Tier 3 chemical monitoring results in the time and manner set forth in the AWP permit ~~and R18-9-E827~~.

…

R18-9-E831. Annual Report

A. An AWPRA shall submit an annual report to the Department, ~~postmarked~~ no later than March 30th.

B. The report shall include the following information from the previous calendar year:

…

6. Enhanced source control components, pursuant to R18-9-E824, including:

   …

   i. A list of any corrective or enforcement actions taken by the AWPRA against an AWPRA ~~p~~Partner, and

8. A summary of whether any updates are required pursuant to R18-9-E826(A)(2),
9. A summary of the available testing method evaluation required pursuant to R18-9-E826(D)(6),
10. An updated operations plan pursuant to R18-9-F836, and
~~8~~11. Any other information necessary to assist the Department in assessing challenges to program implementation.

PART F. TECHNICAL AND OPERATIONAL REQUIREMENTS

R18-9-F832. Minimum Design Requirements

A. An AWPRA shall meet the minimum design criteria in this section in designing and constructing all AWTF treatment trains ~~a pilot treatment train and a full-scale treatment train~~ under an AWP project.

B. Pathogen Control.

…

9. Each treatment process used to meet the requirements in this section shall have the pathogen log reduction values validated for each reference pathogen using one of the two methods listed in subsections (B)(10) and (11) below:
10. Presumptive pathogen removal credits based on existing validation studies.
    a. An AWPRA applicant may claim presumptive pathogen removal credits for a treatment process based on existing validation studies.
    b. Processes claiming presumptive pathogen removal credits shall be confirmed through on-site demonstration during Piloting, Hybrid Pilot and Full-Scale Verification before it may be claimed.
    c. Eligible Barriers.
       i. A presumptive pathogen removal credit may be claimed under this subsection only for a treatment barrier whose pathogen removal performance is governed by a physically or mechanically predictable removal mechanism.
       ii. A presumptive credit shall not be claimed for a biologically active or adsorptive treatment process whose pathogen removal performance is dependent on site-specific water chemistry, media condition, or biological acclimation, including but not limited to granular activated carbon and biologically active carbon processes.
       iii. Pathogen removal credit for an excluded process shall be established through on-site validation under subsection (B)(11) below.
    d. Comparability Analysis. The AWPRA applicant shall include in the Pilot Study Plan or Hybrid Pilot and Full-Scale Verification Plan a comparability analysis demonstrating that the influent water conditions and operating conditions under which the existing validation study for that process was conducted are substantially similar to those encountered at the influent of the process evaluated.
    e. The AWPRA applicant shall conduct direct pathogen sampling at the influent and effluent of the treatment barrier to demonstrate that the barrier achieves the presumptive credited log reduction value under influent water conditions and operating conditions. Where direct sampling for a target pathogen is not analytically feasible, a surrogate in place of direct pathogen sampling may be used if the surrogate is approved by the Department in the Pilot Study Plan or Hybrid Pilot -Full Scale Verification Plan.

DRAFT

f. The AWPRA applicant shall establish the relationship between the continuous surrogate or operational parameter monitored at the barrier and the demonstrated log reduction value, so that the credited performance can be monitored continuously during full-scale operation.
g. The demonstration performed during a Pilot or Hybrid Pilot and Full-Scale Verification study shall confirm that the process achieves the credited log reduction value across the operating conditions established in the existing validation study. If the demonstration operates the barrier within a narrower range than the validated envelope during the pilot study, the credit shall be bound to the demonstrated range.
h. The frequency and number of sampling events shall be sufficient during the pilot study to demonstrate the credited log reduction value and subject to Departmental approval.
i. If the pilot study fails to confirm the presumptive log removal credit, the AWPRA applicant may default to on-site validation studies or propose a lower, demonstrated log removal credit as supported by the existing validation study.

11. On-Site Validation Studies.
    a. The on-site validation study protocol in subsection (B)(11)(b) below shall be prepared by a licensed Arizona engineer with experience in drinking water or wastewater treatment, specifically in evaluating pathogen control in public water supplies.
    b. The studies shall:
        i. Identify the treatment mechanism(s) of pathogen reduction by each treatment process,
        ii. Identify the pathogen(s) being addressed by the treatment process, or appropriate surrogate(s) for the pathogen(s), that are used in the validation study, which shall be the one(s) most resistant to the treatment mechanism(s),
        iii. Ensure that the pathogen(s) or surrogate(s) for the pathogen(s) are present in the test water in concentrations sufficient to demonstrate a pathogen log reduction,
        iv. Identify the factors that influence the pathogen reduction efficiency for the treatment mechanism(s) and include at least the feed water characteristics such as temperature and pH, the Hydraulic loading, the deterioration of components, and the integrity failure, and
        v. Identify the surrogate and/or operational parameters that can be measured continuously and that will correlate with the reduction of the pathogen(s) or surrogate(s) for the pathogen(s),
        vi. Identify the validation methodology to demonstrate the pathogen log removal capability of the treatment process, which shall involve a challenge test to quantify the reduction of the target pathogen or appropriate surrogate while concurrently monitoring the operational parameters to determine an operating envelope,
        vii. Describe the method to collect and analyze data to formulate evidence-based conclusions,
        viii. Describe the method to determine the alert and action levels and the operational monitoring and control strategy,
        ix. Describe the method to be used to calculate the log reduction value for the treatment process for each pathogen such that the validated log reduction value shall not exceed that achieved by 95 percent of the challenge test results when the treatment process is operating in compliance with the alert and action levels, and
        x. Identify the circumstances that would require a re-validation or additional on-site validation.
    c. Variances from the study protocols in this subsection are prohibited except when specifically authorized by the Department.

~~11~~12. The treatment train shall be continuously operated to achieve the log reduction value targets using validated treatment log reduction values and must conform to the Operations Plan pursuant to R18-9-F836.
~~12~~13. The treatment train shall include UV disinfection with a dose of at least 300 mJ per cm2.
~~13~~14. The SCADA system shall identify process failure to meet the alert and action levels and shall automatically discontinue the delivery of water to any distribution system if the treatment train does not meet the minimum design log reduction value target.
~~14~~15. Treatment processes that are credited with pathogen log reductions must be continuously tracked with a SCADA system utilizing online monitoring for surrogates and/or operational parameters.
~~15~~16. The treatment train shall be operated continuously in accordance with the Operations Plan pursuant to R18-9-F836 to achieve either the standard or site-specific pathogen reduction approaches pursuant to R18-9-E828.
~~16~~17. Blending is not eligible to receive pathogen log reduction credit, nor validated treatment log reduction values.

…

D. Other Requirements.

…

~~10. Method Detection Limit. When there is no reliable analytical method that is technically feasible to measure a contaminant at an established health advisory concentration pursuant to R18-9-E826(D), the health advisory value shall be set at the lowest Method Detection Limit of the corresponding and most sensitive EPA-approved method.~~

10. Pipeline Conveyances of Treated Wastewater.
    a. Applicability. Any person constructing a pipeline conveyance, whether new or a replacement of an existing pipeline, shall meet the requirements of this subsection.

b. A person shall design and construct a pipeline conveyance system using good engineering judgment following standards of practice.
c. A person shall construct a pipeline conveyance so that treated wastewater does not find its way into, or otherwise contaminate, a potable water system; system structural integrity is maintained; and the capability for inspection, maintenance, and testing is maintained.
d. A person shall construct a pipeline conveyance and all appurtenances conducting treated wastewater to withstand a static pressure of at least 50 pounds per square inch greater than the design working pressure without leakage as determined in R18-9-E301(D)(2)(j).
e. A person shall provide a pipeline conveyance with thrust blocks or restrained joints where needed to prevent excessive movement of the pipeline.
f. Minimum Separation Distance for Pipeline Conveyances of Treated Wastewater. An AWPRA shall:
    i. Locate a pipeline conveyance no closer than 50 feet from a drinking water well unless the pipeline conveyance is constructed as specified under subsection (D)(10)(f)(iii),
    ii. Locate a pipeline conveyance no closer than two feet vertically nor six feet horizontally from a potable water pipeline unless the pipeline conveyance is constructed as specified under subsection (D)(10)(f)(iii), and
    iii. Construct a pipeline conveyance that does not meet the minimum separation distances specified in subsections (D)(10)(f)(i) and (D)(10)(f)(ii) by encasing the pipeline conveyance in at least six inches of concrete or using mechanical joint ductile iron pipe or other materials of equivalent or greater tensile and compressive strength at least 10 feet beyond any point on the pipeline conveyance within the specified minimum separation distance.

…

E. An AWPRA shall meet the following minimum design criteria in designing and operating a full-scale water reclamation facility that delivers treated wastewater to an AWTF:

…

3. An AWPRA water reclamation facility shall meet a minimum solids retention time (SRT) of 15 days. A reduction in SRT may be requested and approved by the Department if wastewater characterization demonstrates that over all seasons (represented by 12 monthly values) the proposed SRT is consistent with nitrogen reduction and ~~COCs~~ constituents of concern.

…

R18-9-F833. Technical, Managerial, and Financial Demonstration

A. An AWPRA applicant shall submit the following to the Department as a demonstration of technical, managerial, and financial capacity:

…

2. Managerial Capacity. An AWPRA applicant's managerial demonstration shall include, but is not limited to:

…

b. Information or copies of contractual agreements between AWPRA ~~p~~Partners or any other entity associated with an AWP Project, including but not limited to:

…

R18-9-F834. Total Organic Carbon Management (No Change)
R18-9-F835. Full Scale Verification (No Change)
R18-9-F836. Operations Plan (No Change)
R18-9-F837. Vulnerability Assessment (No Change)

DRAFT

ARIZONA ADMINISTRATIVE CODE
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 14. DEPARTMENT OF ENVIRONMENTAL QUALITY - PERMIT AND COMPLIANCE FEES

ARTICLE 3. CERTIFIED OPERATOR FEES

R18-14-301. Certified Operator Fees

A. Definition terms from A.A.C. R18-5-101 apply to this Article~~.~~, except for subsection D of this section where definition terms from R18-9-B804(A) apply.

B. The Department shall assess and collect a flat rate fee for a certification or renewal under both the 18 A.A.C. 5, Article 1 operator certification program and the AWP operator certification program at R18-9-B804.

C. A person shall submit the applicable fee when requesting a certification or renewal under 18 A.A.C. 5, Article 1, as described below:

1. An applicant that seeks new certification shall submit a $87 fee, adjusted annually under subsection ~~(D)~~(E), per certification.
2. An operator that has not held a lower grade level for the required amount of time ~~requests~~ requesting the Department's determination on experience and education in order to be admitted to a higher grade certification examination, shall submit a fee of $201, adjusted annually under subsection ~~(D)~~(E), per application.
3. An applicant that requests a certificate based on reciprocity with another jurisdiction shall submit a fee of $334, adjusted annually under subsection ~~(D)~~(E), per application.
4. An operator submitting a certificate renewal shall submit a $201, adjusted annually under subsection ~~(D)~~(E), fee for each certificate. If the operator has multiple certificates, the first certificate is $201, adjusted annually under subsection ~~(D)~~(E), and each additional certificate with the same expiration date is $67, adjusted annually under subsection ~~(D)~~(E).

D. A person shall submit the applicable fee when requesting an AWP operator certification or renewal under R18-9-B804, as described below:

1. An applicant for an AWP operator certification examination shall submit a $250 fee, adjusted annually under subsection (E).
2. An applicant that passes the AWP operator certification examination, but does not have the required advanced water treatment qualifying experience, shall submit a $90 fee to receive the AWP Provisional Certification, adjusted annually under subsection (E).
3. An applicant that passes the AWP operator certification examination, that has the required advanced water treatment qualifying experience, shall submit a $90 fee to receive the AWP Operator Certification, adjusted annually under subsection (E).
4. An applicant that requests an AWP operator certification based on reciprocity with another jurisdiction shall submit a fee of $340, adjusted annually under subsection (E), per application.
5. An AWP operator submitting an AWP operator certificate renewal shall submit a $60 fee, adjusted annually under subsection (E).

E. The Director shall adjust the certification or renewal fees listed in subsections (C) and (D) every August 1, to the nearest $10, beginning August 4, 2023, by multiplying the certification or renewal fee by the Consumer Price Index (CPI) for the most recent year, and then dividing by the CPI for the year 2023. The CPI for any year is the average of the Consumer Price Index for All Urban Consumers, Phoenix-Mesa-Scottsdale, AZ, all items published by the United States Department of Labor, as of the close of the 12-month period ending on June 30 of that year.

R18-14-302. Fee Assessment and Collection

A. Fees for certification or renewal shall be paid in a method prescribed by the Department ~~U.S. dollars by cash, check, cashier's check, money order, or any other method acceptable to the Department~~.

B. The Department shall not accept a request for a certification or renewal without the appropriate fee.

C. For the 18 A.A.C. 5, Article 1 operator certification program, if the Department does not accept an operator certificate renewal form, required according to A.A.C. R18-5-107(B), the certificate expires for failure to renew according to A.A.C. R18-5-108.

D. For the AWP operator certification under R18-9-B804, if the Department does not accept an operator certificate renewal form, required according to A.A.C. R18-9-B804(H), the certificate expires for failure to renew according to A.A.C. R18-9-B804(I).

…

R18-14-303. Implementation (No Change)

DRAFT