



NOTICES OF FINAL RULEMAKING

This section of the *Arizona Administrative Register* contains Notices of Final Rulemaking. Final rules have been through the regular rulemaking process as defined in the Administrative Procedures Act. These rules were either approved by the Governor's Regulatory Review Council or the Attorney General's Office. Certificates of Approval are on file with the Office.

text of the rules as filed by the agency. Economic Impact Statements are not published.

The Office of the Secretary of State is the filing office and publisher of these rules. Questions about the interpretation of the final rules should be addressed to the agency that promulgated them. Refer to Item #5 to contact the person charged with the rulemaking. The codified version of these rules will be published in the Arizona Administrative Code.

The final published notice includes a preamble and

**NOTICE OF FINAL RULEMAKING
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER POLLUTION CONTROL**

[R17-213]

PREAMBLE

<u>1. Article, Part of Section Affected (as applicable)</u>	<u>Rulemaking Action</u>
Article 6	Repeal
R18-9-601	Repeal
R18-9-602	Repeal
R18-9-603	Repeal
Article 7	Amend
R18-9-701	Renumber
R18-9-702	Renumber
R18-9-703	Renumber
R18-9-704	Renumber
R18-9-705	Renumber
R18-9-706	Renumber
R18-9-707	Renumber
R18-9-708	Renumber
R18-9-709	Renumber
R18-9-710	Renumber
R18-9-711	Renumber
R18-9-712	Renumber
R18-9-713	Renumber
R18-9-714	Renumber
R18-9-715	Renumber
R18-9-716	Renumber
R18-9-717	Renumber
R18-9-718	Renumber
R18-9-719	Renumber
R18-9-720	Repeal
Part A	New Part
R18-9-A701	Renumber
R18-9-A701	Amend
R18-9-A702	Renumber
R18-9-A702	Amend
R18-9-A703	Renumber
R18-9-A703	Amend
R18-9-A704	Renumber
R18-9-A704	Amend
R18-9-A705	Renumber
R18-9-A705	Amend
R18-9-A706	Renumber
R18-9-A706	Amend
R18-9-A707	New Section
Part B	New Part
R18-9-B701	Renumber
R18-9-B701	Amend
R18-9-B702	Renumber
R18-9-B702	Amend
Table 1	Renumber



Table 1	Amend
R18-9-B703	Renumber
R18-9-B703	Amend
R18-9-B704	Renumber
R18-9-B704	Amend
R18-9-B705	Renumber
R18-9-B705	Amend
R18-9-B706	Renumber
R18-9-B706	Amend
R18-9-B707	Renumber
R18-9-B707	Amend
R18-9-B708	Renumber
R18-9-B708	Amend
R18-9-B709	Renumber
R18-9-B709	Amend
R18-9-B710	Renumber
R18-9-B710	Amend
Part C	New Part
R18-9-C701	Renumber
R18-9-C701	Amend
Part D	New Part
R18-9-D701	Renumber
R18-9-D701	Amend
R18-9-D702	Renumber
R18-9-D702	Amend
Part E	New Part
R18-9-E701	New Section

2. Citations to the agency's statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):

Authorizing statutes: A.R.S. § 49-203(A)(6).

Implementing statute: A.R.S. § 49-203.

3. The effective date of the rules:

January 1, 2018

4. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the proposed rule:

Notice of Rulemaking Docket Opening: 22 A.A.R. 16, January 1, 2016

Notice of Rulemaking Docket Opening: 23 A.A.R. 1687, June 23, 2017

Notice Proposed Rulemaking: 23 A.A.R. 1663, June 23, 2017

5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:

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6. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:

Summary

The Arizona Department of Environmental Quality (ADEQ) proposes to amend 18 A.A.C. 9, Articles 6 & 7 to update and restructure the reclaimed water rules, and allow for treatment of reclaimed water for potable use.

Article 7 reclaimed water rules have historically regulated both reclaimed water and gray water. Reclaimed water is water that has been treated or processed by a wastewater treatment plant or an on-site wastewater treatment facility to meet certain standards. Reclaimed water may then be directly reused for certain allowable uses depending on the quality of the water. Reclaimed water quality standards and allowable uses are established in 18 A.A.C. 11, Article 3, which establishes five classes of reclaimed water based on protection of public health and groundwater quality (A+, A, B+, B, and C). Class A+ reclaimed water is wastewater that has undergone the most treatment of a minimum secondary treatment, nitrogen removal treatment, and high levels of disinfection. Class C water is wastewater that has undergone minimum secondary treatment and some disinfection. Allowable end uses correspond with the water quality class designations. End uses for reclaimed water include, for example, crop irrigation, golf course irrigation, recreational impoundments, and dust control.

Gray water is wastewater that is collected separately from a sewage flow and originates from a clothes washer or a bathroom tub, shower, or sink but does not include wastewater from a kitchen sink, dishwasher, or toilet. Arizona has many residential gray water



users that reuse water for irrigation purposes. There are few large scale gray water users that reuse water for irrigation in Arizona, including some R.V. parks, recreational parks, and residential communities.

Generally, the types of facilities that the rules in Articles 6 and 7 apply to include wastewater treatment plants, irrigation districts, other reclaimed water end users, and residential and large-scale gray water users.

ADEQ last adopted a comprehensive revision of the reclaimed water reuse rules in January, 2001. These rules have fostered the beneficial reuse of reclaimed water while protecting water quality and human health. This regulatory framework has served Arizona well in expanding its water supply portfolio.

Since 2001, however, the science and technology of treatment and monitoring have advanced, and new concerns and needs have arisen, including the need for clarification of ambiguities in the rules. In early 2016, ADEQ held informal listening sessions in Tucson, Phoenix, and Flagstaff to gather comments and feedback on the current rules. This rule is an outcome of that process and represents the first round of three planned rulemaking phases.

In addition to meeting stakeholders' water augmentation requests, this rulemaking furthers the goals of the Governor's Arizona Water Initiative's Augmentation Council, originated by Governor Ducey under Executive Order 2015-13 and the Governor's Blue Ribbon Panel on Water Sustainability, which was formed in 2009 by Governor Brewer. The *Blue Ribbon Panel on Water Sustainability Final Report, November 30, 2010* contained recommendations to advance and expand the use of reclaimed water and other recycled waters. In *The Arizona Water Initiative Annual Report, July 1, 2016*, experts identified the need for water augmentation through expanding reclaimed water reuse. This rulemaking is the first phase in expanding the use of reclaimed and recycled waters to further these augmentation goals. For example, part of this rulemaking is will allow for an exception to the prohibition against providing reclaimed water for human consumption in order to augment Arizona's water supply and to spark innovation.

Based on the need for augmentation and the listening sessions held in early 2016, future phases will likely involve updates and amendments to A.A.C. Title 18, Chapter 11, Article 3, Reclaimed Water Quality Standards and additional amendments to A.A.C. Title 18, Chapter 9, Article 7 regarding infrastructure and technology and potable use criteria.

ADEQ is planning a second rulemaking phase that will involve amending A.A.C. Title 18, Chapter 11, Article 3, Reclaimed Water Quality Standards. To assist ADEQ in revising the reclaimed water quality standards, ADEQ has convened an expert workgroup to review the suitability of existing standards in light of current knowledge and provide recommendations on revisions.

ADEQ has also convened a workgroup of experts to provide recommendations to ADEQ on infrastructure and technology for a third rulemaking phase. This work group is charged with two main tasks: (1) review the reclaimed water conveyance requirements (formerly A.A.C. Title 18, Chapter 9, Article 6 provisions, which have been proposed for incorporation into Part B of Article 7, and determine whether the current technical criteria are adequate, and (2) develop and recommend comprehensive criteria for advanced water treatment of reclaimed water for direct potable use. Comprehensive criteria for direct potable use would replace the interim criteria specified in Part E of this rulemaking.

ADEQ intends to modify the reclaimed rules in phases, as opposed to all at once, for several reasons. The review and modification process for such an expansive program is expected to take a good deal of time. The workgroups have been established to provide technical recommendations, but their review is expected to take approximately six months. ADEQ will then modify the rules, considering workgroup and other stakeholder recommendations to further modify the rules. The magnitude of necessary future modification cannot be fully known at this time without further review and stakeholder process. Currently, however, gray water permits are underutilized because of impracticable requirements, and this rulemaking will promote greater gray water utilization. Further, the rules as originally written did not account for advanced reclaimed water treatment technologies so the rules now potentially suppress potable water augmentation innovation and implementation. Phasing the rulemaking will allow for the flow of innovation and utilization of reclaimed and gray water permits. If ADEQ batches all of the phases into one rulemaking, it may be years before permittees may utilize Type 3 gray water permits sufficiently, and before the state can begin to augment its water supply through treated reclaimed water potable use. Also, modifying the rule in phases will allow the regulated community and the public to adapt to the new structure and standards as the rules are modified, and provide additional opportunities for comment and improvement of the rules. For the above reasons, a phased approach will allow the state to make rules to meet water augmentation goals as expeditiously as possible.

Explanation of Major Modifications

ADEQ proposed several major changes for 18 A.A.C. 9, Articles 6 and 7 in this rulemaking, including the following:

- Nomenclature and Restructuring Modifications;
- Modification of the Prohibition Against Providing Reclaimed Water for Human Consumption;
- Addition of Interim Permitting Criteria for an Advanced Reclaimed Water Treatment Facility, Which Produces Potable Water from Reclaimed Source Water;
- Modification of Gray Water Permitting Requirements;
- Modification of Notice and Signage Provisions;
- Modification of Reporting Requirements;
- Modification of Permit Revocation Provisions;
- Addition of Recycled Permit Transition Provision;
- Repeal of Unnecessary Sections and Subsections;
- Modification of Permit Notice Requirements; and
- Other minor clarifications, grammatical changes, and technical and consistency modifications to implement the above listed overarching changes.



Nomenclature and Restructuring Modifications.

ADEQ modified the overall nomenclature of Article 7. Under ADEQ’s current regulations, gray water, industrial wastewater, and reclaimed water are regulated as “reclaimed water.” However, gray water, industrial wastewater, and reclaimed water are all separate and unique categories of “recycled water.” ADEQ proposed to modify Article 7 to regulate all of these categories of water under the same umbrella term of “recycled water.” ADEQ renamed A.A.C. Title 18, Chapter 9, Article 7, from Direct Reuse of Reclaimed Water to Use of Recycled Water. A definition for recycled water is also proposed in R18-9-A701. To implement this new nomenclature, ADEQ proposed a new organizational structure for Article 7 clearly distinguishing the general recycled water provisions and the different categories of recycled water. The proposed structure is designed to ease the addition of any potential new categories of recycled waters in the future.

ADEQ modified the general provisions for reclaimed water to be applicable to all recycled waters and moved the provisions into Part A. Reclaimed water is now addressed in Part B. Reuse of industrial wastewater is regulated separately in Part C. Gray water is now regulated in Part D. Part E, which has no counterpart in the current rules, contains the interim criteria for advanced reclaimed water treatment for distribution of water for direct potable use. Below is the proposed structure for Article 7:

Table 1 Proposed Article 7 Restructure According to Part

Article 7	Use of Recycled Water
Part A	General Provisions
Part B	Reclaimed Water
Part C	Recycled Industrial Wastewater
Part D	Gray Water
Part E	Purified Water for Potable Use

In the current rules, the permit types are listed consecutively in R18-9-711 through R18-9-719. However, as a part of the nomenclature and restructuring changes, ADEQ proposed these permits be located in the part of the rules addressing the particular category of recycled water regulated in the permit. For example, gray water is regulated under Part D. Also as a result of the restructure, every permit is now a “recycled water” permit and renamed as such. Below is a table showing each of the permit types proposed for regulation under Article 7, including their new name and part location.

Table 2 Proposed Permits by Type

Permit Type	Part
Type 1 Recycled Water General Permit for Gray Water	D
Type 2 Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water	B
Type 2 Recycled Water General Permit for Direct Reuse of Class A Reclaimed Water	B
Type 2 Recycled Water General Permit for Direct Reuse of Class B+ Reclaimed Water	B
Type 2 Recycled Water General Permit for Direct Reuse of Class B Reclaimed Water	B
Type 2 Recycled Water General Permit for Direct Reuse of Class C Reclaimed Water	B
Type 3 Recycled Water General Permit for a Reclaimed Water Blending Facility	B
Type 3 Recycled Water General Permit for a Reclaimed Water Agent	B
Type 3 Recycled Water General Permit for Gray Water	D
Recycled Water Individual Permit (General)	A
Recycled Water Individual Permit for Industrial Wastewater That Is Reused	C
Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility (<i>new permit type</i>)	E

The Recycled Water Individual Permit Application in Part A must be used for specific individual permits, which are prescribed by other Parts in Article 7 for particular types of water or situations (e.g. an individual permit for a reclaimed water agent). The Part A individual permit application may also be used for situations involving more than one type of permit at one facility or for situations not captured by a general permit in order to ensure recycled water is used appropriately for the end use. For example, one individual permit may be issued for a facility using gray water and reclaimed water.

The proposed modifications also transfer all of the provisions from A.A.C. Title 18, Chapter 9, Article 6, Reclaimed Water Conveyances, into Article 7 for regulation as general reclaimed water requirements under Part B of Article 7. The definitions for “open water conveyance” and “pipeline conveyance” are moved into the Article 7 General Provisions definition section, R18-9-A701. The reclaimed water pipeline conveyance and open water conveyance sections, R18-9-602 and R18-9-603, respectively, are moved into the section for general requirements for reclaimed water, R18-9-B702. These provisions are only applicable to reclaimed water conveyance and distribution and so are only regulated under the reclaimed water category under Part B of Article 7. ADEQ added a clause to the open water conveyances in R18-9-B702(K)(3)(c) to allow for a possible variance from the ¼ mile signage interval requirement, as approved by the Department to be reasonably protective of human health.

**Modification of the Prohibition Against Providing Reclaimed Water for Human Consumption.**

In furtherance of augmenting Arizona's potable water supply to meet future demands, ADEQ is providing an exception to the prohibition against providing reclaimed water for human consumption by allowing reclaimed water to be treated appropriately for potable use.

ADEQ proposed to leave the current reclaimed classes and permitting methodology substantially in place to allow for the continued appropriate regulation of reclaimed water, which has benefited the state over the years. Without additional advanced treatment, current classes of reclaimed water (A+, A, B+, B, and C) are not verifiably safe to drink. For this reason, ADEQ maintains the prohibition against providing direct reclaimed water for human consumption should continue in order to protect human health, unless the water is treated by a permitted advanced reclaimed water treatment facility.

Research and studies have shown, and ADEQ concurs, the science and technology of advanced water treatment is at a level today where reclaimed water can be reliably treated to produce potable water. Therefore, ADEQ proposed to modify the prohibition against providing reclaimed water for human consumption to allow for an exception. As proposed, reclaimed water may be used as a source water for human consumption if the water undergoes further advanced water treatment and permitting under Part E. Part E prescribes a permitting process and a list of criteria that must be considered for ADEQ to issue a permit for an advanced reclaimed water treatment facility as an end user. The proposed term "advanced reclaimed water treatment facility" is defined in R18-9-A701(1). Under the definition, the facility treats and purifies only Class A+ or B+ reclaimed water to produce potable water suitable for distribution for human consumption. However, if this facility also qualifies as a potable water system as defined under the Safe Drinking Water Act (SDWA), SDWA requirements will also separately apply to the facility under A.A.C. Title 18, Chapter 4.

Given the proven effectiveness of advanced water treatment techniques to produce drinkable water, ADEQ intends reclaimed water appropriately treated by an advanced reclaimed water treatment facility is no longer considered "reclaimed water" and therefore subsequent use is not to be "direct reuse" of reclaimed water as defined in the rules. To implement this concept, ADEQ proposed to modify the definition of "direct reuse" to clarify it does not include the use of potable water produced by an advanced reclaimed water treatment facility. ADEQ also proposed part of the definition of advanced reclaimed water treatment facility to specifically state, "Potable water produced by such a facility is not reclaimed water."

In other words, while an advanced reclaimed water treatment facility is considered an end user of reclaimed water, a person receiving water produced by an advanced reclaimed water treatment facility is not an end user of reclaimed water and is not subject to the end user permitting requirements under Article 7. However, water produced by an advanced reclaimed water treatment facility may be subject to other water quality regulations. For example, if the water produced by an advanced reclaimed water treatment facility is subsequently delivered to a public water system, Safe Drinking Water Act regulations would apply as they would to a surface source water.

Addition of Interim Permitting Criteria for an Advanced Reclaimed Water Treatment Facility, Which Produces Potable Water from Reclaimed Source Water.

Part E of this proposed rulemaking provides protective interim permitting criteria for an advanced reclaimed water treatment facility. These interim rules will remain in effect until ADEQ next modifies Article 7 to perfect the interim criteria based on experience and additional stakeholder input. ADEQ has already started the process for developing final criteria.

As stated in the previous section above, ADEQ is confident in the science and technology that advanced water treatment techniques can provide a finished water suitable for any potable use. These conclusions are based on research of laboratory analyses and multiple publications. E.g. *WateReuse, Framework for Direct Potable Use 79* (2015) ("The ability of a wide range of treatment processes to meet chemical and pathogen standards for [advanced treated water] production..... have been demonstrated and are well documented..."). These conclusions are also supported in practice by facilities in the United States and internationally currently producing potable water by treating reclaimed water through multiple treatment technology barriers.

An advanced reclaimed water treatment facility consists of a chain of state-of-the-art treatment processes provide multiple purification mechanisms that remove contaminants from reclaimed water to produce potable water. The source water allowed by the proposed Part E, Class A+ and B+ reclaimed water, already has received a significant level of treatment by high performance wastewater treatment plants. An advanced reclaimed water treatment facility further purifies this water through a sequence of technologies such as ultra-filtration, reverse osmosis, advanced oxidation, and granular activated carbon. These technologies remove chemical constituents and have the capability to eliminate microbial contaminants many times over. For example, typical treatment trains employed for this purpose provide six to ten or more logarithm removal levels for microbial contaminants. This is equivalent to a removal capability of 99.9999 to 99.99999999 percent or more. This is far more than needed considering the high quality of the source water. By comparison, under the Safe Drinking Water Act, public water systems fed by surface water sources must maintain 4 log removal of viruses, which is equivalent to a 99.99 percent removal. The Safe Drinking Water Act applies its most stringent microbial log removal targets to viruses.

State-of-the-art monitoring technology is also used to track in real time the treatment processes and the quality of the finished water product. Using these monitoring technologies, nonconforming water can be diverted almost immediately offline into, for example, a storage tank or impoundment. These technological advances ensure the facility can reliably purify water for drinking from virtually any source water to any desired standard of protection and ensure no nonconforming water is co-mingled with potable water for delivery.

Under the proposed rules, an advanced reclaimed water treatment facility must obtain a Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility. An applicant would provide the same information as required for any Recycled Water Individual Permit, as well as additional information required in a prescribed design report. The design report must demonstrate the advanced treatment provides multiple barriers of protection reliably producing water suitable for human consumption. Among other required information, the design report must include proof of pilot studies and results, a plan for monitoring for pub-



lic health, and a complete identification, description, and analysis of the treatment stream, treatment system performance alerts, and corrective actions and contingencies for noncompliant water. The requirement for proof of a pilot study means proof of a pilot plant, which is a small treatment system which is operated to generate information needed to design the full-scale facility. Design of the pilot plan itself may be based on an even smaller bench-scale system. ADEQ may accept a pilot study that ADEQ determines to be analogous to the applicant's planned facility. The proposed interim criteria will serve as a framework to develop final criteria for the design, treatment, monitoring, and operation of advanced reclaimed water treatment facilities producing potable water.

To assist in further developing the interim criteria into final criteria, ADEQ has convened a workgroup of experts with access and knowledge of recent publications, research, and practice. Several of these experts have knowledge of or are involved in developing a recent document on Arizona-specific potable use considerations facilitated by the Steering Committee on Arizona Potable Reuse (SCAPR), an ad hoc group formed by experts from municipalities, consulting firms, and academia. Once finalized, ADEQ will likely use this document to further expand the potable use criteria in a later rulemaking phase. However, during this interim period, ADEQ is confident the interim criteria will ensure that any advanced reclaimed water treatment plant proposed produces an exceptional and drinkable finished water product.

Modification of Gray Water Permitting Requirements.

ADEQ updated the gray water use rules to clarify ambiguities and expand the utility of gray water permits.

ADEQ proposed to modify some of the language and requirements in the Type 1 General Permit for Gray Water in R18-9-D701, which regulates residential gray water use. The proposed rule provides greater clarity as to what best practices are most appropriate, safe, and practical. The changes proposed in this rule revision reflect more than 15 years of experience under the current approach. The changes:

- Clarify the use of gray water for safely watering food plants;
- Allow gray water use for shrubs as well as trees;
- Disallow mixing of water used to wash diapers or similarly soiled garments with gray water because disinfection is too complicated for most home gray water systems;
- Provide examples for minimizing standing water on the surface, including the now widespread practice of distributing gray water under a mulch cover;
- Mandate that if blockage, backup, or overload of the system occurs, distribution of gray water should cease until the deficiency is corrected. This may provide additional options over the former language, which required the flow to be directed to the sewer or septic tank;
- Broaden the scope of filtration language to clarify that best practices and additional components may achieve the same level of water quality;
- Specify that gray water storage tank holding time should be minimized to avoid development of anaerobic conditions and odors (such tanks have proven problematic in practice, leading to the use of surge tanks with shorter holding times in some systems); and
- Provide specific examples of flood gray water application including containment by horticultural mulch basins and swales.

Additionally, ADEQ proposed to increase the utility of the Type 3 General Permit for Gray Water. The current Type 3 General Permit for Gray Water is not usable for most applicants due to inappropriate gray water dispersal requirements. The dispersal requirements as currently written mirror the disposal requirements for an on-site wastewater treatment facility, which require disposal into trenches. Trench disposal for on-site waste water treatment facilities is intended to allow for the infiltration of septic tank effluent, which gray water is not. Trench disposal limits the ability of a gray water permittee to use the water for simple irrigation or composting uses.

The proposed R18-9-D702 Type 3 Recycled Water General Permit for Gray Water also reshapes the former Type 3 permit. The new permit language addresses a need by many non-household entities to use gray water for simple subsurface irrigation of landscape plants in a way that protects human health and the environment.

Further, under the proposed R18-9-A703 Recycled Water Individual Permit, ADEQ may allow the addition of kitchen sink and dishwasher wastewater to a gray water source, as long as the water is treated appropriately for its end use.

Modification of Notice and Signage Provisions.

Recognizing that not all allowed end uses are amenable to posting signs, the proposed rules allow a permittee to post signs or provide notification for Type 2 Reclaimed Water General Permits for Direct Reuse of Class A+, A, B+, B, and C waters in R18-9-B704 through -B708.

ADEQ proposed changes to the signage requirement for "Mobile Reclaimed Water Dispersal" in R18-9-B702 to accommodate dispersal equipment other than trucks and tanks.

Modification of Reporting Requirements.

ADEQ proposed in R18-9-A705 to mandate if certain informational changes have occurred, a recycled water permittee must report such changes at least once annually by January 31st. While certain informational changes must be submitted for notice purposes only, ADEQ proposed any other changes will require a new permit application. ADEQ also proposed required annual reporting be due by a calendar date versus the permit anniversary date, in order to minimize work for both ADEQ and the customer to keep track of specific permit effective dates.

Modification of Permit Revocation Provisions.

ADEQ proposed to simplify and consolidate permit revocation provisions into one section, R18-9-A706, for both general and individual permits.



Addition of Recycled Permit Transition Provision.

ADEQ proposed a permit transition provision so that until their permits expire, existing permittees will follow Article 7 rules as they existed at the beginning of 2017.

Repeal of Unnecessary Sections and Subsections.

Upon review, some sections and subsection in Article 7 are unnecessary because the Department is already required by statute or rule to implement such sections or subsections. For example, the Department is already subject to permitting and licensing time-frame requirements by statute in Arizona Revised Statutes Title 41 and general agency rules in the Arizona Administrative Code, Title 18, Chapter 1. In addition, enforcement and penalty procedures in the current R18-9-720 are already established in A.R.S. §§ 49-261 through 49-263.

Modification of Notice Requirements.

In R18-9-A703, ADEQ proposed the agency must post notices of permitting decisions and for hearings on the Department’s website, rather than in newspaper publications.

Section by Section Explanation of Proposed Rules

Table 3 Section by Section Crosswalk and Condensed Explanation of Proposed Rules

<i>Proposed Rule Number and Title</i>	<i>Current Rule Number and Title</i>	<i>Condensed Explanation of Modification</i>
Repeal Article 6	Article 6 Reclaimed Water Conveyances	Repeal as this article will no longer be necessary because all text will be transferred to Article 7.
Repeal	R18-6-601 Definitions	Repeal and transfer text into the Article 7 definitions in R18-9-A701.
Repeal	R18-9-602 Pipeline Conveyances of Reclaimed Water	Repeal and transfer text into the reclaimed water general requirements in R18-9-B702(J).
Repeal	R18-9-603 Open Water Conveyances of Reclaimed Water	Repeal and transfer text into the reclaimed water general requirements in R18-9-B702(K).
Article 7 Use of Recycled Water	Article 7 Direct Reuse of Reclaimed Water	Restructure into several parts to regulate different types of water under the umbrella term recycled water.
Part A General Provisions	N/A	New part for recycled water general provisions.
R18-9-A701 Definitions	R18-9-701 Definitions	Renumbered. Insert “Open water conveyance” and “pipeline conveyance” definitions from Article 6 here. Amend gray water definition to be consistent with statutory definition. Add a definition for recycled water. Add a definition for an advanced reclaimed water treatment facility. Modify definition of direct reuse to clarify it does not include the use of potable water produced by an advanced reclaimed water treatment facility. Add a definition for a sewage treatment facility to clarify the term means the same as it does under the Aquifer Protection Program.
R18-9-A702 Applicability and Standards for Recycled Water	R18-9-702 Applicability and Standards for Reclaimed Water Classes	Renumber and make minor amendments to clarify applicability under recycled water structure.
R18-9-A703 Recycled Water Individual Permit Application	R18-9-705 Reclaimed Water Individual Permit Application	Renumber and amend to include certain general information changes an applicant must annually submit. Modify the notice requirements from requiring newspaper notices to posting on the Department’s website. Repeal pre-application conference provision as ADEQ is always willing to hold pre-application conferences when requested by applicants. Repeal provisions already required by other agency rules or specific applicable statutes. Amend to ensure treatment measures will be employed to meet water quality as appropriate for the source and use. Kitchen sink water may be permitted here with a gray water source. Also, multiple waters and/or uses may be regulated under one individual permit (e.g. gray and reclaimed). Fix rule references.
R18-9-A704 Recycled Water General Permit	R18-9-708 Reusing Reclaimed Water Under a General Permit	Renumber and clarify process and information required for Notice of Intent to Use Recycled Water. Recycled Water Authorization is not automatically issued for a Type 3 permit and ADEQ must inform permittees of its receipt of a Notice of Intent for Type 2 permits.



<i>Proposed Rule Number and Title</i>	<i>Current Rule Number and Title</i>	<i>Condensed Explanation of Modification</i>
R18-9-A705 Recycled Water Permit Term, Information Changes, and Renewal	R18-9-709 Reclaimed Water General Permit Renewal and Transfer	Renumber and completely restructure to apply to all recycled water permits. Requires the permittee to provide certain information annually if there are any changes in the information. If there are any changes other than those allowed with notice, a new permit is required.
R18-9-A706 Recycled Water Permit Revocation	R18-9-710 Reclaimed Water General Permit Revocation	Renumber, restructure, and simplify permit revocation procedures for general and individual permits. This rule was modified to be applicable to all recycled water permits, not just reclaimed water general permits.
R18-9-A707. Recycled Water Permit Transition	N/A	Add provisions so until their permits expire, existing permittees will follow their permits according to the language in Article 7 as it existed at the time the permits were issued.
Repeal	R18-9-720 Enforcement and Penalties	Repeal because enforcement and penalty processes are already prescribed in statute at A.R.S. §§ 49-261 through 49-263.
Part B Reclaimed Water	N/A	New part for reclaimed water regulation.
R18-9-B701 Transition of Aquifer Protection Permits and Permits for the Reuse of Reclaimed Wastewater	R18-9-703 Transition of Permits	Renumber and minor grammar edits and consistency changes, such as updating cross-references and nomenclature.
R18-9-B702 General Requirements for Reclaimed Water	R18-9-704 General Requirements	Modify the prohibition against direct reuse for human consumption to allow for an exception for reclaimed water treated under Part E. The hose bibb provision is transferred to its own subsection to clarify all hose bibbs discharging reclaimed water shall be secured to prevent use by the public, not just hose bibbs associated with irrigation. At “at valve” to clarify ADEQ’s longstanding interpretation of the meaning of hose bibb. Modify signage and notice requirements. Pipeline and open water conveyance requirements from Article 6 are moved into this section. Add a clause in subsection (K)(3)(b) to allow a possible variance from the required ¼ mile interval signage, as approved by ADEQ to reasonably protect human health. Renumber and make nomenclature, grammar, and reference fixes for consistency. This section is still only applicable to reclaimed water.
R18-9-B703 General Provisions for Recycled Water Individual Permit for Reclaimed Water	R18-9-706 Reclaimed Water Individual Permit Application	Renumber and make minor consistency and clarification edits. Remove permit transfer provisions, now covered in Part A. Add provisions for closure as applicable and signage and notification requirements, as appropriate for the end use. Update reference to strip chart recordings to the more generic word “data” to reflect digital data collection methods. For clarity, provide reference to discretionary alternate direct reuses allowed under R18-11-309.
R18-9-B704 Type 2 Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water	R18-9-712 Type 2 Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water	Renumber and make minor changes for consistency.
R18-9-B705 Type 2 Recycled Water General Permit for Direct Reuse of Class A Reclaimed Water	R18-9-713 Type 2 Reclaimed Water General Permit for Direct Reuse of Class A Reclaimed Water	Renumber and make minor changes for consistency and clarity.
R18-9-B706 Type 2 Recycled Water General Permit for Direct Reuse of Class B+ Reclaimed Water	R18-9-714 Type 2 Reclaimed Water General Permit for Direct Reuse of Class B+ Reclaimed Water	Renumber and make minor changes for consistency.
R18-9-B707 Type 2 Recycled Water General Permit for Direct Reuse of Class B Reclaimed Water	R18-9-715 Type 2 Reclaimed Water General Permit for Direct Reuse of Class B Reclaimed Water	Renumber and make minor changes for consistency.



<i>Proposed Rule Number and Title</i>	<i>Current Rule Number and Title</i>	<i>Condensed Explanation of Modification</i>
R18-9-B708 Type 2 Recycled Water General Permit for Direct Reuse of Class C Reclaimed Water	R18-9-716 Type 2 Reclaimed Water General Permit for Direct Reuse of Class C Reclaimed Water	Re-number and make minor changes for consistency.
R18-9-B709 Type 3 Recycled Water General Permit for a Reclaimed Water Blending Facility	R18-9-717 Type 3 Reclaimed Water General Permit for a Reclaimed Water Blending Facility	Re-number and clarify information requirements for Type 3 blending facility applications. Clarify requirements if nitrogen or fecal coliform concentrations are exceeded. Modifies annual reporting date from permit anniversary to a uniform calendar year date of January 31.
R18-9-B710 Type 3 Recycled Water General Permit for a Reclaimed Water Agent	R18-9-718 Type 3 Reclaimed Water General Permit for a Reclaimed Water Agent	Re-numbered, modified for consistency, and clarifies information requirements for Type 3 water agent permit. Modify annual reporting date from permit anniversary to a uniform calendar year date of January 31.
Part C Recycled Industrial Wastewater	N/A	New part for recycled industrial wastewater regulation.
R18-9-C701 Recycled Water Individual Permit for Industrial Wastewater	R18-9-707 Reclaimed Water Individual Permit Where Industrial Wastewater Influences the Characteristics of Reclaimed Water	Re-number and minor changes for consistency. Updated industrial code terminology.
Part D Gray Water	N/A	New part for gray water regulation.
R18-9-D701 Type 1 Recycled Water General Permit for Gray Water	R18-9-711 Type 1 Reclaimed Water General Permit for Gray Water	Re-number and make minor changes for consistency. Several changes to clarify ambiguities in current rule and to provide more useful guidance for residential gray water use.
R18-9-D702 Type 3 Recycled Water General Permit for Gray Water	R18-9-719 Type 3 Reclaimed Water General Permit for Gray Water	Re-number and make minor changes for consistency. Significant changes to technical requirements for large-scale gray water use. New requirements expand the utility of the permit.
Part E Purified Water for Potable Use	N/A	New part for potable use regulation.
R18-9-E701 Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility	N/A	New section to provide an individual permit process for an advanced reclaimed water treatment facility, a facility treats reclaimed water to produce potable water. Provides interim criteria requirements permittees must meet for purifying water for potable use. Clarifies product water subject to the Safe Drinking Water Act (SDWA) would be considered surface water. Clarifies that this rule does not exempt a facility from SDWA requirements.

7. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

- *Framework for Direct Potable Reuse* (Jeffrey J. Mosher, et al. eds, 2015), sponsored by the WaterReuse Association and co-sponsored by NWRI, American Water Works Association, and Water Environment Federation, available at <https://waterreuse.org/waterreuse-research/framework-for-direct-potable-reuse/>.

This report was developed to guide areas that face scarce water supplies, including Southwestern states, with a general framework for direct potable reuse (DPR). The document provides basic information regarding DPR treatment processes, the value of DPR, considerations and context for regulation of DPR, technical issues, and the importance and challenges of public support and outreach. ADEQ used this report as guidance for a DPR framework in Arizona.

- George Tchobanoglous, University of California, Davis, et al., *Direct Potable Reuse: A Path Forward* (2011), sponsored by WaterReuse, Bureau of Reclamation, and California State Water Resources Control Board, available at <https://waterreuse.org/waterreuse-research/11-00-direct-potable-reuse-a-path-forward/>.

This report provides basic information regarding the development of DPR as of 2011, including early background information of the development of DPR, technical issues and aspects of DPR, and the future research needs as of 2011. ADEQ used this report to inform its understanding of the development of DPR.

- *Blue Ribbon Panel on Water Sustainability: Final Report* (2010), sponsored by Arizona Department of Environmental Quality (ADEQ), Arizona Corporation Commission (ACC), and Arizona Department of Water Resources (ADWR), available at <http://www.azwater.gov/AzDWR/waterManagement/BlueRibbonPanel.htm>.



This report was produced by a governor appointed panel of water resource planning experts and leaders to provide recommendations to Arizona for increasing its water portfolio, in part through use of reclaimed water. ADEQ used this report to better understand the Arizona’s water reuse and sustainability goals.

ADEQ reviewed the above three studies and reports as guiding principles and background for the rules, but did not rely on them. To develop these rules, ADEQ took the information in these studies into account in conjunction with internal expert and external stakeholder input.

• WaterReuse Research Foundation, *The Opportunities and Economics of Direct Potable Reuse* (2014), available at <https://watereuse.org/watereuse-research/the-opportunities-and-economics-of-direct-potable-reuse/>.

WaterReuse prepared the above report to assist water agencies in answering questions regarding how much direct potable reuse could cost versus other sources of water; what the carbon footprint may be for direct potable reuse, or how much new water could be made available via direct potable reuse. The report concentrates mostly on California, but the information may be used to approximate costs in Arizona in the absence of similar analysis specific to Arizona.

ADEQ relied on this above study for information regarding the likely cost of direct potable reuse and the likely costs compared to alternative sources of water.

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

Not applicable

9. The preliminary summary of the economic, small business, and consumer impact:

The following discussion addresses each of the elements required for an economic, small business and consumer impact statement (ESBCIS) under A.R.S. § 41-1055.

A. An identification of the rulemaking.

This rulemaking is generally anticipated to encourage usage of reclaimed water, increase business opportunities, and pave the way for water resource conservation and savings. This rulemaking allows for activity that has long been prohibited and does not limit already occurring activities. Under the 2001 reclaimed water rules, no one has been allowed to provide even treated reclaimed water for human consumption, except as allowed by substantive policy. ADEQ is modifying this prohibition to allow for the distribution of highly treated reclaimed water in order to augment Arizona’s water supply and to spark innovation. In addition, rule modifications to large scale gray water use modifications will also allow for activity previously limited by implementation requirements. The other rule modifications, including rule clarifications and rule restructure, should have limited, if any, economic effects.

B. An identification of the persons who will be directly affected by, bear the costs of, or directly benefit from this rulemaking.

Recycled water permittees will be directly affected by this rulemaking, including those who use reclaimed water and gray water for beneficial use.

The types of facilities that these rules generally apply to include wastewater treatment plants, irrigation districts, other reclaimed water end users, and residential and large-scale gray water users.

Type 2 permittees include, as examples, schools, retail centers, HOAs, other residential communities and subdivisions, school districts, municipalities, construction companies, churches, and correctional facilities. The table below shows the numbers of currently active Type 2 general reclaimed permits:

Use Category	Active Type 2 General Permits
Agriculture Irrigation	9
Construction and/or Dust Control	9
Golf Course Irrigation	46
Landscape Impoundment	4
Landscape Irrigation	275
Pasture for animals (dairy)	1
Pasture for animals (non-dairy)	3
Recreational Impoundments (lakes)	2
Restricted Access Landscape Irrigation	6
Silviculture	1
Multiple uses	45
Total Type 2 General Reclaimed Permits	401



ADEQ also currently has 52 active Type 3 reclaimed water permits for water agents or blending facilities, which mainly include municipalities, political subdivisions, and utilities.

There are 10 active individual recycled water permits under ADEQ. This includes:

- 7 industrial permits, including permits for correctional facilities, power plants, food processing facilities, and mines;
- 3 individual gray water permits including for colleges, correctional facilities, municipalities, and industrial operations such as food canning, mining, and power plants; and
- 2 individual reclaimed permits, one for a municipality and one for a county.

There are many Type 1 gray water users in the state, but the exact or even approximate number is unknown as no written or recorded permit is required in order to be in compliance with the rules.

There are currently 6 Type 3 gray water permits, including for R.V. parks, recreational parks, and residential communities. The Type 3 gray water provisions as modified may encourage similar facilities, including hotels, to consider applying for this type of permit in the future.

Other potential permittees include those who may choose to apply for an advanced reclaimed water treatment facility individual permit. These permittees will likely consist of those who wish to capitalize on new technology to maximize the use and conservation of water. ADEQ anticipates that as these innovators demonstrate and prove current technologies, and the technologies become less expensive, more water treatment facilities will start to take advantage of the economic benefit opportunities that these rules provide.

C. A cost benefit analysis of the following:

a. The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.

ADEQ is the main agency impacted by the proposed changes. ADEQ already issues reclaimed and gray water permits. ADEQ expects that processing a permit for advanced water treatment facilities will cost no more than the cost to process aquifer protection permits for large-scale wastewater treatment plants. Likewise, ADEQ does not anticipate any increase in state costs to analyze Type 3 gray water or other individual reclaimed permits.

ADEQ does not anticipate the number of applications for new permits, including for advanced water treatment facility permits, individual reclaimed/gray water permits, or Type 3 gray water permits, to drastically increase as a result of these rules. Therefore, ADEQ does not currently expect this rule to greatly increase the number of permits it must process, and ADEQ expects permit fees to support most of any extra permit processing costs. Upon finalization of the rule, the agency does not expect it will need to greatly increase resources to support the program, at this time. Initially, no new full time employees will be devoted to support the program. The permit fees for aquifer protection, reclaimed, and gray water are fixed, however, and do not adjust with any sort of inflationary index, which may cause issues at a future date. As the agency gains experience and data to measure impacts, ADEQ intends to analyze and address this issue at a future date as a part of regular periodic water quality division-wide analysis of fees. Therefore, ADEQ expects minor economic impacts to result from this rulemaking at this time.

b. The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking.

Political subdivisions and government entities that are reclaimed water permittees are impacted by the rule, but any economic impacts should be minimal. There are approximately 90 reclaimed water permittees that are public entities, such as municipalities, towns, counties, and associated organizations, such as schools. Costs and benefits should be similar as to businesses, and are discussed below.

c. The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

Gray Water Modifications

This rule modifies gray water best management practices for Type 1 and Type 3 permits. ADEQ does not expect the costs to comply with the Type 1 rule to be any more expensive than the previous gray water use requirements. However, when Type 3 gray water users wish to renew their permits, there will likely be a minimal consulting or engineering cost to ensure compliance with the new permit requirements. While this may minimally affect each permittee, consultants, engineers, and law firms may minimally or moderately benefit from this rulemaking from their clients in the aggregate in the future if their services are needed to comply with this rule. More potential large-scale gray water users may also benefit from water cost savings from this rulemaking. Only seven Type 3 gray water permits exist because the current use requirements essentially preclude the objective of the permit, which is to irrigate the land for beneficial use. Instead, current Type 3 gray water facilities must disperse the water to mirror the trench disposal requirements for on-site waste wastewater facilities, which limits the ability of a gray water permittee to use the water for simple irrigation or composting purposes. Given that this rule provides reasonable best management practices in place of the on-site trench disposal methodology, the ability to use gray water on a large scale should increase. This ability may translate to increased use of gray water for water that a business may otherwise have to pay for. This may result in incremental conservation of water and serve to address community water augmentation and water security planning.

Any additional costs to businesses subject to the amended gray water rules will be minimal and are not expected to deter any expansion of business operations. In fact, ADEQ expects this rule to have the opposite effect overall. Likewise, there should be no negative impact on employment in this state.

New Permit for Advanced Reclaimed Water Treatment Facility

The new rule allows for activity that was previously prohibited, namely treating reclaimed water and distributing it for human consumption. In order for this activity to be carried out safely, ADEQ will require an individual reclaimed water permit. This type of



facility is unlike most other current reclaimed water facilities, but ADEQ expects the cost of the permit to be similar to that of an individual APP permit for a large wastewater treatment facility. According to billing records, the cost of these types of permits generally range between \$10,000 - \$15,000.

Advanced reclaimed water treatment is a voluntary activity which may be pursued to augment Arizona's water supply for environmental reasons, and it may soon become profitable given the high value of potable water in Arizona. This rule will also allow for increased water security and an additional long-term dependable water source as a part of a larger plan to augment Arizona's water supply and promote continued economic growth.

Based on Southern California figures as reported in WaterReuse Research Foundation's *The Opportunities and Economics of Direct Potable Reuse*, the total cost of treating reclaimed water to produce potable water, including treatment, conveyance and brine management may run between \$820 acre-foot and \$2000 acre-foot. This cost is likely lower than imported water supply and brackish groundwater supply options. The price of direct potable use overall may be more expensive than other current conservation options, but conservation typically requires increasingly more expensive technologies and resources as the level of acre-feet saved increases. In other words, there is a mathematical limit to the benefits of conservation, whereas advanced water treatment may continue to provide increased supply and benefit with more limited additional resources.

Newspaper Notice Removal

The rule eliminates the requirement for the state to publish permit public notices in newspapers, but rather requires notice be given on the Department's website. As an example, a public notice published in a statewide newspaper may cost approximately \$1,000. This cost is passed along to the permittees in their final permit processing bills. Hence, the change could save thousands of dollars a year for ADEQ permitting customers. However, this modification of the notice requirement could affect newspaper companies negatively, as government-required newspaper notices are a source of income for these companies.

D. A general description of the probable impact on private and public employment in businesses, agencies, and political subdivisions of this state directly affected by this rulemaking.

ADEQ does not anticipate any significant impact on employment in this state as a result of this rulemaking.

E. A statement of the probable impact of the rulemaking on small businesses.

ADEQ does not expect this rulemaking to significantly increase burdens on small businesses. Some additional design, engineering, or consulting costs may be required for a renewing permittee to comply with the Type 3 gray water requirements under this rule. Additionally, consultants, suppliers, engineers, and lawyers with small businesses may indirectly benefit from additional work contracted as a result of the permitting and construction associated with new Type 3 gray water facilities or new advanced reclaimed water treatment facilities.

a. An identification of the small businesses subject to this rulemaking.

Under A.R.S. § 41-1001(21):

"Small business" means a concern, including its affiliates, which is [1] independently owned and operated, which is [2] not dominant in its field and which [3] employs fewer than one hundred full-time employees or which had gross annual receipts of less than four million dollars in its last fiscal year. (Emphasis added.)

The types of businesses affected are the same as those listed in the section above that identifies those persons affected by the rulemaking. Construction, landscaping, golf courses, and retail centers are some examples of possible small businesses affected by this rulemaking. ADEQ is unaware of any small businesses that do not want this rule to proceed.

b. The administrative and other costs required for compliance with the rulemaking.

This rule does not prescribe significant changes in administrative or compliance costs for existing reclaimed water or Type 1 gray water users.

New Type 3 gray water permittees, which may include small businesses, will likely need to consult designers, engineers, or consultants to comply with the new rule modifications. However, the costs will likely be no more or less than the consultant costs for the trench disposal requirements that have existed since 2001. Therefore, ADEQ does not expect the new Type 3 gray water requirements to increase compliance costs for new businesses, including small businesses. However, upon renewal, each of the 6 existing Type 3 gray water facilities will be required to renew according to the rules established in this rulemaking. This will entail some design costs as discussed above. These facilities are not impacted immediately as they have until their existing permit expires in order to comply with the new regulations.

New advanced reclaimed water treatment facilities will entail significant investment in permitting, engineering, construction, and long-term operation costs.

For both Type 3 gray water users and advanced reclaimed water treatment facilities, potential permittees will need to analyze the possible return on investment for their particular business.

c. A description of the methods that the agency may use to reduce the impact on small businesses.

(i) *Establishing less costly compliance requirements in the rulemaking for small businesses.*

ADEQ is consolidating most generally required reporting under this rule to be made once annually by January 31st instead of by the permit anniversary date. ADEQ anticipates this to have a minimal positive impact on small businesses. ADEQ is providing an exception to the prohibition of providing reclaimed water for human consumption by allowing an advanced reclaimed water treatment facility to be permitted to treat reclaimed water and distribute the potable product for human consumption.

(ii) *Establishing less costly schedules or less stringent deadlines for compliance in the rulemaking.*

Current permits are grandfathered into the recycled water program so that existing reclaimed and gray water permits shall follow the rules as they exist under current permits until such permits expire. Any renewed permit will be renewed under the new rules.



This was done to allow the regulated community time to evaluate the new rule structure any changes needed to their processes before the new rules apply. The new rules are not, however, expected to cause significant changes for small businesses.

(iii) *Exempting small businesses from any or all requirements of this rulemaking.*

To protect human health and the environment, ADEQ cannot exempt small businesses from requirements of this rulemaking.

d. The probable cost and benefit to private persons and consumers who are directly affected by this rulemaking.

ADEQ does not anticipate any immediate significant economic cost or benefit to private persons or consumers. The modifications in Type 1 gray water use requirements are essentially clarifications and are expected to at most minimally affect residential gray water users. An intangible benefit of these rules may be the ability of the public to support businesses that conserve more water through gray water use or that lead the nation in protecting water resources by producing potable water from reclaimed water.

F. A statement of the probable effect on state revenues.

ADEQ does not expect any significant increase or decrease state revenues as a result of this rule.

G. A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

ADEQ does not know of any less intrusive or less costly alternative methods of expanding gray water use and allowing for treatment of reclaimed water to produce potable water, while still protecting human health and the environment.

H. A description of the limitations of the data available for this economic small business and consumer impact statement.

ADEQ generally does not track in a database certain information on permittees, such as whether a facility is publicly or privately owned. Some of the information came from an informal review of active permits and past billing histories.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

R18-9-A701(A)(2)(a) –

- left “National” to avoid clarify applicability to both NPDES & AZPDES permits [see Comment and Response 1]

R18-9-B702, Table 1 –

- combined rows for A+ & A and B+ and B because they are the same [see Comment and Response 18];
- added “at valve” to clarify longstanding ADEQ interpretation of hose bibb [see Comment and Response 37]; and
- modified language for to clarify ADEQ’s longstanding interpretation for when and where signage is required for restricted access irrigation signage [see Comment and Response 2]

R18-9-B702(K)(3)(c) –

- added clause to the open water conveyances signage provision in R18-9-B702(K)(3)(c) to allow for a possible variance from the ¼ mile signage interval requirement, as approved by the Department to be reasonably protective of human health [see Comment and Response 30]

R18-9-B705(B)(1)(c) & (d) –

- removed “if applicable” from these subsections as the phrase does not add value for clarification purposes [see Comment and Response 10]

R18-9-B710(F) –

- repealed this subsection because it is already covered under subsection (E) and was left in place in error in the proposed rulemaking [see Comment and Response 27]

R18-9-D701(C)(8) & R18-9-D701(C)(8) –

- in both rules, modified the holding tank time provision from mandating a 24 hour time period to mandating that the holding tank time must be “minimized to avoid development of anaerobic conditions and odors”, so as to account for varying temperatures and conditions throughout the state and throughout the year [see Comment and Response 44]

R18-9-E701(B) –

- added emphasis that the rule does not exempt any facility from Safe Drinking Water Act requirements applicable under Title 18, Chapter 4 of the Arizona Administrative Code [see Comment and Response 3, and other comments for which the responses refer the reader to Response 3]; and
- changed “treated” to “considered” in order to avoid confusion between the technical term “treated” and the colloquial interpretation of “treated” [change not made in response to a particular comment]

Technical Corrections –

- ADEQ also made technical corrections at the request of Governor’s Regulatory Review Council staff.

11. An agency’s summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

Comment 1: In R18-9-A701(2)(a), “National” should not be struck out and the rule should read as follows: “The use of water subsequent to its discharge under the conditions of a National or an Arizona Pollutant Discharge Elimination System permit.” Phoenix’s 91st Avenue Wastewater Treatment Plant has a National, rather than an Arizona, Discharge Elimination System permit, due to proximity to tribal lands. (City of Phoenix)

Response 1: ADEQ agrees that this clarification is important considering the different nomenclatures and the fact that reclaimed conveyance rules would apply to both federal and state permits. ADEQ has modified the rule language accordingly.

Comment 2: R18-9-B702, Table 1, Signage and Notification Requirements for Direct Reuse Sites: under Restricted Access Irriga-



tion for Class B+, B, and C reclaimed water, Phoenix requests the clarifying changes below:

1. Ingress points; or 2. On premises ~~or~~ at reasonably spaced intervals not more than 1/4 mile, as applicable to the use; and 3. Notice on golf score cards, if applicable. (City of Phoenix)

Response 2: ADEQ’s interpretation is that a clarification is needed to accommodate situations where reclaimed water is distributed within a large area in which access is secured, such as within the fenced area of a sewage treatment facility. This contrasts with the more typical situation where an irrigation ditch conveys reclaimed water to more distant farm fields and access to the ditch is unsecured to vehicular and pedestrian traffic. In this latter situation, to ensure protection of human health, ADEQ believes the existing signage requirements are appropriate. ADEQ has revised this provision to read:

“1. Ingress points; 2. On premises or at a reasonably spaced intervals of not more than 1/4 mile, as applicable to the use at the reuse site or along the open water conveyance, unless access to vehicular and pedestrian traffic is secured; and 3. Notice If applicable, notice on golf score cards, if applicable”

Comment 3: The definition of “advanced reclaimed water treatment facility” should be amended to state that it treats and purifies reclaimed water to be suitable as a source water supply to a drinking water treatment facility which is designed, approved, and regulated under the Safe Drinking Water Act. It is not appropriate to regulate potable water under the reclaimed water rules. (Maricopa County Water and Waste Management Division [Maricopa County])

Response 3: ADEQ does not intend that the Part E provisions for an Advanced Reclaimed Water Treatment Facility substitute for or contradict any requirements of the Safe Drinking Water Act, as subsection R18-9-E701(B) prescribes. In fact, federal law has not addressed how to safely treat and directly reuse reclaimed water for Safe Drinking Water Act purposes. If an advanced reclaimed water treatment facility is also subject to the SDWA as a potable water system, then this rule provides additional public health protection in the absence of any parallel federal law. Also, this rule applies to more situations than the distribution of drinking water by a potable water system regulated under the SDWA; it applies to any distribution of treated reclaimed water for potable use. To clarify that this rule does not substitute for Safe Drinking Water Act requirements, ADEQ has revised this subsection from the proposed version to read:

“B. Safe Drinking Water Act. For purposes of Safe Drinking Water Act requirements, water produced by an Advanced Reclaimed Water Treatment Facility shall be ~~treated as~~ considered surface water for purposes of compliance with Title 18, Chapter 4 of the Arizona Administrative Code. Nothing in this section exempts an applicable facility from Safe Drinking Water Act requirements.”

Note that ADEQ also modified “treated as” to “considered” to avoid confusion between the technical and colloquial interpretations of “treated.”

Comment 4: Regulating drinking water under the Aquifer Protection rules is inappropriate, since there is no discharge to the groundwater under the proposed rules. (Maricopa County)

Response 4: This rule proposal regulates an Advanced Reclaimed Water Treatment Facility under a Recycled Water Individual Permit, not through the Aquifer Protection Permit program. Recycled water used as a drinking water source would be regulated as if it were a surface water under Title 18, Chapter 4 of the Arizona Administrative Code.

Comment 5: The proposed rules are inconsistent and need to be clear that an advanced reclaimed water treatment facility treats and purifies reclaimed water to be suitable as a source water supply to a drinking water treatment facility which is designed, approved, and regulated under the Safe Drinking Water Act. It is not appropriate to regulate potable water under the reclaimed water rules. Under the Safe Drinking Water Act, this source of water would need to be treated as a surface water supply, with all of the protections for such a supply as detailed under the Safe Drinking Water rules. (Maricopa County)

Response 5: These rules are fully consistent with SDWA requirements. The finished water from an Advanced Reclaimed Water Treatment Facility will be considered a surface water source under the Safe Drinking Water Act. As Response 3 indicates, ADEQ modified R18-9-E701(B) to further clarify that the Part E requirements do not substitute for or override SDWA requirements. ADEQ developed the criteria for permitting an Advanced Reclaimed Water Treatment Facility in Part E to ensure that such facilities appropriately address safety concerns in consideration of the distinctive characteristics of reclaimed water.

If the commenter is concerned that a drinking water distributor not subject to SDWA (that is, the system serves less than 25 people or 15 service connections) might somehow produce water unsuitable for human consumption, ADEQ does not share this concern. The costs of permitting, design, construction, and monitoring necessary to bring a protective advanced reclaimed water treatment facility online are likely prohibitive for most small systems not subject to the SDWA that have so few water users to fund the project. Even so, these rules are specifically designed to ensure that any advanced reclaimed water treatment facility will be permitted to produce drinkable water protective of human health. Therefore, outside of the clarification to subsection R18-9-E701(B), no further change to the rule is necessary.

Comment 6: The use of Class A+ and B+ effluent as appropriate sources for direct potable reuse is inappropriate as long as the standard only has to be met 4 out of 7 days. This opens up the range of source water to potentially untreated wastewater being acceptable. The use of source water should be limited to those facilities which can prove to meet the standard under all circumstances. (Maricopa County)

Response 6: The commenter mentions only part of the standard for the reclaimed water quality classes. As the commenter alludes to, for Class A+ reclaimed water, there must be no fecal coliform organisms in 4 of the last 7 daily samples, and for Class B+ reclaimed water, there must be less than 200 fecal coliform organisms per 100 milliliters (ml) of water in 4 of the last 7 daily samples. However, the commenter fails to mention that the standard also includes single sample maximum limits. Thus, for Class A+ reclaimed water, all samples for fecal coliforms must fall below 23 organisms per 100 ml, and for Class B+ reclaimed water, all samples must fall below 800 organisms per 100 ml. In other words, the quality of the reclaimed water is tightly constrained for all of the reclaimed water classes, and does not open “up the range of source water to potentially untreated wastewater.”

Advanced Reclaimed Water Treatment Facilities will treat water to a potable level through multiple barriers of treatment that take



into consideration not only the 4 of 7 day averages but the single sample maximum limits applicable to the reclaimed water classes. The criteria proposed in this rule ensure that the Advanced Reclaimed Water Treatment Facility will produce finished water protective of public health for any of the reclaimed water classes, although only classes A+ and B+ are allowed under this rule. Among these criteria are detailed characterization of the reclaimed water source, pilot treatment system testing tailored to the characteristics of the source water, multiple barriers of treatment for microbial and chemical constituents within the treatment train, determination of appropriate microbial removal targets, process control monitoring to ensure microbial limits are met, and corrective actions for out-of-range monitoring and diversion of any non-compliant water from delivery. No change to the rule is necessary.

Comment 7: It is inappropriate to proceed with direct potable reuse provisions (section E) until after the Phase 2 standards are developed for the advanced wastewater treatment facility. (Maricopa County)

Response 7: ADEQ believes that the interim criteria proposed in Part E of this rule are fully satisfactory for the purpose of permitting an Advanced Reclaimed Water Treatment Facility if a utility submits an application to ADEQ during the period the interim criteria are in effect. An extensive body of technical literature exists on design and operation details pertaining to the interim criteria. Both facility designers and ADEQ permitting specialists would be relying on this literature to ensure that the interim criteria are satisfactorily addressed. No change to the rule is necessary.

Comment 8: There is a concern that this type of facility would be reviewed and approved by someone without an expertise in the review and approval of surface water treatment facilities. (Maricopa County)

Response 8: ADEQ has delegated approval of surface water treatment facilities under SDWA to only one local authority. If ADEQ were to receive an application and issue a permit for an Advanced Reclaimed Water Treatment Facility that produces a finished water that is considered a surface water source, ADEQ would collaborate with the local authority during the entire process to ensure that appropriate technical review is provided all around. No change to the rule is necessary.

Comment 9: The current and proposed reuse rules do not require any signage at parks which are using reclaimed water as a source of spray irrigation water. It is irresponsible not to notify the users of public or private parks that the water used to irrigate with is reclaimed water. These facilities are typically used by children and families. Activities include picnicking and play, and participants should be properly notified as such. (Maricopa County)

Response 9: ADEQ does not allow reuse of Class B+, B, or C reclaimed water for irrigation of parks and schoolyards. However, it does allow irrigation with Class A+ and A reclaimed water. The current rule requires signage for irrigation of schoolyards with Class A+ or A reclaimed water but not for parks. A rule change to require signage for parks is not a consideration in this rule revision, but ADEQ will analyze the current situation with respect to parks and determine whether a rule change is merited in the next installment of rulemaking.

Comment 10: Under R18-9-B705(B)(1)(c) (Recycled Water Permit Term, Information Changes, and Renewal), the rule requires reporting of “the total nitrogen concentration of the reclaimed water applied, if applicable.” It is not clear when it would not be applicable to report this. I think that ADEQ should delete the phrase “if applicable” here. Also, it would be clearer if the rule identified that this is the average total nitrogen concentration or geometric mean of the total nitrogen concentration. (Pima County Regional Wastewater Reclamation Department [Pima County])

Response 10: ADEQ has removed “if applicable” in both subsections (c) and (d) as the phrase does not add clarification value to these subsections. The situation will dictate whether the requirement is applicable to the use. Regarding the total nitrogen comment, ADEQ did not consider this change in this rulemaking but will take this comment under advisement for the next rulemaking installment.

Comment 11: Under R18-9-B702(H)(4)(c), within these exceptions there is opportunity to address use of reclaimed water for riparian ecosystem enhancement. I suggest that ADEQ add an additional item under this subsection that says “ii. Silviculture for riparian habitat restoration where the application uses A+ reclaimed water outside of any active stream channel and irrigation is controlled with moisture sensing equipment.” (Pima County)

Response 11: ADEQ is aware of interest among stakeholders in recent years to designate riparian restoration or enhancement as an allowed end use for reclaimed water in A.A.C. Title 18, Chapter 11. ADEQ will take this suggestion under advisement for a possible rule change in the next installment of rulemaking.

Comment 12: For R18-9-A705(B) (Recycled Water Permit Term, Information Changes, and Renewal), ADEQ should be notified within 15 days from the date of change of the permittee (end user), as opposed to annually (as stated in the proposed language). If passed as proposed with the annual limit, this would have the potential to result in the loss of critical permit information which could cost the Department time and resources to recover. Fifteen days is consistent with other ADEQ permit transfer notification timeframes. (Global Water Resources Inc. [Global Water])

Response 12: ADEQ does not anticipate significant costs from having only annual notice of the changes prescribed in the rule. Nor is a delay in this information likely result in negative environmental effects. The rule also does not preclude permittees from notifying ADEQ of any changes more frequently than once annually. No change to the rule is necessary.

Comment 13: For R18-9-A705(B)(1) & (2) (Recycled Water Permit Term, Information Changes, and Renewal), ADEQ should define and specify the difference between the Owner and the Permittee, or replace them with “end-user”. Section D701(A) includes a definition for “end-user” as being basically the Permittee, which is supported by the Type 2 Notice of Intent (NOI). It makes sense that the person who uses the recycled water is the one who must adhere to the rules, i.e., the responsible use of recycled water for the intended allowable use. (Global Water)

Response 13: ADEQ believes that there is value in obtaining owner information in the case that ownership has changed and it is different from the permittee or provided contact person. Also, ADEQ believes that the rule and the application forms are clear that the permittee means the end user. No change to the rule is necessary.



Comment 14: For R18-9-A705(B)(6) (Recycled Water Permit Term, Information Changes, and Renewal), the expansion of a reuse area and/or the addition of another allowable use within the same property boundary is information that should be presented to the Department for approval prior to implementing. The Department has the faculty to approve whether or not the use of reclaimed water as presented in a Notice of Intent (NOI) meets with the intent of the rule and is considered safe. The allowable uses and use-requirements are not always interpreted correctly by the end-users (permittees or potential permittees), and they should not be given the authority to self-approve these changes to their Department-approved permit. Two examples come to mind: 1) an end-user wants to expand their reuse area to include land which is not contiguous with their previously-approved permit (ADEQ historically has considered non-contiguous reuse areas as needing separate permits); 2) an end-user wants to add dust control as an allowable use under their Class B reclaimed water permit, with the intent to impound the water at the construction site (ADEQ does not allow the impoundment of non-denitrified reclaimed water without lining the impoundment to achieve a certain hydraulic conductivity). If these activities were only required to be reported to ADEQ annually, non-denitrified reclaimed water could potentially be discharged to the aquifer for an entire year, or what should have been two separate reuse permits could erroneously be permitted under only one. (Global Water)

Response 14: The commenter is concerned that for Classes A, B, and C reclaimed water, in which the total nitrogen content is not removed to below the drinking water Maximum Contaminant Level, any delay by a permittee in notifying ADEQ about end use changes until the end of the calendar year could lead to groundwater contamination. ADEQ recognizes this concern, but believes that in practice, this outcome is highly unlikely.

For example, a permittee irrigating acreage with Class A, B, or C reclaimed water is doing so under an existing end use general permit that covers water application rates and water balances designed to minimize the potential for groundwater contamination for the type of vegetation that is irrigated. It is unlikely that a permittee would risk violating the permit terms by willfully over-irrigating additional non-contiguous land, rather than simply following the application rate and water balance measures that continue to be required under the permit.

As for dust control, the general permit for the end user does prescribe that if an impoundment is added, the impoundment must be lined. Again, a permittee would risk violation of permit terms. However, ADEQ believes the in practice, reclaimed water permittees are very cognizant of the special practices obligated by reuse, so such situations would be rare.

Thus, ADEQ believes that it is the best use of resources for itself and the permittee to process these types of changes no more than once annually, given the unlikelihood of adverse environmental impacts. ADEQ appreciates the comment, but believes that a reasonable person would have considerable experience with reusing reclaimed water under the rules as written, and would contact ADEQ to clarify if he or she is unsure. No change to the rule is necessary.

Comment 15: R18-9-A705(B)(7) (Recycled Water Permit Term, Information Changes, and Renewal) does not specify that an increase in non-denitrified recycled water should be subject to the same nitrogen-management method as originally approved. Without a review of the amended nitrogen-management method (such as a water balance model), the Department would not know if an increase of 10 to 20 percent of the Class A, B, or C reclaimed water could have the potential to reach the water table and cause the groundwater to exceed the Aquifer Water Quality Standard for nitrogen. (Global Water)

Response 15: ADEQ believes that the rules as written would still clearly apply to any additional use or expansion in water use. This means that nitrogen management provisions would still apply to any increased usage of recycled water. Therefore, before expanding his or her use of water, a permittee must ensure that impoundments are lined appropriately, and that, using a water balance or other approved method, any expansion of water usage would not reach the water table and affect an aquifer. Please also see Response 14. No change to the rule is necessary.

Comment 16: For R18-9-A705(C) (Recycled Water Permit Term, Information Changes, and Renewal), Consider rewriting the second sentence as follows: A permittee shall update all information as listed in subsection (B) in a Notice of Renewal; changes to the information specified in B6 and B7 shall be subject to approval. (Global Water)

Response 16: For the reasons stated above, ADEQ currently believes this change is not necessary to protect human health or the environment or to improve internal processes.

Comment 17: For R18-9-B702(C) (General Requirements for Reclaimed Water), there are existing APPs which include reclaimed water blending operations, so it would be inconsistent to say that these blending operations could only take place under a Recycled Water Individual Permit or a Type 3 Recycled Water General Permit for a Reclaimed Water Blending Facility. (Global Water)

Response 17: The clarification of language in this rule does not change any requirements for existing Aquifer Protection Permits.

Comment 18: For R18-9-B702(I) (General Requirements for Reclaimed Water), since the signage requirements are exactly the same for A+ and A, and also for B+ and B, you may want to consider combining A+ and A in the same row, and also B+ and B, in the interest of brevity and saving space. (Global Water)

Response 18: ADEQ agrees that this would make the rule simpler and more understandable and has modified the rule accordingly.

Comment 19: Consider removing R18-9-B704(D) (Type 2 Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water). It is difficult to justify why an APP impoundment has to be reviewed and monitored, and the same impoundment at a reuse site does not. (This also pertains to R18-9-B706, for Class B+ reclaimed water.) Or consider adding an explanation that the planned disposal of reclaimed water in unlined impoundments is only allowed under an Aquifer Protection Permit. (Global Water)

Response 19: The general permits for Class A+ and Class B+ reclaimed water do not require a liner for impoundments storing reclaimed water under a general permit. Unlike Class A, B, and C reclaimed water, which contains a total nitrogen content in excess of the Aquifer Water Quality Standard limit of 10 mg/l, Class A+ and B+ reclaimed waters have undergone nitrogen removal within the sewage treatment facility to a total nitrogen content of less than 10 mg/l. Thus, seepage of Class A+ and B+ reclaimed water from an unlined impoundment would not cause an Aquifer Water Quality Standard violation for total nitrogen in



the underlying aquifer.

Under APP, subsection R18-9-B204(B)(7) requires that all containment structures within the treatment works of a sewage treatment facility meet a defined and very low seepage rate. For an impoundment, a lining is usually required to meet this seepage rate. However, under R18-9-B204(D), an applicant may request in writing and justify a less stringent alternative, including use of an unlined impoundment, if justified by site-specific conditions.

ADEQ believes that there is insufficient justification for requiring a liner for impoundments containing Class A+ or B+ reclaimed water. No change to the rule is necessary.

Comment 20: Consider rewriting R18-9-D701 (Type 1 Recycled Water General Permit for Gray Water) as follows: The gray water irrigation area is sited outside of a floodway. (ADEQ does not regulate the “system”, as in how they capture their gray water; the rules apply to where and how they apply the gray water for irrigation.) This comment applies also to the Type 3 gray water permit under R18-9-D702(C)(9). (Global Water)

Response 20: It is ADEQ’s longstanding interpretation is that the “gray water system” means the gray water system’s assemblies and the application area combined. No change to the rule is necessary.

Comment 21: For R18-9-E701 (Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility [Individual Permit for ARWTF]) generally and R18-9-E701(C)(6), currently, the “Part E. Purified Water for Potable Use” (PWPU) R18-9-E701 does not address the compliance tracking and reporting of the water quality for the water system owner and their Customers. The rule advises the water from a facility shall be treated as a surface Water facility. However, this does not address how the Primacy Agency, ADEQ, EPA and customers will track the water quality compliance parameters of the system. The ADEQ Oracle Water Quality Tracking Data base used by the APP SMRF has many problems and program limitations. I recommend the Water Quality (WQ) of the facility be tracked in the SDWIS system as a either a New PWS or a New EPDS. Then, the WQ can be tracked with the additional WQ parameters deemed necessary for PWPU to ensure all interested parties including customers have the ability to monitor and track the facility’s performance. This will give the public the knowledge they need to track the system’s WQ and obtain a comfort level that the PWPU is being treated to whatever the agreed Direct Potable Reuse DW regulatory standards are deemed to be. Also, the distribution system of the PWPU system needs to be addressed, specifically the piping conveyance prior to entering the actual potable water system. (Global Water)

Response 21: This rule is not intended to substitute for SDWA requirements. However, if the advanced reclaimed water treatment facility is also a potable water system, compliance and monitoring will be tracked in the same manner as required under Arizona’s rules and procedures implementing the Safe Drinking Water Act.

Comment 22: For R18-9-E701(C)(1)(b) (Individual Permit for ARWTF), in regards to “source water”, I assume source water will be defined as Class B+ - Class A+ as documented on page no. 1667 of proposed rulemaking. (Global Water)

Response 22: Yes, the definition of “advanced reclaimed water treatment facility” specifies that the facility only treats and purifies Class A+ or B+ water.

Comment 23: For R18-9-E701(C)(1)(d) (Individual Permit for ARWTF), requesting a list of unregulated microbial and chemical constituents and the corresponding concentrations in the source water to determine the system’s effectiveness of treatment seems ambiguous since even the UCMRs for potable drinking water are consistently changing. This may require a clear definition of what the microbial and chemical constituents are or may require classification for WWTPs that are not in an industrial environment and only treat domestic wastewater for example. (Global Water)

Response 23: For the purpose of these interim criteria, the applicant would propose a list of constituents based on their specific circumstances and other factors. This list would be discussed with ADEQ staff during the application review process to finalize a list appropriate to the applicant’s source water, proposed treatment train, published guidance and relevant research, and other factors.

Comment 24: For R18-9-E701(C)(2) (Individual Permit for ARWTF), it seems this will be primarily from the pilot System(s) since the PWPU systems are all fairly new, especially the newer technology related to filtration. (Global Water)

Response 24: ADEQ agrees that the results from pilot treatment testing under R18-9-E701(C)(2) will greatly inform design and monitoring elements of the Advanced Reclaimed Water Treatment Facility.

Comment 25: For R18-9-E701(C)(4) (Individual Permit for ARWTF), on page no. 1667 the verbiage advises technology is in the 6 and 10 log range, however for example the current potable 4 Log requirements for drinking water using chlorine disinfection comply with the 334.0 EPA 4 Log requirement. The rule should help define what the minimum acceptable treatment criteria will be for the logarithmic reduction target level, maybe 6 log? (Global Water)

Response 25: The appropriate logarithmic removal target level will vary on a case by case basis depending on the particular reclaimed source water, treatment train of a facility, and any additional potential treatment as part of a drinking water system. Under the rule as written, applicant may propose an appropriate log removal target accordingly. ADEQ does not believe a rule change is necessary at this time.

Comment 26: For R18-9-E701(C)(9) (Individual Permit for ARWTF), you need to determine if new PWPU operator treatment and distribution certifications will be required. (Global Water)

Response 26: An operation plan and training is already required in the rule as proposed. However, ADEQ will consider specific operator certification requirements in future rulemaking installments.

Comment 27: R18-9-B710(F) (Type 3 Recycled Water General Permit for a Reclaimed Water Agent) should be deleted because it is covered under subsection (E) immediately preceding it and under R18-9-A705(B), and the deadlines for the disclosures would conflict. (Zimmerman)

Response 27: ADEQ agrees with this clarifying change and has modified the rule accordingly.



Comment 28: R18-9-A705(C) (Recycled Water Individual Permit Application) should allow for late filing of a notice of renewal provided that nothing has changed that would require a new permit and the permittee has stayed in compliance with the applicable substantive requirements for reuse. 5 years is a long time to remember or calendar the renewal and ADEQ does not provide notice of imminent permit expiration, so it is not difficult to miss the deadline and have to submit a new application and expend ADEQ resources reviewing it when there is no actual need for it. Alternatively, permit terms could be lengthened or made indefinite. Effluent reuse arrangements are typically very long term. There is no reason for only a 5 year term if the permittee has to stay in compliance as substantive rules change over time and annually submit any changes in information. (Zimmerman)

Response 28: It is important for the agency and the customer to periodically update a permit as rules and facilities change over time. ADEQ believes that a five year permit time is a reasonable permit term time period and similar to other environmental permit term time periods (e.g. CWA AZPDES and CAA Title V). The agency makes every effort to notify a permittee of upcoming renewal dates. However, if a renewal date is missed, the agency works with permittees to ensure that a facility may continue their operations until a new permit is issued.

Comment 29: The RID Board concurs that using reclaimed water will offset and conserve potable water for human consumption and domestic purposes. (Roosevelt Irrigation District [RID])

Response 29: ADEQ appreciates the expression of support.

Comment 30: The RID owns and operates pipelines and open water canal conveyances that carry a combination of reclaimed water in conjunction with remediated water and groundwater. The reclaimed water is from the City of Phoenix 23rd Avenue water reclamation facility and the Liberty Water Company water reclamation facility. It is not practical for the RID to place warning signs along the canal ditch at all points of ingress and at 1/4 mile intervals. (RID)

Response 30: ADEQ agrees that it may be reasonable in certain situations to place signs at different intervals than currently required by the rules. As such, ADEQ added a clause to the open water conveyances signage provision in R18-9-B702(K)(3)(c) to allow for a possible variance from the 1/4 mile signage interval requirement, as approved by the Department to be reasonably protective of human health. The subsection is revised as follows:

“(c) Place signs at all points of ingress and, if the open water conveyance is operated with open access, at least every 1/4-mile along the length of the open water conveyance or other interval as approved in writing by the Department; and”

Comment 31: The RID supports the amendment to R18-9-704 in order to allow incidental runoff of reclaimed water to the waters of the U.S. under certain conditions. Reclaimed water has been a significant component of the RID water supply used for beneficial purposes, such as irrigation. Allowing incidental runoff of reclaimed water from a site where it is being applied is a sound practice which have been utilized by the agricultural community for decades. The RID does not see any need for the agency to place additional restrictions or permit regulations on the existing uses and practices of the RID or its customers. (RID)

Response 31: This comment appears to refer to changes made in prior rulemakings. No changes are proposed specific to run-off provisions in this rulemaking.

Comment 32: RID believes that the generator of the reclaimed water should remain responsible for the amount of chlorine and E.Coli that can be discharged into the RID conveyance system. Since the RID owns and operates a significant amount of open conveyance systems, water quality is subject to changes from nonpoint sources. The regulations should be clear that the conveyances which receive reclaimed water is not a reclaimed water blending facility. The use of the RID canals for conveyance has been a long term beneficial means of conveyance and should be allowed to continue without further regulation or permitting. The RID should be allowed to continue to use standard agricultural conveyance pipelines to convey their water which contains some amount of reclaimed water. (RID)

Response 32: ADEQ appreciates the comments. ADEQ has made no substantive changes to conveyance requirements. All requirements that applied regarding conveyances before this rulemaking will still apply.

Comment 33: It is unclear why the owner operator of the facility that accepts reclaimed water, and provides additional treatment for a higher-quality direct reuse, such as using the reclaimed water as source water for a potable water treatment plant, should be permitted as anything other than a potable water treatment facility? (RID)

Response 33: Please see Response 3. This rule does not substitute for SDWA requirements.

Comment 34: The RID supports ADEQ in providing an exception to the prohibition against providing reclaimed water for human consumption by allowing reclaimed water to be treated appropriately for potable use. The RID supports ADEQ leaving the current reclaimed classes and permitting methodology in place. The RID supports ADEQ no longer using the term reclaimed water for water that is delivered to and processed through an advanced water treatment facility. The RID supports ADEQ requiring an advanced water treatment facility to obtain a recycled water individual permit. The RID supports ADEQ expanding and establishing interim permitting criteria. This will enable projects to move forward, which will meet ever increasing water demands. (RID)

Response 34: ADEQ appreciates the commenter’s support.

Comment 35: The RID believes that a permit should be ten (10) years rather than five (5) years in length to provide certainty to the facility owners. (RID)

Response 35: ADEQ believes that five years is a reasonable permit term, especially given the current rate of advancement of treatment and monitoring technologies. Please see Response 28 above.

Comment 36: The RID does not believe ADEQ should always require a full pilot plant study for the advanced water treatment facility that will be used to treat reclaimed water for potable use under a recycled water individual permit. (RID)

Response 36: ADEQ believes that protection of public health currently demands a high level of review, including the submission of a pilot study with a permit application for an advanced reclaimed water treatment facility. ADEQ may accept an analogous facility’s full pilot study.



Comment 37: I would like to see a definition of hose bibb in the rule. (City of Flagstaff)

Response 37: This comment refers to the provision in R18-9-B702(G) that hose bibbs discharging reclaimed water should be secured to prevent use by the public and Table 1 in R18-9-B702 for signage of hose bibbs. Neither the International Plumbing Code (IPC) nor the Uniform Plumbing Code (UPC) define hose bibb. To clarify ADEQ's longstanding intent that a "hose bibb" is the valve from which water may be discharged, and does not include hose connection points, ADEQ will add the phrase "at valve" under the heading "Hose Bibbs" in Table 1 of R18-9-B702.

Comment 38: I think the permit requirements in R18-9-E701 should be moved to the drinking water rules. (City of Flagstaff)

Response 38: ADEQ disagrees. As addressed in Responses 3 and 5, the permitting requirements for an Advanced Reclaimed Water Treatment Facility neither substitute for nor contradict any requirements of the Safe Drinking Water Act (SDWA). All SDWA approvals and other requirements remain effect. Despite the high level of treatment provided by an Advanced Reclaimed Water Treatment Facility—to a potable standard—this rule considers the finished water produced by the facility a surface water source with respect to the SDWA and therefore subject to all SDWA requirements regarding surface water sources. No change to the rule is necessary.

Comment 39:

...Currently, about 25% of wastewater in Arizona is... [generated by systems producing] less than 24,000 gallons per day...down to a simple home...I reuse my water through the "free" quote-unquote permit offered by the 711 section of the gray water rules...and I also get the pleasure of enforcing on people who use that permit and use it incorrectly...we need to approach gray water and reuse from a total standpoint including all waste waters in Arizona.

The other point I want to make is...I see this as a "top-down" approach...I believe if we're going to have the support of reuse throughout Arizona that we need to have the individual citizens reusing the water they can in their homes and support that through the proper easy to use, functional permit and process...I believe if you look at those permits [authorizing use of less than 24,000 gallons per day]...they are administered on a face to face basis...and that's very different than the environment established in the individual permits section...people like me have a direct contact with the public.

...If you look at what's happened in NSF 350 recently, there are products now...approved on their product listing...show better test results than A+ quality effluent. I'm encouraging the department to actually look at a...series of permits and a program ... for under 24,000 gallons for [recycled water]. And delegate that to the counties along with those the black water permits so that they can be administered face to face by a single party.

I think there is also a missing element...a type 3 permit delegated that is essentially a...residential permit for under 3,000 gallons per day...to also include commercial projects. (Garrett)

Individuals do not read the rules before implementing – RULES MUST BE DESIGNED WITH THE UNDERSTANDING OF NORMAL HUMAN ACTIONS

ADEQ should develop a recycled water program for on-site wastewater treatment facilities of less than 24,000 gallons per day that are regulated under Type 3 General Aquifer Protection Permits. ADEQ should develop these as Type 3 recycled water permits with five or seven year renewal periods and delegate them to the counties. Permits should be developed for residential use from 400 to 24,000 gallons per day and for commercial use from 0 to 24,000 gallons per day.

Resolve:

- Current conflict between 711 residential free permit and E303 Compost system requirements for a normal black water disposal system.
- Apply any resolution to all type 4 permits – Provide consistency
- Provide transition from Type 1 1.09 sewage treatment and onsite treatment facilities that are currently using overflow or gray water discharge. (Garrett)

Response 39: In the above comments, it is sometimes not clear that two different regulatory programs are being discussed. One program requires a permit under the Aquifer Protection Permit (APP) program for on-site wastewater treatment facilities, including septic tanks and alternative on-site systems where site conditions prevent installation of a septic tank. Such facilities exist in order to facilitate the disposal of treated black water, which includes wastewater from toilets and kitchen sinks. The other program discussed is the recycled water program (or the reclaimed water program under the 2001 rules), which involves use, reuse, and permitting of reclaimed water and gray water. Specifically at issue here is the Type 1 Recycled [formerly "Reclaimed"] General Permit for gray water, whereby residents may collect and reuse water collected from laundry, bathroom sinks, or showers, for irrigation purposes.

On-site wastewater treatment facilities, which exist in order to facilitate the disposal of black water, are permitted as general permits under APP. ADEQ has generally delegated permitting authority for on-site wastewater treatment facilities to the 15 counties. Specifically, ADEQ has delegated general permit authority under APP for septic tanks and some or all alternative systems of less than 3000 gallons per day of flow (generally residential systems) to all counties. ADEQ has delegated general permit authority under APP for larger on-site wastewater treatment facilities (multi-residential or non-residential), from 3,000 to 24,000 gallons per day of flow, to counties based on their need for these larger facilities and the ability of the delegated agency to review and oversee administration of these more complex systems. ADEQ retains jurisdiction for sewage treatment facilities with a flow of 24,000 gallons per day or more as Individual Aquifer Protection Permits.

Except for complaint response and compliance assistance duties for Type 1 gray water user permits, ADEQ does not delegate any of the recycled water program to local authorities. This includes individual and general permits for reclaimed water, and general permits for gray water. Two types of general permits are specified in rule for gray water. The Type 1 general permit is for private residential gray water use for a flow of less than 400 gallons per day. The Type 3 general permit applies to gray water flows of not



more than 3000 gallons per day which do not fit the conditions of the Type 1 general permit. In addition, under these final rules, a person has the option to apply for an Individual Recycled Water Permit for gray water use for situations that do not fit either the Type 1 or Type 3 general permit conditions.

The Type 1 general permit for private residential gray water does not require a person to submit an application or register for that permit or pay a permit fee. A person is deemed to be in compliance with the permit and may use gray water under the permit if he or she follows the criteria specified in the rule. This Type 1 gray water permit does not conflict with permits issued by delegated agencies for on-site wastewater treatment facilities. There are no significant changes to the Type 1 gray water permit in this rulemaking. As most people using gray water fall under the Type 1 criteria, and therefore do not need to apply for a permit through ADEQ, the agency disagrees with the current process labeled as duplicative for most customers.

The commenter suggests that ADEQ consider expanding the reclaimed water permitting program to on-site wastewater treatment facilities under this rulemaking and also provides comments related to general permits under APP. A major revision of the APP rules for these systems, involving development of significantly more stringent requirements, would be needed to ensure the safety of any wastewater reuse. This is outside the purview of the recycled water program and of this rulemaking, but ADEQ will take these suggestions under advisement for possible future rule changes.

Also, the commenter ties the issuance of the Type 3 gray water permit to a general APP that would be issued for an on-site system. These are separate programs because black water and gray water pose different environmental and health concerns. In ADEQ's experience, most commercial or institutional facilities dispose of black water to a sewer rather than rely on on-site wastewater treatment systems. Therefore, at this time, there is not enough need to consider tying the issuance of a Type 3 gray water permit to that of a general permit under APP for an on-site wastewater treatment system disposing 3000 to 24,000 gallons per day.

As ADEQ implements the recycled water program as governed under this rule change, it will evaluate the potential benefits to Arizona's citizens and whether delegating provisions of these recycled water rules to local authorities is appropriate.

Comment 40: Currently 15 counties in the State of Arizona have some sort of delegation agreement with ADEQ to administer the onsite wastewater program... we have up to 23 different types of permits... about 15 different advanced technologies that produce wastewater quality far superior than you would get with gray water... [Innovation and technological advancements are] also happening in the onsite technology, we have products already on the proprietary product listing of ADEQ that we can bring inside... for irrigation and to flush inside the house. What we don't have is a framework for the on-site people to be able to manage that. But what we do have are building codes that have already adopted NSF 350 that has these great performance standards...

So if we're going to talk about water reuse... we need to bring the onsite people in and listen to them; we've missed this piece in this rule making... One of the recommendations I would have is on your committee group is to get a building official on it... and one the on-site folks... to talk about the specific parts of the gray water and the things we can do to make sure this dialog moves forward...

The [Coconino County] Board of Supervisors... they want us to be able to issue permits from the local level... if you're above 400 gallons of gray water use you come in and get a permit from our a department, but I have to send you to ADEQ to get a permit down in Phoenix... If we can treat full source waste water at a local level, why are we sending the lesser gray water we are not concerned about to ADEQ... it's an unnecessary complication for our citizens and a duplication of processes, one of the things Doug Ducey has told us he wants us to do a better job at. The counties are delegated full strength waste water up to 24,000 gallons per day so certainly we can handle those permits for gray water as well. (Coconino County)

Response 40: Please see Response 39 above regarding the recycled water program, which is the subject of this rulemaking. The APP general permit program for on-site wastewater treatment facilities is outside the scope of this rulemaking.

The last paragraph of this comment implies that there is a duplication of permitting processes between on-site wastewater treatment systems and gray water systems. This is not the case as the gray systems are separate types of facilities from onsite systems and under separate regulatory frameworks.

No change to this rule is necessary.

Comment 41: In some ways when you go with an unpermitted, "happy go free" approach... you lose the ability to monitor your effectiveness. So we don't know how many we're doing. I'd like us to do rules statewide and not just written for a semi-arid desert down in Tucson... in Flagstaff, I have gray water but I also have a 30 inch frost depth.

We should have some kind of O&M manual... we regulate the house for the life expectancy... and we like to have documents that live with that house... if we had documentation on the gray water system, it would be helpful for the third or fourth homeowner to know where it is... By not having a permit or documentation, these systems are not being identified 100% of the time on the notice of transfers. Which is problematic... You could have a homeowner who doesn't know what they have. (Coconino County)

Response 41: ADEQ believes that permitting residential gray water users by rule is the current best way to protect human health and the environment while also easing overly burdensome regulation. The current rule for permitting private residential use has been an effective regulatory tool since its inception in 2001, and no changes to the permitting process aspects of the rule are necessary. As issues associated with gray water use are largely self-limiting, ADEQ believes it is not within the scope of its mission to regulate property transfers to the extent of required and O&M manual. ADEQ believes no change to the rule is necessary.

Comment 42: In addition to addressing reclaimed water for direct potable reuse, ADEQ needs to develop and recommend comprehensive criteria for advanced onsite system treatment of reclaimed water for direct reuse. Recommend ADEQ adopt NSF 350 that currently is adopted by the 2015 IRC. Technologies are currently on the ADEQ proprietary Product Listing that will allow reuse of the treated onsite wastewater to be reused to flush toilets and irrigation. (Coconino County)

As with the advances that have been made in innovation and utilization of gray water and reuse permits, advances have also been made with treatment technologies in the onsite wastewater program. There are currently technologies listed on the ADEQ Proprietary Product Listing that would allow for wastewater treated onsite to have the effluent reused for toilet flushing inside the home.



The wastewater rules have been hindered from any substantive rule making since 2005. ADEQ incorrectly characterizes the Type 4 Composting Toilet permit. Type 4.03 is for use of a composting toilet. The disposal methods allow for year round use of a residence. Composting toilet is not a standalone permit.

Response 42: Please see Response 39 above. ADEQ is not revising any APP rules as a part of this rulemaking.

Comment 43: Gray water is for the beneficial use of irrigation and not for discharge. The number one reason people seek out a compost-gray water system is because it is often the cheapest easiest path for development, it is not for irrigation purposes. This section should also consider cold climate for those areas where temperatures drop down to prevent any type of irrigation a properly sized soil based system would be needed. (Coconino County)

Response 43: ADEQ believes that the combination of practices described in R18-9-D701(A)(6), (A)(7), and (A)(11) in the Type 1 gray water general permit along with the option under R18-9-E303(F)(2)(b) of requiring the interceptor and disposal trench for kitchen wastewater to also accommodate gray water flows are sufficient to guide a homeowner in proper operation of the gray water system.

Comment 44: ADEQ specifies that gray water storage tank holding time should be 24 hours or less to avoid development of anaerobic conditions and odors. Consideration should be given for buried tanks in areas with cold climate. In Flagstaff the soil temperature does not get high enough year round to sustain bacterial growth. Soil temperatures are available on the web. (Coconino County)

Response 44: Because of the differences in climate throughout the state and throughout the year, ADEQ has modified R18-9-D701(C)(8) rule to say that holding time must be “minimized to avoid the development anaerobic conditions and odors”. If odors or anaerobic conditions may develop, a gray water user is expected to ensure that water is kept in holding tanks for a period of time that prevents such conditions or odors to occur. ADEQ also similarly modified the corresponding provision in the Type 3 gray water rule at R18-9-D702(C)(8).

Comment 45: Simply changing the name from Direct Reuse of Reclaimed Water to Use of Recycled Water does not address the problem. Especially when the classifications of water will remain the same. As it pertains to gray water, gray water should not be included as reclaimed-recycled water as it receives no treatment.

The following are two examples of definitions on Reclaimed/Recycled water:

Reclaimed or recycled water (also called wastewater reuse or water reclamation) is the process of converting wastewater into water that can be reused for other purposes. Reuse may include irrigation of gardens and agricultural fields or replenishing surface water and groundwater (i.e., groundwater recharge).

Reclaimed or recycled water (also called wastewater reuse or water reclamation) is the process of converting wastewater into water that can be reused for other purposes. Reuse may include irrigation of gardens and agricultural fields or replenishing surface water and groundwater (i.e., groundwater recharge). Reused water may also be directed toward fulfilling certain needs in residences (e.g. toilet flushing), businesses, and industry, and could even be treated to reach drinking water standards. This last option is called either “direct potable reuse” or “indirect potable” reuse, depending on the approach used. Colloquially, the term “toilet to tap” also refers to potable reuse.

Additionally “Reclaimed” is the more consistent and common term consistent with the technology on a nationwide scale. (Coconino County)

Response 45: Previously, gray water was included in Article 7 with reclaimed water. However, it is really a different type of recycled water. There is widespread acceptance that gray water use is a distinct form of recycling water. No change to rule is necessary.

Comment 46: Currently, gray water permits are underutilized because of impracticable requirements. The use of gray water is underutilized as it is ideally not the most efficient way to reuse water and is not sustainable due to what is in the waste stream. Gray water is not a Reclaimed water, nor is it a Recycled water as it appears the categories for Reclaimed/Recycled water will not be changed. Gray water needs to be regulated by one entity and not the bifurcated process that currently exists. Gray water needs to be taken out of the 711 rules and put into the Title 18 Chapter 9 APP Program. All 15 counties are delegated the Type 4 permits. The source for all gray water for onsite systems would be through these permitted systems. It is more logical for gray water permitting processing for both rural and municipal areas to be overseen by the county partners.

Currently the application process is as follows: There is a duplicative permitting process by requiring those applicants that are installing onsite system with gray water systems obtain a second permit through ADEQ is overly burdensome. Certainly if the Delegated Authorities can oversee the full strength waste and permit these systems the lesser strength gray water need not be further administered and overseen by an entity in Phoenix. As with the intent of this Rule Revision there is the desire to encourage, permit and oversee these reuse permits at the local level?

The Gray Water Reuse Rules allow for a very permissive use of gray water without regulation. All of the existing Type 4 Alternative Treatment Technologies in the APP produce an effluent discharge that has better performance numbers than the unregulated gray water. Perhaps this should be considered for all general permits and instead of discharge treated effluent could be used at shallower depths to allow for broader irrigation applications. (Coconino County)

Response 46: Please see response 39 and 40 above.

Comment 47: Use of gray water for safely watering food plants, R18-9-D701(A)(3). Caution and disagree with this approach. There is insufficient research to allow this and we would need to be very careful as once it is allowed it becomes very difficult to segregate, for use on vegetables with a skin or rind as opposed to leafy greens.

Allow gray water use for shrubs as well as trees, R18-9-D701(A)(3). This is actually the best use for gray water as the supply is not as reliable over time and shrubs typically are not as needy as other landscape plants. (Coconino County)

Response 47: This provision is very clear that using gray water to water food plants is not allowed except for trees and shrubs



which have an edible portion that does not come into contact with the gray water, which includes the skin or rind of that edible portion. ADEQ does not believe that irrigation of trees and shrubs in this category would be confused with leafy greens. No change to rule is necessary.

Comment 48: Disallow mixing of water used to wash diapers or similarly soiled garments with gray water, R18-9-D701(A)(5), because disinfection is too complicated for most home gray water systems. Agree with this proposal. (Coconino County)

Response 48: Thank you for your comment.

Comment 49: Provide examples for minimizing standing water on the surface, including the now widespread practice of distributing gray water under a mulch cover. Gray water should not be applied through flood irrigation, flooding is not an efficient method in maximizing the use of gray water for irrigation purposes. If the use of gray water is to promote water conservation this is not a correct path. The best method to maximize water usage to plants is through drip irrigation where the water may be applied to the plants in a controlled amount and time. Wide spread application of flood irrigation for gray water could result in breeding areas for mosquitoes. We already have West Nile Virus and Zika. Mandate that if blockage, backup, or overload of the system occurs, distribution of gray water should cease until the deficiency is corrected, R18-9-D701(A)(7). This is a common sense approach and should not have to be written out however, a blockage alone is not the only reason an individual needs to route their gray water back to an onsite system or municipal system. It may include uses inside the home that generate an effluent that would be harmful to plants, for example salt baths or high bleach loads of laundry. Or if there is a contagious disease inside the household or a very sick person taking and using medications, rubs, and ointments that are best suited to not go to the planted areas. Or what about if the homeowner simply has no desire to maintain their planter and wishes to convert the planted area to something else. Or with time the gray water volume inside the home decreases as children or parties leave the household and irrigation areas need to be reconsidered or sometimes abandoned. There needs to be a method to revert the water back to an onsite system or municipal system. (Coconino County)

Response 49: ADEQ believes the conditions prescribed for private residential gray water in this rule satisfactorily address the issues raised by the commenter. The concern about generating harmful effluent is addressed at R18-9-D701. The commenter's concern with respect to a contagious disease or very sick person is addressed in part by R18-9-D701(A)(5), which specifies not washing diapers or similarly soiled or infectious garments, and by R18-9-D701(A)(2), which specifies that human contact with gray water and soil watered by gray water must be avoided. In whatever way a gray water user reasonably ceases distribution of gray water in case of a system blockage, backup, or overload or in the situation that any of the other permit conditions cannot be met, is up to the user. No change to the rule is necessary.

Comment 50: ADEQ is proposing a new reuse/gray water permit for flows from 3000 to 24,000 gpd. The counties are currently delegated these flows for full-strength wastewater. This permit should be folded into the on-site system rules. (Coconino County)

Response 50: Please see comment 39 above.

Comment 51: Under the proposed R18-9-A703 Recycled Water Individual Permit, ADEQ will allow the addition of kitchen sink and dishwasher wastewater to a gray water source, as long as the water is treated appropriately for its end use. This is where there is a potential for problems with vectors with the kitchen water going out on top of the ground in flood irrigation or on top of the ground surface. Food wastes attracts insects, rodents and animals. Disagree with this practice and has not be widely accepted nationwide. (Coconino County)

Response 51: Individual permit conditions are tailored to site-specific conditions and are designed to be protective of human health, including treatment, monitoring, reporting, and other requirements appropriate to the use. No change to the rule is necessary.

Comment 52: Regarding the proposed Type 3 Recycled Water General Permit for Gray Water, R18-9-D702, suggest that large commercial systems that are served by municipal wastewater be the only permits that apply for this permit category. Use of the currently the existing 4.23 General Permit [in APP] would allow for reuse up to 24,000 gpd at the local level. (Coconino County)

Response 52: The 4.23 General APP Permit regulates wastewater discharges from larger-sized septic tanks and alternative on-site systems under the Aquifer Protection Permit program. ADEQ does not intend to move the beneficial use of gray water from these recycled water rules into the APP program. Please see Response 39 above.

Comment 53: The continuation of perpetual-life Type 1 permits for gray water, may meet ADEQ rulemaking intentions in the hands of a highly motivated property owner or lessee. However, such success cannot be assured during a property transfer, or in the hands of less motivated persons, such as a new or impaired owner, or a renter, especially without an effective oversight and training programs.

The absence of records pertaining to the presence and management responsibilities for a Type 1 Recycled Water Gray Water system operating under R18-9-D701 could be problematic for property which is going through a transfer of ownership. At that time there will be responsibilities for seller disclosure and buyer due diligence inspection. Without design and operational records, the transfer of ownership transaction could be in jeopardy, or result in other risk to the parties to the transaction, including a Realtor® and Escrow officer.

Retaining the Type 1 permit for properties operating under a pre-existing gray water authorization makes sense, perhaps with a 20-year sunset date. The upgraded program should provide better documentation by utilizing a process resembling that for the proposed Type 2 Recycled Water General Permit, but allowing for a longer term, say until the time of ownership transfer. While that term may seem burdensome, such general permit-type practices are common for automobile registration renewal, credit card agreements, etc. Further the program established in A.A.C. R18-9-A316 establishes an inspection and transfer processes for Type 4 General Permit facilities in Chapter 9, Article 3; and could be adapted for a recycled water permit. This Article 3 program has been operating since mid-2006, applicable to the approximately 550,000 operating On-site Wastewater Treatment Facilities under ADEQ jurisdiction. (Swanson)



Response 53: Please see Response 41.

Comment 54: ADEQ APP rules pertaining to residential sewage, including gray water, would seem to function more efficiently within the same body of regulation and expertise. The placement of residential gray water on the land surface may seem risk free, though the presence of vectors and disease transmission uncertainty has been rapidly evolving. Further professional scrutiny by those with comprehensive communicable disease expertise within the various public health programs in Arizona is recommended for the 13 Practices and several Prohibitions. (Swanson)

Response 54: Please see Responses 47 and 49. ADEQ has consulted with internal and external gray water experts to develop these rules and considers the rules to be protective of human health and the environment.

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

The rules require several different types of permits. General permits are used where possible. However, pursuant to A.R.S. 41-1037(A)(3), which allows individual permits if general permits are technically infeasible, individual permits are prescribed for case-by-case situations. For example, individual permit is required for advanced reclaimed water treatment facilities. Such facilities will have varying advanced water treatment techniques and will also require case-by-case facility-specific determinations.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

There is no corresponding federal law applicable to reclaimed water, gray water, or to the direct potable use of treated reclaimed water.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

No analysis has been submitted.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

None

14. Whether the rule was previously made, amended, or repealed as an emergency rule. If so, cite the notice published in the Register as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:

No

15. The full text of the rules follows:

**TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER POLLUTION CONTROL**

ARTICLE 6. RECLAIMED WATER CONVEYANCES REPEALED

Section	
R18-9-601.	Definitions <u>Repealed</u>
R18-9-602.	Pipeline Conveyances of Reclaimed Water <u>Repealed</u>
R18-9-603	Open Water Conveyances of Reclaimed Water <u>Repealed</u>

ARTICLE 7. DIRECT REUSE OF RECLAIMED USE OF RECYCLED WATER

Section	
R18-9-701.	Definitions <u>Renumbered</u>
R18-9-702.	Applicability and Standards for Reclaimed Water Classes <u>Renumbered</u>
R18-9-703.	Transition of Permits <u>Renumbered</u>
R18-9-704.	General Requirements <u>Renumbered</u>
R18-9-705.	Reclaimed Water Individual Permit Application <u>Renumbered</u>
R18-9-706.	Reclaimed Water Individual Permit General Provisions <u>Renumbered</u>
R18-9-707.	Reclaimed Water Individual Permit Where Industrial Wastewater Influences the Characteristics of Reclaimed Water <u>Renumbered</u>
R18-9-708.	Reusing Reclaimed Water Under a General Permit <u>Renumbered</u>
R18-9-709.	Reclaimed Water General Permit Renewal and Transfer <u>Renumbered</u>
R18-9-710.	Reclaimed Water General Permit Revocation <u>Renumbered</u>
R18-9-711.	Type 1 Reclaimed Water General Permit for Gray Water <u>Renumbered</u>
R18-9-712.	Type 2 Reclaimed Water General Permit for Direct Reuse of Class A+ Reclaimed Water <u>Renumbered</u>
R18-9-713.	Type 2 Reclaimed Water General Permit for Direct Reuse of Class A Reclaimed Water <u>Renumbered</u>
R18-9-714.	Type 2 Reclaimed Water General Permit for Direct Reuse of Class B+ Reclaimed Water <u>Renumbered</u>
R18-9-715.	Type 2 Reclaimed Water General Permit for Direct Reuse of Class B Reclaimed Water <u>Renumbered</u>



- R18-9-716. ~~Type 2 Reclaimed Water General Permit for Direct Reuse of Class C Reclaimed Water Renumbered~~
- R18-9-717. ~~Type 3 Reclaimed Water General Permit for a Reclaimed Water Blending Facility Renumbered~~
- R18-9-718. ~~Type 3 Reclaimed Water General Permit for a Reclaimed Water Agent Renumbered~~
- R18-9-719. ~~Type 3 Reclaimed Water General Permit for Gray Water Renumbered~~
- R18-9-720. ~~Enforcement and Penalties Repealed~~

PART A. GENERAL PROVISIONS

Section

- ~~R18-9-701-R18-9-A701. Definitions~~
- ~~R18-9-702-R18-9-A702. Applicability and Standards for Reclaimed Recycled Water Classes~~
- ~~R18-9-705-R18-9-A703. Reclaimed Recycled Water Individual Permit Application~~
- ~~R18-9-708-R18-9-A704. Reusing Reclaimed Recycled Water Under a General Permit~~
- ~~R18-9-709-R18-9-A705. Reclaimed Recycled Water General Permit Term, Information Changes, and Renewal and Transfer~~
- ~~R18-9-710-R18-9-A706. Reclaimed Recycled Water General Permit Revocation~~
- ~~R18-9-A707. Recycled Water Permit Transition~~

PART B. RECLAIMED WATER

Section

- ~~R18-9-703-R18-9-B701. Transition of Aquifer Protection Permits and Permits for the Reuse of Reclaimed Wastewater~~
- ~~R18-9-704-R18-9-B702. General Requirements for Reclaimed Water~~
- ~~R18-9-706-R18-9-B703. General Provisions for Reclaimed Recycled Water Individual Permit for Reclaimed Water General Provisions~~
- ~~R18-9-712-R18-9-B704. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water~~
- ~~R18-9-713-R18-9-B705. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class A Reclaimed Water~~
- ~~R18-9-714-R18-9-B706. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class B+ Reclaimed Water~~
- ~~R18-9-715-R18-9-B707. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class B Reclaimed Water~~
- ~~R18-9-716-R18-9-B708. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class C Reclaimed Water~~
- ~~R18-9-717-R18-9-B709. Type 3 Reclaimed Recycled Water General Permit for a Reclaimed Water Blending Facility~~
- ~~R18-9-718-R18-9-B710. Type 3 Reclaimed Recycled Water General Permit for a Reclaimed Water Agent~~

PART C. RECYCLED INDUSTRIAL WASTEWATER

Section

- ~~R18-9-707-R18-9-C701. Reclaimed Recycled Water Individual Permit Where for Industrial Wastewater Influences the Characteristics of Reclaimed Water That Is Reused~~

PART D. GRAY WATER

Section

- ~~R18-9-711-R18-9-D701. Type 1 Reclaimed Recycled Water General Permit for Gray Water~~
- ~~R18-9-719-R18-9-D702. Type 3 Reclaimed Recycled Water General Permit for Gray Water~~

PART E. PURIFIED WATER FOR POTABLE USE

Section

- ~~R18-9-E701. Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility~~

ARTICLE 6. RECLAIMED WATER CONVEYANCES REPEALED

R18-9-601. Definitions Repealed

In addition to the definitions provided in R18-9-701, the following terms apply to this Article:

- ~~1. "Open water conveyance" means any constructed open waterway, including canals and laterals that transports reclaimed water from a sewage treatment facility to a reclaimed water blending facility or from a sewage treatment facility or reclaimed water blending facility to the point of land application or end use. An open water conveyance does not include waters of the United States.~~
- ~~2. "Pipeline conveyance" means any system of pipelines that transports reclaimed water from a sewage treatment facility to a reclaimed water blending facility or from a sewage treatment facility or reclaimed water blending facility to the point of land application or end use.~~

R18-9-602. Pipeline Conveyances of Reclaimed Water Repealed

A. Applicability.

- ~~1. Any person constructing a pipeline conveyance on or after January 1, 2001, whether new or a replacement of an existing pipeline shall meet the requirements of this Article.~~
- ~~2. Any person who has constructed a pipeline conveyance before January 1, 2001, is considered to be in compliance with this Article.~~

B. A person shall design and construct a pipeline conveyance system using good engineering judgement following standards of practice.

C. A person shall construct a pipeline conveyance so that:

- ~~1. Reclaimed water does not find its way into, or otherwise contaminate, a potable water system;~~
- ~~2. System structural integrity is maintained; and~~
- ~~3. The capability for inspection, maintenance, and testing is maintained.~~



- ~~D.~~ A person shall construct a pipeline conveyance and all appurtenances conducting reclaimed water to withstand a static pressure of at least 50 pounds per square inch greater than the design working pressure without leakage as determined in A.A.C. 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.~~ The following requirements for minimum separation distance apply. A person shall:
- ~~1.~~ Locate a pipeline conveyance no closer than 50 feet from a drinking water well unless the pipeline conveyance is constructed as specified under subsection (F)(3);
 - ~~2.~~ 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 (F)(3);
 - ~~3.~~ Construct a pipeline conveyance that does not meet the minimum separation distances specified in subsections (F)(1) and (F)(2) 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; and
 - ~~4.~~ If a reclaimed water system is supplemented with water from a potable water system, separate the potable water system from the pipeline conveyance by an air gap.
- ~~G.~~ A person shall:
- ~~1.~~ For a pipeline conveyance, eight inches in diameter or less, use pipe marked on opposite sides in English: "CAUTION: RECLAIMED WATER, DO NOT DRINK" in intervals of three feet or less and colored purple or wrapped with durable purple tape;
 - ~~2.~~ For a mechanical appurtenance to a pipeline conveyance, ensure that the mechanical appurtenance is colored purple or legibly marked to identify it as part of the reclaimed water distribution system and distinguish it from systems for potable water distribution and sewage collection.

R18-9-603. Open Water Conveyances of Reclaimed Water Repealed

- ~~A.~~ This Article applies to an open water conveyance, regardless of the date of construction.
- ~~B.~~ A person shall maintain an open water conveyance to prevent release of reclaimed water except as allowed under federal and state regulations. The maintenance program shall include periodic inspections and follow-up corrective measures to ensure the integrity of conveyance banks and capacity of the conveyance to safely carry operational flows.
- ~~C.~~ Signage for Class B+, B, and C Reclaimed Water. A person shall:
- ~~1.~~ Ensure that signs state: "CAUTION: RECLAIMED WATER, DO NOT DRINK," and display the international "do not drink" symbol;
 - ~~2.~~ Place signs at all points of ingress and, if the open water conveyance is operated with open access, at least every ¼ mile along the length of the open water conveyance; and
 - ~~3.~~ Ensure that signs are visible and legible from both sides of the open water conveyance.

ARTICLE 7. DIRECT REUSE OF RECLAIMED USE OF RECYCLED WATER

- R18-9-701. Renumbered
- R18-9-702. Renumbered
- R18-9-703. Renumbered
- R18-9-704. Renumbered
- R18-9-705. Renumbered
- R18-9-706. Renumbered
- R18-9-707. Renumbered
- R18-9-708. Renumbered
- R18-9-709. Renumbered
- R18-9-710. Renumbered
- R18-9-711. Renumbered
- R18-9-712. Renumbered
- R18-9-713. Renumbered
- R18-9-714. Renumbered
- R18-9-715. Renumbered
- R18-9-716. Renumbered
- R18-9-717. Renumbered
- R18-9-718. Renumbered
- R18-9-719. Renumbered



R18-9-720. Enforcement and Penalties Repealed

Any person who violates a condition specified in a permit issued under this Article, falsifies data or information submitted to the Department as required under Articles 6 or 7 of this Chapter, or violates a provision of Article 6 or 7 of this Chapter, is subject to the enforcement actions prescribed under A.R.S. §§ 49-261 and 49-262.

PART A. GENERAL PROVISIONS

~~R18-9-701~~R18-9-A701. Definitions

Unless provided otherwise, the definitions provided in A.R.S. § 49-201, A.A.C. R18-9-101, R18-9-601, R18-11-301, and the following terms apply to this Article:

1. “Advanced reclaimed water treatment facility” means a facility that treats and purifies Class A+ or Class B+ reclaimed water to produce potable water suitable for distribution for human consumption. R18-9-B702(B) does not apply to an advanced reclaimed water treatment facility. Potable water produced by an advanced reclaimed water treatment facility is not reclaimed water.
- ~~2.~~ “Direct reuse” means the beneficial use of reclaimed water for a purpose allowed by this Article. The following is not a direct reuse of reclaimed water:
 - a. The use of water subsequent to its discharge under the conditions of a National or Arizona Pollutant Discharge Elimination System permit;
 - b. The use of water subsequent to discharge under the conditions of an Aquifer Protection Permit issued under 18 A.A.C. 9, Articles 1 through 3; ~~or~~
 - c. The use of industrial wastewater, reclaimed water, or both, in a workplace subject to a federal program that protects workers from workplace exposures; or
 - d. The use of potable water produced by an advanced reclaimed water treatment facility.
- ~~3.~~ “Direct reuse site” means an area permitted for the application or impoundment of reclaimed water. An impoundment operated for disposal under an Aquifer Protection Permit is not a direct reuse site.
- ~~3.~~ “End user” means a person who directly reuses reclaimed water meeting the standards for Classes A+, A, B+, B, and C, established under 18 A.A.C. 11, Article 3.
- ~~4.~~ “Gray water” means wastewater that has been collected separately from a sewage flow and that originates from a clothes washer, bathtub, shower, and sink, or a bathroom tub, shower or sink but that does not include wastewater from a kitchen sink, dishwasher, or toilet. A.R.S. § 49-201(18).
- ~~5.~~ “Industrial wastewater” means wastewater generated from an industrial process.
- ~~6.~~ “Irrigation” means the beneficial use of water or reclaimed water, or both, for growing crops, turf, or silviculture, or for landscaping.
- ~~7.~~ “Open access” means ~~that~~ access to reclaimed water by the general public is uncontrolled.
9. “Open water conveyance” means any constructed open waterway, including canals and laterals, that transports reclaimed water from a sewage treatment facility to a reclaimed water blending facility or from a sewage treatment facility or reclaimed water blending facility to the point of land application or end use. An open water conveyance does not include waters of the United States.
10. “Pipeline conveyance” means any system of pipelines that transports reclaimed water from a sewage treatment facility to a reclaimed water blending facility or from a sewage treatment facility or reclaimed water blending facility to the point of land application or end use.
- ~~8.~~ “Reclaimed water” means water that has been treated or processed by a wastewater treatment plant or an on-site wastewater treatment facility. A.R.S. § ~~49-201(31)~~ 49-201(32).
- ~~9.~~ “Reclaimed water agent” means a person who holds a permit to distribute reclaimed water to more than one end user.
- ~~10.~~ “Reclaimed water blending facility” means an installation or method of operation that receives reclaimed water from a sewage treatment facility or other reclaimed water blending facility classified to produce Class C or better reclaimed water and blends it with other water so that the produced water may be used for a higher-class purpose listed in 18 A.A.C. 11, Article 3, ~~Appendix~~ Table A.
14. “Recycled water” means a processed water that originated as a waste or discarded water, including reclaimed water and gray water, for which the Department has designated water quality specifications to allow the water to be used as a supply.
- ~~11.~~ “Restricted access” means that access to reclaimed water by the general public is controlled.
16. “Sewage Treatment Facility” means a sewage treatment facility as defined in 18 A.A.C. 9, Article 1.

~~R18-9-702~~R18-9-A702. Applicability and Standards for Reclaimed-Recycled Water Classes

- A. This Article applies to:
 1. An owner or operator of a sewage treatment facility that generates reclaimed water for direct reuse,
 2. An owner or operator of a reclaimed water blending facility,
 3. A reclaimed water agent,
 4. An end user of reclaimed water,
 5. A person who uses ~~gray water~~ recycled water regulated under this Article,
 6. A person who directly reuses reclaimed water from a sewage treatment facility combined with industrial wastewater or combined with ~~reclaimed~~ water from an industrial wastewater treatment facility, and
 7. A person who directly reuses reclaimed water from an industrial wastewater treatment facility in the production or processing of a crop or substance that may be used as human or animal food.
- B. Reclaimed water classes A+, A, B+, B, and C specified in this Article shall meet the standards established in 18 A.A.C. 11, Article 3.



- C. Nothing in this Article exempts the disposal of reclaimed water from the Aquifer Protection Permit requirements under A.R.S. Title 49, Chapter 2, Articles 1, 2, and 3.

~~R18-9-705-R18-9-A703, Reclaimed-Recycled Water Individual Permit Application~~

~~A.~~ Pre-application conference. Upon request of an applicant, the Department shall schedule and hold a pre-application conference with the applicant to discuss any requirements in this Article.

~~B.A.~~ To apply for a Reclaimed-Recycled Water Individual Permit, a person shall provide the Department with:

- ~~1.~~ The applicable permit fee specified under 18 A.A.C. 14; and
- ~~2.~~ The following information on a form provided by the Department:
 - ~~a.~~ The name, e-mail address, telephone number, and mailing address of the owner or operator of the facility or, if applicable, the reclaimed water agent;
 - ~~b.~~ The social security number of the applicant, if the applicant is an individual;
 - ~~e-b.~~ The legal description of the direct reuse site, including latitude and longitude coordinates; township range, and section; site address, if applicable; and a map showing the facility or site location;
 - ~~d-c.~~ Any other federal or state environmental permits issued to the applicant;
 - ~~e-d.~~ Source of reclaimed-recycled water to be directly reused-used;
 - ~~e.~~ The applicant may propose for approval, and the Department may issue, a single permit that includes more than one type of recycled water allowed by this article, including for multiple classes of reclaimed water, if the applicant demonstrates the waters will be treated appropriately for the end use;
 - ~~f.~~ The applicant may propose, and the Department may permit, the inclusion of kitchen sink and dishwasher wastewater with gray water under a Recycled Water Individual Permit, if the applicant demonstrates such waters will be treated appropriately for the end use;
 - ~~f-g.~~ Volume of reclaimed Estimated volume of recycled water to be directly reused-used on an annual basis;
 - ~~g-h.~~ Class of reclaimed water to be directly reused, if applicable;
 - ~~h-l.~~ Description of the direct reuse-use activity; and
 - ~~j.~~ Any treatment measures utilized to meet or maintain reclaimed water quality standards or otherwise ensure the quality of the recycled water is fit for the intended use; and
 - ~~i-k.~~ The applicant's signature certifying certification that the information submitted in the application is true and accurate to the best of the applicant's knowledge; .
- ~~2.~~ A copy of the certificate of disclosure of violations required under A.R.S. § 49-109; and
- ~~3.~~ The applicable permit fee specified under 18 A.A.C. 14.

~~C.~~ Administrative completeness review. Upon receipt, the Department shall review the Reclaimed Water Individual Permit application to determine its administrative completeness under A.R.S. § 41-1074 and A.A.C. R18-1-503.

~~D.~~ Substantive review. Upon receipt of a complete Reclaimed Water Individual Permit application, the Department shall review the application to determine its substantive adequacy under A.R.S. § 41-1075 and A.A.C. R18-1-504.

~~E.~~ Draft permit. The Department shall provide the applicant a copy of a draft of the Reclaimed Recycled Water Individual Permit before the notice specified in subsection (F) is published.

~~F.B.~~ Public participation.

1. Notice of Preliminary Decision.
 - ~~a.~~ The Department shall publish a Notice of Preliminary Decision to issue or deny a Reclaimed Water Individual Permit within a period of time that allows the Department to meet the licensing time frame requirements under 18 A.A.C. 5.
 - ~~b-a.~~ The Department shall publish the Notice of Preliminary Decision regarding the issuance or denial of a final permit determination in one or more newspapers of general circulation where the facility is located on the Department's website.
 - ~~e-b.~~ The Department shall accept written comments from the public before a Reclaimed Recycled Water Individual Permit is issued or denied.
 - ~~d-c.~~ The written public comment period begins on the publication date of the Notice of Preliminary Decision and extends for 30 calendar days.
2. After publishing the notice specified in subsection (F)(1)(a) (B)(1)(a), the Department shall hold a public hearing to address the Notice of Preliminary Decision if the Department determines that:
 - ~~a.~~ Public-Significant public interest in a public hearing exists, or
 - ~~b.~~ Issues-Significant issues or information have been brought to the attention of the Department that are relevant to the permitting decision and have not been considered previously in the permitting process.
3. If the Department determines that a public hearing is necessary and a public hearing has not already been noticed under subsection (F)(1)(a) (B)(1)(a), the Department shall schedule a public hearing and republish the Notice of Preliminary Decision as a legal notice at least once, in one or more newspapers of general circulation where the facility is located and notice of the public hearing on the Department's website.
4. The Department shall accept written public comment until the close of the hearing record as specified by the person presiding at the public hearing.

~~G.C.~~ Final permit issuance or denial.

- ~~1.~~ The Department shall give the applicant written notification of its final decision to issue or deny the permit application within the overall licensing time frame requirements in 18 A.A.C. 5.
- ~~2-1.~~ The Department may deny a Reclaimed-Recycled Water Individual Permit if the Department determines upon completion of the application process that the applicant has:
 - ~~a.~~ Failed or refused to correct a deficiency in the permit application;
 - ~~b.~~ Failed to demonstrate that the facility and the operation will protect public health and water quality. This determination shall be based on:
 - ~~i.~~ The information submitted in the permit application,



- ii. Any information submitted to the Department as written public comment or following a public hearing; or
 - iii. Any information relevant to the demonstration ~~that is~~ developed or acquired by the Department, or
 - c. Provided false or misleading information.
- 3-2. If the Department denies a ~~Reclaimed-Recycled~~ Water Individual Permit the Department shall provide the applicant with written notification ~~that explains~~ explaining the following:
- a. The reasons for the denial with references to the statutes or rules on which the denial is based.
 - b. The applicant's right to appeal the denial, including the number of days the applicant has to file a notice of appeal, and the name and telephone number of the Department contact person who can answer questions regarding the appeals process.
 - c. The applicant's right to request an informal settlement conference under A.R.S. §§ 41-1092.03(A) and 41-1092.06.

~~R18-9-708, R18-9-A704, Reusing Reclaimed-Recycled Water Under a General Permit~~

- A. Type 1 ~~Reclaimed-Recycled~~ Water General Permit for Gray Water. A person may ~~directly reuse reclaimed-use recycled~~ water without notice to the Department if the use:
- 1. ~~The direct reuse is~~ Is specifically authorized by and meets the requirements of this Article, and
 - 2. Complies with the requirements of the Type 1 ~~Reclaimed-Recycled~~ Water General Permit under ~~R18-9-711~~ this Article.
- B. Type 2 ~~Reclaimed-Recycled~~ Water General Permit for Reclaimed Water.
- 1. A person may ~~directly reuse reclaimed-use recycled~~ water under a Type 2 ~~Reclaimed-Recycled~~ Water General Permit if:
 - a. The ~~direct reuse-use~~ is authorized by and meets the requirements of this Article;
 - b. The ~~direct reuse-use~~ meets all the conditions of the applicable Type 2 ~~Reclaimed-Recycled~~ Water General Permit under ~~R18-9-712 through R18-9-716~~ this Article;
 - c. The person files a Notice of Intent ~~for Direct Reuse of Reclaimed to Use Recycled~~ Water under subsection (B)(2); and
 - d. The person submits the applicable fee established in 18 A.A.C. 14.
 - 2. Notice of Intent ~~for Direct Reuse of Reclaimed to Use Recycled~~ Water.
 - a. A person shall submit, by ~~certified~~ mail, in person, or by another method approved by the Department, the Notice of Intent ~~for Direct Reuse of Reclaimed to Use Recycled~~ Water on a form provided by the Department.
 - b. The Notice of Intent ~~for Direct Reuse of Reclaimed to Use Recycled~~ Water shall include;
 - i. The name, address, ~~e-mail address~~, and telephone number of the applicant;
 - ii. ~~The social security number of the applicant, if the applicant is an individual;~~
 - ~~iii-~~ The name, address, and telephone number of the contact person;
 - ~~iv-iii-~~ The source, estimated volume, and, if applicable, class of ~~reclaimed-recycled~~ water to be ~~directly reused-used~~;
 - ~~v-~~ A legal description of the ~~direct reuse site~~, including ~~iv-~~ The latitude and longitude coordinates of the approximate center point of the use site;
 - ~~vi-v-~~ The description of the ~~direct reuse-use~~ activity, including a description of acreage and the type of vegetation to be irrigated, if applicable to the type of direct reuse activity; and
 - ~~vii-vi-~~ The ~~permittee's applicant's signature certifying certification~~ that the ~~permittee applicant~~ agrees to comply with all requirements of this Article, including specific terms of the applicable ~~Reclaimed-Recycled~~ Water General Permit.
 - c. For a Type 2 Recycled Water General Permit for Direct Reuse of Reclaimed Water, the Notice of Intent to Use Recycled Water must include the description of the direct reuse activity, including a description of acreage and the type of vegetation to be irrigated, if applicable to the type of direct reuse activity.
 - 3. The Department shall notify the applicant that the Department received the Notice of Intent to Use Recycled Water and that the applicant is authorized to use the recycled water according to Type 2 permit conditions.
- C. Type 3 ~~Reclaimed-Recycled~~ Water General Permit for Reclaimed Water and Type 3 Recycled Water General Permit for Gray Water. A person ~~may~~ shall not operate under a Type 3 ~~Reclaimed-Recycled~~ Water General Permit after filing an applicable Notice of Intent to Operate with the Department and receiving until the Department issues a written Verification of General Permit Conformance for the operation Recycled Water Authorization.
- 1. Application submittal. The applicant shall submit, either by ~~certified~~ mail, in person at the Department, or by another method approved by the Department:
 - a. The Notice of Intent to ~~Operate-Use Recycled Water~~ on a form provided by the Department containing the information specified in the applicable Type 3 ~~Reclaimed-Recycled~~ Water General Permit under ~~R18-9-717(B), R18-9-718(C), or R18-9-719(B)~~ this Article, and
 - b. The applicable fee established in 18 A.A.C. 14.
 - 2. ~~Verification issuance- Issuance of Recycled Water Authorization~~. If, after reviewing the Notice of Intent to ~~Operate-Use Recycled Water~~, the Department determines ~~that~~ the direct reuse conforms with the conditions of a Type 3 ~~Reclaimed-Recycled~~ Water General Permit and all other applicable requirements of this Article, the Department shall issue the ~~Verification of General Permit Conformance- Recycled Water Authorization~~.
 - 3. ~~Verification denial- Denial of Recycled Water Authorization~~.
 - a. If the Department determines on the basis of its review or an inspection ~~that~~ the ~~direct reuse use~~ does not conform to the conditions of the applicable Type 3 ~~Reclaimed-Recycled~~ Water General Permit or other applicable requirements of this Article, the Department shall notify the applicant of its decision not to issue the ~~Verification of General Permit Conformance- Recycled Water Authorization~~.
 - ~~b-~~ If an application is denied, the applicant shall not operate under a Type 3 Reclaimed Recycled Water General Permit.
 - ~~e-b-~~ The applicant may appeal the decision not to issue a ~~Verification of General Permit Conformance- Recycled Water Authorization~~ under A.R.S. §§ 41-1092 through 41-1092.12.



4. Automatic issuance. If the Department does not issue the Verification of General Permit Conformance within the time frame specified under 18 A.A.C. 1, Article 5, and does not notify the applicant that it will not issue the verification, the verification automatically becomes effective upon expiration of the overall time frame.

R18-9-709, R18-9-A705, Reclaimed-Recycled Water General Permit Term, Information Changes, and Renewal and Transfer

- A.** General permit renewal. A permittee shall renew a Reclaimed Water General Permit at least 90 days before the permit expires by following the procedure described in either R18-9-708(B) or (C) and include the applicable fee established in 18 A.A.C. 14.
1. A Type 1 Reclaimed Water General Permit is valid as long as the conditions of the general permit and the requirements of this Article are met. No renewal is required;
 2. A Type 2 Reclaimed Water General Permit is valid for five years from the date the Department receives the Notice of Intent for Direct Reuse of Reclaimed Water;
 3. A Type 3 Reclaimed Water General Permit is valid for five years from the date the Verification of General Permit Conformance becomes effective.
- B.** General permit transfer. A permittee shall provide notice to the Department by certified mail within 15 days following the transfer of a Type 2 or Type 3 Reclaimed Water General Permit. The Notice of Transfer shall:
1. Contain any information that has changed from the original Notice of Intent for Direct Reuse of Reclaimed Water or the Notice of Intent to Operate, including all information on the proposed new permittee, and
 2. Include the applicable fee established in 18 A.A.C. 14.
- A.** A recycled water general permit is valid as follows:
1. A Type 1 Recycled Water General Permit is valid as long as the conditions of the general permit and the requirements of this Article are met. No renewal is required.
 2. A Type 2 Recycled Water General Permit is valid for five years from the date the Department receives the Notice of Intent to Use Recycled Water;
 3. A Type 3 Recycled Water General Permit is valid for five years from the date the Recycled Water Authorization is issued.
- B.** If any change in the following information occurs, a permittee operating under any individual, or Type 2 or Type 3 recycled water general permit shall update the Department with such changes at least once annually by January 31:
1. Permittee.
 2. Ownership.
 3. Contact person.
 4. Phone number, address, email address, or telephone number, or any combination of any of the above, for permittee or contact person.
 5. Name of the use site.
 6. For a Type 2 Recycled Water General Permit for Direct Reuse of Class A + or B + Reclaimed Water remaining under the same ownership:
 - a. Expansion of the reuse area.
 - b. Addition of another allowable use if it is located within the same property boundary as the boundary identified in the Notice of Intent to Use Recycled Water submitted to the Department.
 7. An increase in Class A, B, or C reclaimed water use of more than ten percent but less than twenty percent above the volume of reclaimed water currently permitted for use at the reuse site, if applicable.
- C.** To renew any Type 2 or Type 3 Recycled Water General Permit, a permittee must submit a Notice of Renewal at least 30 days before the permit expires and include the applicable fee established in 18 A.A.C. 14. A permittee may update or change any information as described in subsection (B) in a Notice of Renewal.
- D.** For changes not described in subsections (B) or (C), the permittee must submit a new Notice of Intent to Use Recycled Water or a Recycled Water Individual Permit application, as applicable.

R18-9-710, R18-9-A706, Reclaimed-Recycled Water General Permit Revocation

- A.** The Director may revoke a Reclaimed Water General Permit if the permittee fails to comply with any requirement in this Article, including a condition specified in the applicable Reclaimed Water General Permit. The Director shall make the determination based on the risk to public health and safety or a threat to waters of the state.
1. Before revoking a general permit, the Department shall provide notice to the permittee by certified mail of the Department's intent to revoke the Reclaimed Water General Permit. The notice of intent to revoke the general permit shall provide the permittee a reasonable opportunity to correct any noncompliance and specify a time frame within which the permittee shall achieve compliance.
 2. If the permittee fails to correct the noncompliance within the specified time frame, the Department shall notify the permittee, by certified mail, of the Director's decision to revoke the Reclaimed Water General Permit.
- B.** The Director shall revoke a Reclaimed Water General Permit for any or all facilities located within a specific geographic area, if, due to a geologic or hydrologic condition, the cumulative effect of the facilities subject to the Reclaimed Water General Permit has violated or will violate a Water Quality Standard established under A.R.S. §§ 49-221 and 49-223.
- A.** After notice and opportunity for a hearing, the Director may revoke coverage under a Recycled Water General Permit and require the permittee to obtain an individual permit in order to operate for any of the following:
1. The permittee failed to comply with any applicable provision of A.R.S. Title 49, Chapter 2; Article 7 of this Chapter; or any permit condition;
 2. The permittee misrepresented or omitted a fact, information, or data related to an application or permit condition;
 3. The Director determines a permitted activity is causing or will cause a violation of a water quality standard established under A.R.S. § 49-221;
 4. A permitted activity is causing or will cause imminent and substantial endangerment to public health or the environment.



- B. The Director may revoke coverage under a general permit for any or all facilities within a specific geographic area, if, due to geologic or hydrologic conditions, the cumulative effect of the facilities subject to the Recycled Water General Permit has violated or will violate a water quality standard established under A.R.S. § 49-221.
- C. If an individual permit is issued to replace general permit coverage, the coverage under the general permit is automatically revoked upon issuance of the individual permit.
- D. The Director may, after notice and opportunity for hearing, suspend or revoke a Recycled Water Individual Permit for any of the reasons listed in subsections (A)(1) through (A)(4) of this section.

R18-9-A707. Recycled Water Permit Transition

The terms and conditions of Type 2, Type 3, and individual reclaimed water permits issued before January 1, 2018, including permits issued for gray water, shall remain in effect according to the language of this Article effective as of the date the permit was issued.

PART B. RECLAIMED WATER

R18-9-703-R18-9-B701. Transition of Aquifer Protection Permits and Permits for the Reuse of Reclaimed Wastewater

- A. A person may directly reuse reclaimed water under an individual Aquifer Protection Permit or a Permit for the Reuse of Reclaimed Wastewater issued by the Department before January 1, 2001 if the person meets the conditions of the permit and the permit does not expire.
- B. A person meeting the requirements of subsection (A) may apply for a new reclaimed water permit under this Article.
 - 1. To obtain a reclaimed water permit, a person shall submit a ~~Reclaimed Recycled Water Individual Permit application, required under R18-9-705(B)-R18-9-A703(A), or a Notice of Intent for Direct Reuse of Reclaimed to Use Recycled Water, required under R18-9-708(B)(2) R18-9-A704(B)(2) or R18-9-A704(B)(3), or a Notice of Intent to Operate, required under R18-9-708(C)(4)~~ to the Department at least 120 days before the current permit expires.
 - 2. The Department shall continue the terms of the individual Aquifer Protection Permit or the Permit for the Reuse of Reclaimed Wastewater beyond the stated date of expiration if:
 - a. The permitted direct reuse is of a continuing nature; and
 - b. The permittee submits a timely and complete application for a new permit.
- C. Sewage treatment facility generating reclaimed water.
 - 1. At the request of a permittee holding an individual Aquifer Protection Permit, the Department shall amend an individual Aquifer Protection Permit ~~issued before January 1, 2001~~ if the permittee adequately demonstrates that the applicable quality of reclaimed water produced for direct reuse is achieved. The Department shall review:
 - a. The information in the individual Aquifer Protection Permit ~~application~~, any applicable supporting documentation, and the water quality test results from the previous two years to determine the classification of reclaimed water generated by the sewage treatment facility; and
 - b. The available water quality data if the sewage treatment facility has operated for less than two years.
 - 2. The Department shall ~~ensure that~~ issue an amended individual Aquifer Protection Permit under procedures specified under 18 A.A.C. 9, Article 2 ~~contains~~ containing:
 - a. Identification of the class of reclaimed water generated by the facility;
 - b. Requirements for monitoring reclaimed water quality and flow at a frequency appropriate to demonstrate compliance with this Article and 18 A.A.C. 11, Article 3;
 - c. Requirements for quarterly reporting of the following data to the Department, any reclaimed water agent who has contracted for delivery of reclaimed water from the facility, and any end user who has not waived interest in receiving this information:
 - i. Water quality test results demonstrating ~~that~~ reclaimed water produced by the facility meets the applicable standards for the class of water identified in subsection (C)(2)(a), and
 - ii. The total volume of reclaimed water generated for direct reuse.
 - d. Provision for cessation of delivery, if necessary, and storage or disposal if reclaimed water cannot be delivered for direct reuse.

R18-9-704-R18-9-B702. General Requirements for Reclaimed Water

- A. Sewage treatment facility. ~~Except for permits continued under R18-9-703(A), a~~ A sewage treatment facility owner or operator shall provide reclaimed water for direct reuse only as authorized under an individual Aquifer Protection Permit ~~amended under R18-9-703(C)(2)~~.
- B. Additional treatment. If an owner or operator of a facility accepts reclaimed water and provides additional treatment for a higher quality direct reuse, the facility is considered a sewage treatment facility and shall ~~operate under the requirements of~~ provide reclaimed water for direct reuse only as authorized under an individual Aquifer Protection Permit ~~amended under R18-9-703(C)(2)~~.
- C. Reclaimed water blending facility. An owner or operator of a reclaimed water blending facility shall ~~not~~ conduct blending operations ~~without obtaining only as authorized under a Reclaimed-Recycled Water Individual Permit or Reclaimed a Type 3 Recycled Water General Permit for a Reclaimed Water Blending Facility.~~
- D. Reclaimed water agent. A person shall ~~not~~ operate as a reclaimed water agent ~~without obtaining only as authorized under a Reclaimed Recycled Water Individual Permit or a Reclaimed Type 3 Recycled Water General Permit for a Reclaimed Water Agent.~~
- E. End user. A person shall not directly reuse reclaimed water unless permitted under this Article.
- F. Irrigating with reclaimed water. A permittee ~~irrigating with reclaimed water~~ applying reclaimed water for an irrigation use allowed in 18 A.A.C. 11, Article 3, Table A shall:
 - 1. Use application methods that reasonably preclude human contact with reclaimed water;
 - 2. Prevent reclaimed water from standing on open access areas during normal periods of use; and
 - 3. Prevent reclaimed water from coming into contact with drinking fountains, water coolers, or eating areas; ~~and~~
 - 4. ~~Secure hose bibbs discharging reclaimed water to prevent use by the public.~~



- G.** Hose bibbs. A permittee directly reusing reclaimed water shall secure hose bibbs discharging reclaimed water to prevent use by the public.
- G.H.** Prohibited activities.
1. Irrigating with untreated sewage;
 2. Providing water for human consumption from a reclaimed water source except as allowed in Part E of this article.
 - 2-3. Providing or using reclaimed water for any of the following activities:
 - a- ~~Direct reuse for human consumption;~~
 - b-a. Direct reuse for swimming, wind surfing, water skiing, or other full-immersion water activity with a potential of ingestion; or
 - e-b. Direct reuse for evaporative cooling or misting.
 - 3-4. Misapplying reclaimed water for any of the following reasons:
 - a. Application of a stated class of reclaimed water ~~that is~~ of lesser quality than allowed by this Article for the type of direct reuse application;
 - b. Application of reclaimed water to any area other than a direct reuse site; or
 - c. Allowing runoff of reclaimed water or reclaimed water mixed with stormwater from a direct reuse site, except for:
 - i. agricultural return flow ~~that is~~ directed onto an adjacent field or returned to an open water conveyance; or
 - ii. a discharge authorized by an individual or general NPDES or AZPDES permit.
- H-I.** Signage and Notification. A permittee shall place and maintain signage at locations and provide applicable notification as specified in Table 1 so the public is informed ~~that~~ reclaimed water is in use and ~~that~~ no one should drink from the system.
- J.** Pipeline Conveyances of Reclaimed Water.
1. Applicability. Any person constructing a pipeline conveyance, whether new or a replacement of an existing pipeline, shall meet the requirements of this subsection.
 2. A person shall design and construct a pipeline conveyance system using good engineering judgement following standards of practice.
 3. A person shall construct a pipeline conveyance so that:
 - a. Reclaimed water does not find its way into, or otherwise contaminate, a potable water system;
 - b. System structural integrity is maintained; and
 - c. The capability for inspection, maintenance, and testing is maintained.
 4. A person shall construct a pipeline conveyance and all appurtenances conducting reclaimed water to withstand a static pressure of at least 50 pounds per square inch greater than the design working pressure without leakage as determined in A.A.C. R18-9-E301(D)(2)(j).
 5. A person shall provide a pipeline conveyance with thrust blocks or restrained joints where needed to prevent excessive movement of the pipeline.
 6. The following requirements for minimum separation distance apply. A person shall:
 - a. Locate a pipeline conveyance no closer than 50 feet from a drinking water well unless the pipeline conveyance is constructed as specified under subsection (J)(5)(c);
 - b. 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 (J)(5)(c);
 - c. Construct a pipeline conveyance that does not meet the minimum separation distances specified in subsections (J)(5)(a) and (J)(5)(b) 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; and
 - d. If a reclaimed water system is supplemented with water from a potable water system, separate the potable water system from the pipeline conveyance by an air gap.
 7. A person shall:
 - a. For a pipeline conveyance, eight inches in diameter or less, use pipe marked on opposite sides in English: "CAUTION: RECLAIMED WATER, DO NOT DRINK" in intervals of three feet or less and colored purple or wrapped with durable purple tape.
 - b. For a mechanical appurtenance to a pipeline conveyance, ensure the mechanical appurtenance is colored purple or legibly marked to identify it as part of the reclaimed water distribution system and distinguish it from systems for potable water distribution and sewage collection.
- K.** Open Water Conveyances of Reclaimed Water.
1. This subsection applies to an open water conveyance, regardless of the date of construction.
 2. A person shall maintain an open water conveyance to prevent release of reclaimed water except as allowed under federal and state regulations. The maintenance program shall include periodic inspections and follow-up corrective measures to ensure the integrity of conveyance banks and capacity of the conveyance to safely carry operational flows.
 3. Signage for Class B+, B, and C Reclaimed Water. A person shall:
 - a. Ensure signs state: "CAUTION: RECLAIMED WATER, DO NOT DRINK," and display the international "do not drink" symbol;
 - b. Place signs at all points of ingress and, if the open water conveyance is operated with open access, at least every 1/4-mile along the length of the open water conveyance or other interval as approved in writing by the Department; and



c. Ensure signs are visible and legible from both sides of the open water conveyance.

Table 1. Signage and Notification Requirements for Direct Reuse Sites

Reclaimed Water Class	Hose Bibbs	Residential Irrigation	Schoolground Irrigation	Other Open Access Irrigation	Restricted Access Irrigation	Mobile Reclaimed Water Dispersal
A+, A	Each bibb <u>at valve</u>	Front yard, or all entrances to a subdivision if the signage is supplemented by written yearly notification to individual homeowners by the homeowner's association.	On premises visible to staff and students	None	None	Back of truck or on tank <u>On dispersal equipment and visible to the public</u>
A	Each bibb	Front yard, or all entrances to a subdivision if the signage is supplemented by written yearly notification to individual homeowners by the homeowner's association.	On premises visible to staff and students	None	None	Back of truck or on tank
B+, B	Each bibb <u>at valve</u>	Direct Reuse Not Allowed	Direct Reuse Not Allowed	Direct Reuse Not Allowed	1. Ingress points; 2. On premises or at <u>At</u> reasonably spaced intervals of not more than 1/4 mile, as applicable to the use at the reuse site or along the open water conveyance, unless access to vehicular and pedestrian traffic is secured; and <u>as applicable to the use at the reuse site or along the open water conveyance, unless access to vehicular and pedestrian traffic is secured; and</u> 3. Notice <u>If applicable, notice</u> on golf score cards, if applicable	Back of truck or on tank <u>On dispersal equipment and visible to the public</u>
B	Each bibb	Direct Reuse Not Allowed	Direct Reuse Not Allowed	Direct Reuse Not Allowed	1. Ingress points 2. On premises or at reasonably spaced intervals not more than 1/4 mile, as applicable to the use 3. Notice on golf score cards, if applicable	Back of truck or on tank
C	Each bibb <u>at valve</u>	Direct Reuse Not Allowed	Direct Reuse Not Allowed	Direct Reuse Not Allowed	1. Ingress points; 2. On premises or at <u>At</u> reasonably spaced intervals of not more than 1/4 mile, as applicable to the use at the reuse site or along the open water conveyance, unless access to vehicular and pedestrian traffic is secured; and <u>as applicable to the use at the reuse site or along the open water conveyance, unless access to vehicular and pedestrian traffic is secured; and</u> 3. Notice <u>If applicable, notice</u> on golf score cards, if applicable	Back of truck or on tank <u>On dispersal equipment and visible to the public</u>

Note: All impoundments with open access including lakes, ponds, ornamental fountains, waterfalls, and other water features shall be posted with signs regardless of the class of reclaimed water.



~~R18-9-706~~R18-9-B703. General Provisions for Reclaimed Recycled Water Individual Permit for Reclaimed Water General Provisions

- A. A ~~Reclaimed-Recycled~~ Water Individual Permit for Reclaimed Water is obtained under ~~R18-9-705~~ R18-9-A703. A ~~Reclaimed-Recycled~~ Water Individual Permit for Reclaimed Water:
1. Is valid for five years;
 2. ~~May be amended, transferred, reissued, or revoked by the Director based on whether the permittee meets the terms of the individual permit and the requirements of this Article. Must be updated as prescribed by R18-9-A705;~~ and
 3. Continues, pending the issuance of a new permit, with the same terms following its expiration if the following are met:
 - a. The permittee submits an application for a new permit at least ~~120~~ 60 days before the expiration of the existing permit; and
 - b. The permitted activity is of a continuing nature.
- B. A ~~Reclaimed-Recycled~~ Water Individual Permit for Reclaimed Water shall contain, if applicable:
1. The class of reclaimed water to be applied for direct reuse or the alternative water quality criteria appropriate for a direct reuse type not listed in 18 A.A.C. 11, Article 3, Table A that ADEQ may allow under R18-11-309;
 2. Specific types of direct reuse applications or and any limitations on reuse;
 3. Requirements for monitoring reclaimed water quality and flow to demonstrate compliance with this Article and 18 A.A.C. 11, Article 3;
 4. Requirements for reporting the following data to demonstrate compliance with this Article and 18 A.A.C. 11, Article 3:
 - a. Water quality test results demonstrating ~~that~~ the reclaimed water meets the applicable standards for the class of water or the alternative water quality criteria identified in subsection (B)(1), and
 - b. The total volume of reclaimed water generated for direct reuse.
 5. Requirements for maintaining records of all monitoring information and monitoring activities ~~that~~ include:
 - a. The date, description of sampling location, and time of sampling or measurement;
 - b. The name of the person who performed the sampling or measurement;
 - c. The date the analyses were performed;
 - d. The name of the person who performed the analyses;
 - e. The analytical techniques or methods used;
 - f. The results of the analyses; and
 - g. Documentation of sampling technique, sample preservation, and transportation, including chain-of-custody forms.
 6. Requirements to retain all monitoring activity records and results, including all ~~original strip chart recordings~~ data for continuous monitoring instrumentation, and calibration and maintenance records for five years from the date of sampling or analysis. The Director shall extend the five-year retention period:
 - a. During the course of an unresolved litigation regarding compliance with the permit conditions, or
 - b. For any other justifiable cause.
 7. A requirement to allow all end users access to the records of physical, chemical, and biological quality of the reclaimed water.
 8. Signage or other notification requirements appropriate to the use; and
 9. Closure requirements, if applicable.
- C. ~~Permit transfer. A permittee may transfer a Reclaimed Water Individual Permit to another person if the following conditions are met:~~
1. ~~The permittee notifies the Director of the proposed transfer.~~
 2. ~~The permittee submits a written agreement containing a specific date for the transfer of permit responsibility and coverage between the current permittee and the proposed new permittee, including an acknowledgment that the existing permittee is liable for violations up to the date of transfer and that the proposed new permittee will be liable for violations from that date forward.~~
 3. ~~The notice specified in subsection (C)(1) contains any information for the proposed new permittee that is changed from the information submitted under R18-9-705(B).~~
 4. ~~The Director, within 30 days of receiving a transfer notice from the permittee, does not notify both the current permittee and proposed new permittee of the intent to amend, revoke, or reissue the permit or require the proposed new permittee to file an application for a new permit rather than agreeing to transfer the current permit.~~

~~R18-9-712~~R18-9-B704. Type 2 Reclaimed-Recycled Water General Permit for Direct Reuse of Class A+ Reclaimed Water

- A. A Type 2 ~~Reclaimed-Recycled~~ Water General Permit for Direct Reuse of Class A+ Reclaimed Water allows any direct reuse application of reclaimed water listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~, if the conditions in this Article are met.
- B. Record maintenance. A permittee shall maintain records for five years ~~that describe~~ describing the direct reuse site and the total amount of reclaimed water used annually for the permitted direct reuse activity. The records shall be made available to the Department upon request.
- C. A permittee shall post signs or provide notification or both as specified in ~~R18-9-704(H)~~ R18-9-B702(I).
- D. No lining is required for an impoundment storing Class A+ reclaimed water.

~~R18-9-713~~R18-9-B705. Type 2 Reclaimed-Recycled Water General Permit for Direct Reuse of Class A Reclaimed Water

- A. A Type 2 ~~Reclaimed-Recycled~~ Water General Permit for the Direct Reuse of Class A Reclaimed Water allows any direct reuse application of reclaimed water listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~, if the conditions in this Article are met.
- B. Records and reporting. A permittee shall:
1. Maintain records containing the following information for five years, and make them available to the Department upon request:
 - a. The direct reuse site,
 - b. The volume of reclaimed water applied monthly for each category of direct reuse activity listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~,
 - c. The total nitrogen concentration of the reclaimed water applied, and
 - d. The acreage and type of vegetation to which the reclaimed water is applied.
 2. Report annually to the Department on or before the anniversary date of the Notice of Intent to Use Recycled Water:



- a. The volume of reclaimed water received,
 - b. The type of reclaimed water application, and
 - c. If used for irrigation, the vegetation and acreage irrigated.
- C. Nitrogen management. A permittee shall ensure that:
- 1. Impoundments storing reclaimed water allowed by the general permit are lined using a low-hydraulic conductivity artificial or site-specific liner material achieving a calculated discharge rate less than 550 gallons per acre per day; and
 - 2. The application rates of the reclaimed water are based on one of the following:
 - a. ~~The~~ If assigned, the water allotment assigned specified by the Arizona Department of Water Resources;
 - b. A water balance that considers consumptive use of water by the crop, turf, or landscape vegetation; or
 - c. An alternative method approved by the Department.
- D. In addition to the Notice of Intent to Use Recycled Water for Direct Reuse of Reclaimed Water specified in ~~R18-9-708(B)(2)~~ R18-9-A704(B)(2), the applicant shall provide a list of impoundments, water depth, freeboard, and the liner characteristics and the method chosen from the list in subsection (C)(2).
- E. The permittee shall post signs or provide notification, or both, as specified in ~~R18-9-704(H)~~ R18-9-B702(I).

~~R18-9-714~~ R18-9-B706. Type 2 Reclaimed-Recycled Water General Permit for Direct Reuse of Class B+ Reclaimed Water

- A. A Type 2 Reclaimed-Recycled Water General Permit for Direct Reuse of Class B+ Reclaimed Water allows any direct reuse application of Class B and Class C reclaimed water listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~, if the conditions in this Article are met.
- B. A permittee shall comply with the record maintenance and posting requirements established under ~~R18-9-712~~ R18-9-B704 and make records available to the Department upon request.
- C. No lining is required for an impoundment storing Class B+ reclaimed water.

~~R18-9-715~~ R18-9-B707. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class B Reclaimed Water

- A. A Type 2 Reclaimed-Recycled Water General Permit for the Direct Reuse of Class B Reclaimed Water allows the direct reuse application of Class B and Class C reclaimed water listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~, if conditions in this Article are met.
- B. A permittee shall comply with the requirements established under ~~R18-9-713(B)~~ R18-9-B705(B), (C), (D), and (E).

~~R18-9-716~~ R18-9-B708. Type 2 Reclaimed Recycled Water General Permit for Direct Reuse of Class C Reclaimed Water

- A. A Type 2 Reclaimed-Recycled Water General Permit for the Direct Reuse of Class C Reclaimed Water allows the direct reuse application of Class C reclaimed water listed in 18 A.A.C. 11, Article 3, ~~Appendix Table A~~, if conditions in this Article are met.
- B. A permittee shall comply with the requirements established under ~~R18-9-713(B)~~ R18-9-B705(B), (C), (D), and (E).

~~R18-9-717~~ R18-9-B709. Type 3 Reclaimed Recycled Water General Permit for a Reclaimed Water Blending Facility

- A. Permit conditions.
 - 1. A Type 3 Reclaimed-Recycled Water General Permit for a Reclaimed Water Blending Facility allows the blending of reclaimed water with other water, if the conditions in this Article are met.
 - 2. Blending reclaimed water with industrial wastewater or with reclaimed water from an industrial wastewater treatment plant is not authorized by this general permit.
- B. A person shall file with the Department a Notice of Intent to Operate a reclaimed water blending facility ~~at least 90 days before the date the proposed activity will start on a form provided by the Department.~~ The Notice of Intent to Operate shall include:
 - 1. The name, address, e-mail address, and telephone number of the applicant;
 - 2. ~~The social security number of the applicant, if the applicant is an individual;~~
 - 3-2. The name, address, e-mail address, and telephone number of a contact person;
 - 4-3. The source and volume of reclaimed water to be blended;
 - 5-4. The class of reclaimed water to be blended;
 - 6-5. The source, volume, and quality of other water to be blended;
 - 7-6. ~~A legal description of the reclaimed water blending facility, including~~ The latitude and longitude coordinates of the blending facility;
 - 8-7. A description of the reclaimed water blending facility, including a demonstration ~~that~~ the proposed blending methodology will meet the standards established in 18 A.A.C. 11, Article 3 for the class of reclaimed water the facility will produce;
 - 9-8. ~~A signature on the notice of intent certifying~~ The applicant's certification that the applicant agrees to comply with the requirements of this Article, 18 A.A.C. 11, Article 3, and the terms of this recycled water general permit; and
 - 10-9. The applicable permit fee specified under 18 A.A.C. 14.
- C. A person shall not operate a reclaimed water blending facility until the Department issues a written ~~Verification of General Permit Conformance~~ Recycled Water Authorization under ~~R18-9-708(C)~~ R18-9-A704(C).
- D. A permittee shall monitor:
 - 1. The blended water quality for total nitrogen and fecal coliform at frequencies specified by the class of reclaimed water in 18 A.A.C. 11, Article 3.
 - a. If the concentration in the blended water of either total nitrogen or fecal coliform, as applicable, exceeds the limits for the applicable reclaimed water class established in 18 A.A.C. 11, Article 3, within 30 days of the exceedance, the permittee shall submit a report plan to the Department ~~within 30 days with a proposal~~ to change the blending process or to otherwise correct the deficiency. The permittee shall also double the monitoring frequency for the next ~~two~~ four months.
 - b. If another exceedance occurs within the interval of increased monitoring, the permittee shall submit an application within 45 days for a Reclaimed-Recycled Water Individual Permit for Reclaimed Water.
 - 2. The volume of reclaimed water, the volume of the other water, and the total volume of blended water delivered for direct reuse on a monthly basis.



- E. The permittee shall report the results of the monitoring under subsection (D) to the Department ~~on or before the anniversary date of the verification approval by January 31, for the immediately preceding calendar year,~~ and shall make this information available to the end users.

~~R18-9-718, R18-9-B710, Type 3 Reclaimed Recycled Water General Permit for a Reclaimed Water Agent~~

- A. A Type 3 ~~Reclaimed Recycled Water General Permit for a Reclaimed Water Agent~~ allows a person to operate as a Reclaimed Water Agent if ~~that~~ the conditions of this Article are met, and the following conditions are met for the class of reclaimed water delivered by the Reclaimed Water Agent:
1. Signage ~~and notification~~ requirements specified under ~~R18-9-704(H), R18-9-B702(I),~~ as applicable;
 2. Impoundment liner requirements specified under ~~R18-9-712(D), R18-9-713(C), R18-9-714(C), R18-9-715(B), or R18-9-716(B), R18-9-B704(D), R18-9-B705(C), R18-9-B706(C), R18-9-B707(B) or R18-9-B708(B),~~ as applicable; and
 3. Nitrogen management requirements specified under ~~R18-9-713(C), R18-9-715(B), and R18-9-716(B), R18-9-B705(C), R18-9-B707(B), and R18-9-B708(B),~~ as applicable.
- B. A person holding a Type 3 ~~Reclaimed Recycled Water Permit for a Reclaimed Water Agent~~:
1. Is responsible for the direct reuse of reclaimed water by more than one end user instead of direct reuse by the end users under separate Type 2 Recycled Water General Permits, and
 2. Shall maintain a contractual agreement with each end user stipulating any end user responsibilities for the requirements specified under subsection (A).
- C. A person shall file with the Department a Notice of Intent to Operate as a reclaimed water agent ~~at least 90 days before the date the proposed activity will start.~~ The Notice of Intent to Operate shall include:
1. The name, address, ~~e-mail address,~~ and telephone number of the applicant;
 2. ~~The social security number of the applicant, if the applicant is an individual;~~
 3. ~~2.~~ The name, address, ~~e-mail address,~~ and telephone number of a contact person;
 4. ~~3.~~ The following information for each end user to be supplied reclaimed water by the applicant:
 - a. The name, address, ~~e-mail address,~~ and telephone number of the end user;
 - b. ~~A legal description of each direct reuse site, including A system map showing the locations of the direct reuse sites and the latitude and longitude coordinates of each site; and~~
 - c. A description of each direct reuse activity, including the type of vegetation, acreage, and annual volume of reclaimed water to be used, unless Class A+ or Class B+ reclaimed water is delivered.
 5. ~~4.~~ The source, class, and annual volume of reclaimed water to be delivered by the applicant;
 6. ~~5.~~ A description of the contractual arrangement between the applicant and each end user, including any end user responsibilities for the requirements specified under subsection (A); and
 7. ~~6.~~ The applicable permit fee specified under 18 A.A.C. 14.
- D. A proposed reclaimed water agent shall not distribute reclaimed water to end users until the Department issues a written ~~Verification of General Permit Conformance~~ Recycled Water Authorization issued under ~~R18-9-708(C), R18-9-A704(C).~~
- E. A reclaimed water agent shall record and annually report the following information to the Department, ~~on or before each anniversary date of the verification approval by January 31, for the immediately preceding year:~~
1. The total volume of reclaimed water delivered by the reclaimed water agent;
 2. The volume of reclaimed water delivered to each end user for Class A, Class B, and Class C reclaimed water; and
 3. Any change in the information submitted under subsection (C).
- F. ~~The reclaimed water agent shall notify the Department before the end of each calendar year of any changes in the information submitted under subsection (C).~~

PART C. RECYCLED INDUSTRIAL WASTEWATER

~~R18-9-707, R18-9-C701, Reclaimed Recycled Water Individual Permit Where for Industrial Wastewater Influences the Characteristics of Reclaimed Water That Is Reused~~

- A. The following activities are prohibited unless a ~~Reclaimed Recycled Water Individual Permit~~ is obtained under ~~R18-9-705, R18-9-A703:~~
1. ~~Direct reuse Use~~ of reclaimed water from a sewage treatment facility that is combined with industrial wastewater or ~~that is combined with reclaimed water from an industrial wastewater treatment facility.~~
 2. ~~Direct reuse Use~~ of reclaimed water from an industrial wastewater treatment facility for production or processing of a crop or substance that may be used as human or animal food.
- B. In addition to the requirements in ~~R18-9-705(B), R18-A703(A),~~ an application for a ~~Reclaimed Recycled Water Individual Permit~~ shall include:
1. Each source of the industrial wastewater with Standard Industrial Code or North American Industry Classification System Code, and the projected rates and volumes from each source;
 2. The chemical, biological, and physical characteristics of the industrial wastewater from each source; and
 3. If reclaimed water will be used in the processing of any crop or substance that may be used as human or animal food, the information regarding food safety and any potential adverse health effects of this direct reuse.

PART D. GRAY WATER

~~R18-9-711, R18-9-D701, Type 1 Reclaimed Recycled Water General Permit for Gray Water~~

- A. A Type 1 ~~Reclaimed Recycled Water General Permit for Gray Water~~ allows private residential ~~direct reuse use~~ of gray water for a flow of less than 400 gallons per day if all the following conditions are met:
1. ~~Human contact with gray water and soil irrigated by gray water is avoided;~~
 2. ~~1.~~ Gray water originating from the residence is used and contained within the property boundary for household gardening, composting, ~~lawn watering,~~ or landscape ~~irrigation watering;~~



- 2. Human contact with gray water and soil watered by gray water is avoided;
 - 3. Surface application of gray water is not used for irrigation watering of food plants, except for citrus and nut trees and shrubs which have an edible portion that does not come into contact with the gray water;
 - 4. The gray water does not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities;
 - 5. The gray water does not contain water used to wash diapers or similarly soiled or infectious garments;
 - ~~5-6.~~ The application of gray water is managed to minimize standing water on the surface by using measures such as avoiding overwatering, distributing the gray water beneath a mulch or other cover, and using best practices to improve soil condition and increase filtration;
 - ~~6-7.~~ The gray water system is constructed so that if blockage, plugging, or backup, or overload of the system occurs, gray water can be directed into the sewage collection system or on-site wastewater treatment and disposal system, as applicable gray water distribution shall cease until the deficiency is corrected. The gray water system may include a means of filtration components to reduce plugging and blockage and backup and be operated using best practices to extend system lifetime;
 - ~~7-8.~~ Any gray water storage tank is surge tanks, if any, are covered to restrict access and to eliminate habitat for mosquitoes or other vectors, and holding time is minimized to avoid development of anaerobic conditions and odors;
 - ~~8-9.~~ The gray water system is sited outside of a floodway;
 - ~~9-10.~~ The gray water system is operated to maintain a minimum vertical separation distance of at least five feet from the point of gray water application to the top of the seasonally high groundwater table;
 - ~~10-11.~~ For a residence's residence using an on-site wastewater treatment facility for black water treatment and disposal, the use of a gray water system does not change the design, capacity, or reserve area requirements for the on-site wastewater treatment facility at the residence, and ensures that the facility can handle the combined black water and gray water flow if the gray water system fails or is not fully used;
 - ~~11-12.~~ Any pressure piping used in a gray water system that may be susceptible to cross connection with a potable water system clearly indicates that the piping does not carry potable water; and
 - 12. Gray water applied by surface irrigation does not contain water used to wash diapers or similarly soiled or infectious garments unless the gray water is disinfected before irrigation; and
 - 13. Surface irrigation by application of gray water is only by flood or drip irrigation distribution methods. Flood distribution methods may include containment by horticultural mulch basins and swales.
- B. Prohibitions. The following are prohibited:
- 1. Gray water use for purposes other than ~~irrigation watering and composting~~, and
 - 2. ~~Spray irrigation. Application of gray water by a spray method.~~
- C. ~~Towns, cities, or counties may further limit the use of gray water described in this Section by rule or ordinance.~~

R18-9-719, R18-9-D702. Type 3 Reclaimed Recycled Water General Permit for Gray Water

- A. A Type 3 ~~Reclaimed Recycled Water~~ General Permit for Gray Water allows ~~a~~ for the use of gray water irrigation system for landscape irrigation and composting if:
- 1. The general permit described in ~~R18-9-711~~ R18-9-D701 does not apply,
 - 2. The flow is not more than 3000 gallons per day, and
 - 3. The gray water system satisfies the notification, design, and installation requirements specified in ~~subsection~~ subsections (B) and (C).
- B. A person shall file a Notice of Intent to Operate a Gray Water ~~Irrigation System~~ with the Department ~~at least 90 days before the date the proposed activity will start on a form provided by the Department.~~ The Notice of Intent to Operate shall include:
- 1. The name, address, ~~e-mail address~~, and telephone number of the applicant;
 - 2. ~~The social security number of the applicant, if the applicant is an individual;~~
 - 3. ~~A legal description of the direct reuse site, including The latitude and longitude coordinates;~~
 - 3. A description of the sources of gray water and calculations demonstrating the flow is not more than 3000 gallons per day;
 - 4. Design plans for the gray water ~~irrigation~~ system;
 - 5. ~~A signature on the Notice of Intent to Operate certifying The applicant's certification~~ that the applicant agrees to comply with the requirements of this Article and the terms of this ~~Reclaimed Recycled Water General Permit for Gray Water~~; and
 - 6. The applicable permit fee specified under 18 A.A.C. 14.
- C. The following ~~technical~~ requirements apply to the design, ~~and installation, and operation~~ of a gray water ~~irrigation~~ system allowed under this ~~Reclaimed Recycled Water General Permit for Gray Water~~:
- 1. ~~Design of the gray water irrigation system shall meet the on-site wastewater treatment facility requirements under R18-9-A312(C), (D)(1), (D)(2), (E)(1), (G), and R18-9-E302(C)(1), except the septic tank specified in R18-9-E302(C)(1) is not required if pretreatment of gray water is not necessary for the intended application;~~
 - 2. ~~Design of the dispersal trenches for the gray water irrigation system shall meet the on-site wastewater treatment facility requirements for shallow trenches specified in R18-9-E302(C)(2);~~
 - 3. ~~The depth of the gray water dispersal trenches shall be appropriate for the intended irrigation use but not more than 5 feet below the finished grade of the native soil; and~~
 - 4. ~~The void space volume of the aggregate fill in the gray water dispersal trench below the bottom of the distribution pipe shall have enough capacity to contain two days of gray water at the design flow.~~
- 1. Human contact with gray water and soil irrigated by gray water is avoided;
 - 2. Gray water is not applied to an exposed surface but into a bed or trench of permeable material, through piping installed below the soil surface, or by similar means. Spray irrigation of gray water is not allowed. The application of gray water shall not result in standing water on the surface.
 - 3. The design shall ensure gray water is used and contained within the property boundary for landscape irrigation or composting;



4. Gray water is not used for irrigation of food plants, except for trees and shrubs which have an edible portion that does not come into contact with the gray water;
 5. The gray water may contain water from drinking fountains but does not contain hazardous chemicals derived from industrial, hobbyist, or similar activities at the site;
 6. Gray water does not contain water used to wash diapers or similarly soiled or infectious garments;
 7. The gray water system is constructed so if blockage, plugging, or backup of the system occurs, gray water can be directed into the sewage collection system or on-site wastewater treatment and disposal system, as applicable;
 8. Gray water surge tanks, if any, are covered to restrict access and to eliminate habitat for mosquitoes or other vectors, and holding time is minimized to avoid development of anaerobic conditions and odors;
 9. The gray water system is sited outside of a floodway;
 10. The gray water system is operated to maintain a minimum vertical separation distance of at least five feet from the point of gray water application to the top of the seasonally high groundwater table;
 11. If an on-site wastewater treatment facility is used for black water treatment and disposal, the use of a gray water system does not change the design, capacity, or reserve area requirements for the on-site wastewater treatment facility so the facility may handle the combined black water and gray water flow; and
 12. Any piping used in a gray water system susceptible to cross connection with a potable water system clearly indicates the piping does not carry potable water.
- D.** The applicant shall not operate the gray water system until the Department issues a written Recycled Water Authorization under R18-9-A704(C).
- E.** The Department may review design plans and details and accept a gray water irrigation system issue a Recycled Water Authorization that differs from the requirements specified in subsection (C) if the system provides equivalent performance and protection of human health and water quality.
- F.** In the Recycled Water Authorization, the Department may require a permittee to report data or information for any of the conditions in this section if the Department deems the reporting necessary to protect human health or water quality or both.

PART E. PURIFIED WATER FOR POTABLE USE

R18-9-E701. Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility

- A.** An application for a Recycled Water Individual Permit for an Advanced Reclaimed Water Treatment Facility must be submitted to the Department according to the requirements in R18-9-A703, as applicable.
- B.** Safe Drinking Water Act. For purposes of Safe Drinking Water Act requirements, water produced by an Advanced Reclaimed Water Treatment Facility shall be considered surface water for purposes of compliance with Title 18, Chapter 4 of the Arizona Administrative Code. Nothing in this section exempts an applicable facility from Safe Drinking Water Act requirements.
- C.** Design Report. In addition to the information required by subsection (A), the applicant shall submit a design report for the Advanced Reclaimed Water Treatment Facility according to a form prescribed by the Department and certified by an Arizona-registered professional engineer. The design report must include the following information:
1. Characterization of source water quantity and quality, including:
 - a. Average and anticipated minimum and maximum source water flows to the facility;
 - b. Concentrations of the source water's physical, microbiological, and chemical constituents regulated for drinking water Maximum Contaminant Levels under the Safe Drinking Water Act and which the Department determines are appropriate for the particular facility and source water;
 - c. Description and concentrations of constituents in the source water used for unit treatment process monitoring and assessment of unit treatment process efficacy, and
 - d. A list of unregulated microbial and chemical constituents and corresponding concentrations in the source water a facility proposes to monitor in order to assess the treatment effectiveness of the overall treatment train. The particular constituents will depend on consideration of factors, such as:
 - i. Occurrence of the constituent in source and local waters,
 - ii. Availability of standardized laboratory methods for quantification of the constituent,
 - iii. Usefulness as representatives of or surrogates for larger classes of constituents, and
 - iv. Availability of toxicity data for the constituent.
 2. Description of, and results from, the pilot water treatment system for the facility or of analogous systems where comparable treatment components are demonstrated as appropriate for treating the particular characteristics of the applicant's proposed source water;
 3. Identification and description of the technologies, processes, methodologies, and process control monitoring to be employed for microbial control;
 4. Logarithmic reduction targets for microbial control, to ensure the product water is free of pathogens and suitable for potable use;
 5. Identification and description of technologies, processes, methodologies and process control monitoring for chemical control;
 6. Plan for monitoring the product water for public health protection;



7. Commissioning and startup plan, including preoperational and startup testing and monitoring, expected time-frame for meeting full operational performance, and any other special startup condition meriting consideration in the individual permit;
8. Operation and maintenance plan including corrective actions for out-of-range monitoring results and contingencies for non-compliant water;
9. Operator training plan; and
10. Documentation of technical, financial, and management capability.