	Water Quality Division Substantive Policy	ADEQ
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	Gray and Black Water Design Flow Calculation for Onsite Wastewater Treatment Facilities; Composting Toilets	Policy No. 3000.2022
		Effective: 12/1/2022

This Substantive Policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona Administrative Procedure Act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties, you may petition the agency under Arizona Revised Statutes section 41-1033 for a review of the statement.

1.0 **Purpose**

Pursuant to A.R.S. § 41-1001(22), "substantive policy statement" means a written expression which informs the general public of an agency's current approach to, or opinion of, the requirements of the federal or state constitution, federal or state statute, administrative rule or regulation, or final judgment of a court of competent jurisdiction, including, where appropriate, the agency's current practice, procedure or method of action based upon that approach or opinion. The clarification provided in this substantive policy statement has been determined by ADEQ to meet applicable state and federal law and, therefore, ADEQ provides this substantive policy to assist persons in interpreting rules pertinent to ADEQ. Notwithstanding this substantive policy statement, ADEQ may consider alternative approaches to comply with applicable law.

This policy clarifies the relationship between the rules in A.A.C. Title 18, Chapter 9, Article 3, Part E. Type 4 General Permits (Onsite Wastewater Treatment Rules) and A.A.C. Title 18, Chapter 9, Article 7 (Recycled Water and Gray Water Rules).

ADEQ has received questions from delegated authorities and the regulated community on how to calculate design flow for onsite wastewater treatment facilities (OWTF) when considering both gray and black water. This policy establishes ADEQ's position on whether to account for both gray and black water in the calculation of total design flows when sizing an OWTF and how the position applies to the composting toilet general permit rule in A.A.C. R18-9-E303.

2.0 **Definitions**

A.A.C. – Means Arizona Administrative Code.

Aquifer Protection Permits (APP) – Means a regulatory program in the state of Arizona authorized by the state legislature under Title 49, Chapter 2, Article 3.

A.R.S. – Means Arizona Revised Statutes.

Black Water – Means wastewater, including, but not limited to, wastewater from kitchens, dishwashers, and toilets, and also includes Gray Water (i.e., wastewater from clothes washer, or a bathroom tub, shower or sink) if Gray Water has not been collected separately from the sewage flow and reused in accordance with Gray Water Rules.

Gray Water – Refers to the definition of the same name in A.A.C. R18-9-A701(5).

Gray Water Rules – Refers to A.A.C. Title 18, Chapter 9, Article 7, Part D.

Onsite Wastewater Treatment Rules – Refers to A.A.C. Title 18, Chapter 9, Article 3, Part E.

On-site Wastewater Treatment Facility (OWTF) – Refers to the definition of the same name in A.A.C. R18-9-101.

3.0 Policy Statement

- 3.1 For the purpose of determining design, capacity or reserve area for an OWTF pursuant to the Onsite Wastewater Treatment Rules, both Black and Gray waters (combined) are required to be accounted for pursuant to A.A.C. R18-9-D701(A)(11).
- 3.2 For the purpose of determining design, capacity or reserve area for an OWTF pursuant to the Onsite Wastewater Treatment Rules, the use of a Gray Water system does not change the design, capacity, or reserve area requirements pursuant to A.A.C. R18-9-D701(A)(11).
- 3.3 For the purpose of determining design, capacity or reserve area for an OWTF pursuant to the Onsite Wastewater Treatment Rules, an applicant must ensure the OWTF can handle the combined total design flow of both Black and Gray Water pursuant to A.A.C. R18-9-D701(A)(11) and R18-9-D702(C)(11).
- 3.4 Wastewater from a kitchen sink is considered Black Water. Black Water must be disposed of pursuant to the Onsite Wastewater Treatment Rules (See the definition of “Gray Water” at A.A.C. R18-9-A701).
- 3.5 If a residence has only one sink, that sink is considered a Black Water source for the purposes of the Onsite Wastewater Treatment and Gray Water Rules.
- 3.6 Permittees under the Gray Water Rules who can not beneficially use their Gray Water (such as in the winter months) must dispose of the Gray Water in either a sewer or an OWTF with a capacity to handle the Permittee’s combined Black and Gray Water flows.
- 3.7 With respect to Composting Toilets:
 - 3.7.1 Wastewater must be managed as provided in this A.A.C. R18-9-E303;
 - 3.7.2 If Gray Water is separated and reused, the reuse must comply with the Gray Water Rules;
 - 3.7.3 A trench or bed must be used to disperse combined flow wastewater into the subsurface and sizing of the trench or bed is based on the total

design flow of combined Gray and Black water flows. A.A.C. R18-9-E303(F)(2).

3.8 For the purpose of the Onsite and Gray Water Rules, Gray Water that is not separated from Black Water is Black Water. Kitchen sink water cannot be separated into gray and black water streams even if using an interceptor (Casanova, 2001).

3.9 For the purpose of the Onsite and Gray Water Rules, Gray Water that is not used in accordance with the Gray Water Rules must be disposed of in the sewer or pursuant to the Onsite Rules.

4.0 Authority

A.R.S. § 49-104(a)(1) provides authority for ADEQ to formulate policies, plans and programs to implement Title 49 to protect the environment. A.R.S. § 49-245 provides authority for ADEQ to promulgate rules for general APP.

5.0 Audience

General Public

ADEQ Water Quality Permitting and Inspection Staff

ADEQ Management

Onsite Wastewater Treatment Facility Responsible Parties and their Agents

Gray Water Recycled Water Permittees

ADEQ Delegated Authorities or Local Agencies

6.0 Policy Steward

ADEQ Water Quality Division Director

7.0 Communication & Training

This policy will be noticed in accordance with A.R.S. § 41-1091. ADEQ will make this policy available on the Agency's policy website and the Agency's delegation website. ADEQ will distribute the policy to Delegated Authorities and Local Agencies. ADEQ staff is available for training, clarification and discussion.

8.0 Annual Policy Review



This policy will be reviewed annually during the Agency Annual Policy Review and will be revised or withdrawn as necessary at that time.

9.0 Additional Documents

Casanova, Lisa M. et al. (2001). A survey of the microbial quality of recycled household graywater. Journal of The American Water Resources Association, Vol. 37, No. 5,

1313-1319.

10.0 Approval

Title	Name	Signature	Date
Affected Executive Leadership Team Member	Trevor Baggione		Sep 7, 2022
Administrative Counsel, as to form	Edwin Slade	 Edwin Slade (Sep 29, 2022 14:08 PDT)	Sep 29, 2022

11.0 Historical Note

N/A