

Graywater and Rainwater Harvesting Stakeholder Group

<u>Name</u>	<u>Organization</u>
Lisa Hoffman (Alternates: Nate Allen, Kevin Koch)	Technicians for Sustainability
Alex Jacome	Southern Arizona Home Builders Association
Kevin Barber	American Institute of Architects
Dr. Paul Green (Alternate: Kendall Kroesen)	Tucson Audubon Society
Matt Hogel (Alternates: Jenny Neeley, Cory Jones)	Sierra Club – Rincon Group
Andy Karic	Triumph Builders
Brad Lancaster (Alternates: Val Little, Kevin Koch)	Rainwater Harvesting for Dry Lands
George Larsen (Alternate: Don Baker)	Larsen Baker Commercial Developers
Michael McDonald (Alternate: Terry Dee)	Habitat for Humanity
Colin Zimmerman	Tucson Association of Realtors
Jason Meininger (Alternate: Amy McCoy)	The Sonoran Institute
Nick Nieto	Plumbing, Heating & Cooling Contractors Association
Dave Pittman (Alternate: Brian Brown)	Arizona Builders Alliance
Jay Tripp (Alternates: Jay Casey, Mike Collins)	Plumbers and Pipefitters Union Local #469

General Permit BMPs

Follow these best management practices to comply with Arizona's rules for gray water use

- ◆ First and foremost, avoid human contact with gray water, or soil irrigated with gray water.
- ◆ You may use gray water for household gardening, composting, and lawn and landscape irrigation, but use it in a way that it does not run off your own property.
- ◆ Do not surface irrigate any plants that produce food, except for citrus and nut trees.
- ◆ Use only flood or drip irrigation to water lawns and landscaping. Spraying gray water is prohibited.
- ◆ When determining the location for your gray water irrigation, remember that it cannot be in a wash or drainage way.
- ◆ Gray water may only be used in locations where groundwater is at least five feet below the surface.
- ◆ Label pipes carrying gray water under pressure to eliminate confusion between gray water and drinking water pipes.
- ◆ Cover, seal and secure storage tanks to restrict access by small rodents and to control disease carrying insects such as mosquitoes.
- ◆ Gray water cannot contain hazardous chemicals such as antifreeze, mothballs and solvents. Do not include wash water from greasy or oily rags in your gray water.
- ◆ Gray water from washing diapers or other infectious garments must be discharged to a residential sewer or other wastewater facility, unless it can be disinfected prior to its use.
- ◆ Surface accumulation of gray water must be kept to a minimum.
- ◆ Should a backup occur, gray water must be disposed into your normal wastewater drain system. To avoid such a backup, consider using a filtration system to reduce plugging and extend the system's lifetime.
- ◆ If you have a septic or other on-site wastewater disposal system, your gray water use does not change that system's design requirements for capacity and reserve areas.



Contacts for Gray Water Information

Phoenix Main Office

Serving Gila, La Paz, Maricopa, Pinal and Yuma Counties
1110 W. Washington St., Phoenix, AZ 85007

(602) 771-2300

Toll Free (800) 234-5677

TDD (602) 771-4829

pmo@azdeq.gov

Northern Regional Office - Flagstaff

Serving Apache, Coconino, Mohave, Navajo and Yavapai Counties

(928) 779-0313

Toll Free (877) 602-3675

nro@azdeq.gov

Southern Regional Office - Tucson

Serving Cochise, Graham, Greenlee, Pima and Santa Cruz Counties

(520) 628-6733

Toll Free (888) 271-9302

sro@azdeq.gov

Community Liaisons

ADEQ has community liaisons located throughout the state to assist residents in rural communities. To find out how to contact the community liaison nearest you, call the regional office in your area. In addition to providing ADEQ specific information, your community liaison can suggest a specific person in your county government to contact about gray water.

This brochure is available at

azdeq.gov/environ/water/permits/download/graybro.pdf

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Arizona Department of
Environmental Quality's Guide
to Complying with the
Type 1 General Permit

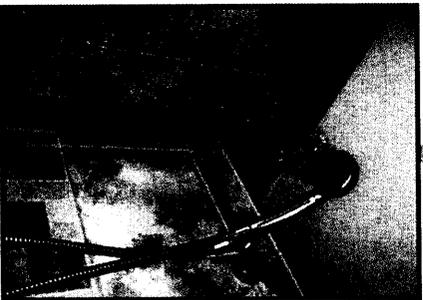


Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

Every drop of water counts. By using gray water, we save our fresh water supplies by not applying drinking water to landscape plants.

What is gray water?

Gray water is defined as wastewater, collected separately from your sewage flow, that originates from a clothes washer, bathtub, shower or sink, but not from a kitchen sink, dishwasher or toilet.



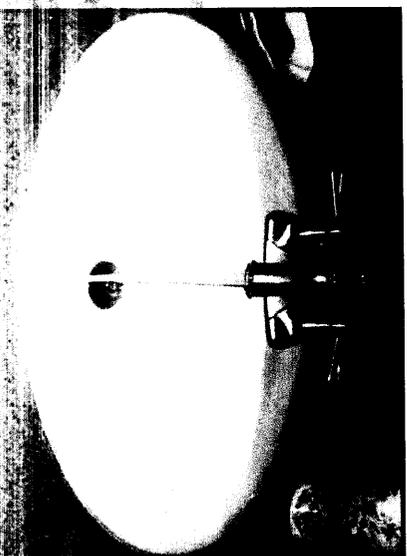
Gray water is distinguished from "black water," which is wastewater from toilets, kitchen sinks and dishwashers. Black water should not be reused in the home because of high risk of contamination by bacteria, viruses and other pathogens.

Gray water may contain fats, oils, grease, hair, lint, soaps, cleansers, fabric softeners and other chemicals. Gray water can also contain elevated levels of chlorides, sodium, borax and sulfates and have a high pH (is alkaline) that may be harmful to some plants. So it's important to know what is contained in products that are put down household drains.

To make the process easier for homeowners who want to use gray water at their homes, ADEQ developed the rules with stakeholder input. Many of these rules are based on the results of a gray water study conducted in the Tucson area, which you can view at www.watercasa.org/research/residential/resindex.htm.

The basic requirements to use gray water at your home are simple:

- ◆ Residents must adhere to the guidelines for a Reclaimed Water Type 1 General Permit. A Type 1 General Permit requires no formal notification to the department, no review or design approval, and no public notice, reporting or renewal.
- ◆ Although you don't have to apply to receive a formal permit for permission to use gray water, you must abide by the 13 best management practices (BMPs) listed in this brochure, which were developed to protect public health and water quality.



Permit Eligibility and Usage Requirements

- ◆ The general permit is meant for private residential use only. Gray water must be used on the site where it is generated. The area of use cannot be accessible by the public.
- ◆ Under this general permit, gray water can only be used for irrigation – not for dust control, cooling or other water uses.
- ◆ Only drip or flood irrigation with gray-water is allowed. Spray irrigation is not permitted due to the potential for inhalation or drifting off-site.
- ◆ Gray water flow must be less than 400 gallons per day.

In general, no city, town or county may limit the use of gray water if the use is allowed by this general permit (ARS §49-204).

For a copy of the gray water rule, call the nearest ADEQ office or download it at www.azsos.gov/public_services/title_18/18-09.pdf. The gray water rule can be found in Title 18, Chapter 9, Article 7.



ADOPTED BY THE
MAYOR AND COUNCIL

ORDINANCE NO. 10579

RELATING TO BUILDINGS, ELECTRICITY, PLUMBING AND MECHANICAL CODE;
CREATING THE "RESIDENTIAL GRAY WATER ORDINANCE" REQUIRING
INSTALLATION OF GRAY WATER "STUB-OUTS" IN RESIDENTIAL
CONSTRUCTION; REQUIRING THAT GRAY WATER SYSTEMS COMPLY
WITH APPLICABLE REGULATIONS; AMENDING TUCSON CODE CHAPTER
6, ARTICLE III DIVISION I BY AMENDING SECTION 6-38 AND ADDING
SECTION 2602.1.2, "GRAY WATER STUB-OUTS", AS A LOCAL AMENDMENT
TO THE INTERNATIONAL RESIDENTIAL CODE; AND DECLARING AN
EMERGENCY.

WHEREAS, the State of Arizona's Department of Environmental Quality
instituted a general permit for homeowners whose gray water systems meet
Best Management Practices; and

WHEREAS, gray water systems constructed and operated according to
these Best Management Practices provide a safe method of reducing water
demand; and

WHEREAS, gray water is a valuable resource as it makes "double use" of
water that otherwise goes down the drain. Gray water systems divert some
interior water from clothes washers, bathtubs, showers or bathroom sinks (but
not from a kitchen sink, dishwasher or toilet) for use in outdoor irrigation; and

WHEREAS, gray water systems — which recycle household water to a
spot where it can be used outdoors — can save a typical household 13,000
gallons of potable water per year; and

WHEREAS installation of stub-outs at the time of constructions greatly
facilitates the use of gray water in residences, and

WHEREAS, a desert community should do everything possible to
conserve water and promote efficient use of water resources.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF TUCSON, ARIZONA, AS FOLLOWS:

SECTION 1. This ordinance shall be known and referred to as the “Residential Gray Water Ordinance.”

SECTION 2. The Tucson Code Chapter 6, Buildings, Electricity, Plumbing and Mechanical Code, Article III, Buildings, Division I, Building Code, Section 6-38, *Residential code adopted*, International Residential Code 2006 as adopted by Ordinance 10417 with amendments, is hereby amended by adopting a new section 2602.1.2 as set forth in Attachment A to this ordinance incorporated here as if fully set forth herein.

SECTION 3. The Director of Development Services is authorized to adopt appropriate rules, regulations and Development Standards necessary to implement the provisions of this ordinance.

SECTION 4. The provisions of this ordinance may be modified or waived when it can be satisfactorily demonstrated to the Building Official that compliance with these regulations is impractical due to construction or other physical constraints and an acceptable alternative method of compliance that allows gray water usage is proposed.

SECTION 5. The provisions of Sections 1 through 4 of this ordinance shall apply to construction built pursuant to permits issued after June 1, 2010.

SECTION 6. The various City officers and employees are authorized and directed to perform all acts necessary or desirable to give effect to this ordinance, including, but not limited to, providing an instructional pamphlet setting forth in plain language the requirements of this ordinance.

SECTION 7. If any of the provisions of this ordinance or the application thereof to any person or circumstance is invalid, the invalidity shall not affect other provisions or applications of this ordinance which may give effect without the invalid provision or circumstance, and to the end the provisions of this ordinance are severable.

SECTION 8. WHEREAS, it is necessary for the preservation of the peace, health and safety of the City of Tucson that this ordinance becomes immediately effective, an emergency is hereby declared to exist and this ordinance shall be effective immediately upon its passage and adoption.

PASSED, ADOPTED AND APPROVED BY the Mayor and Council of Tucson, Arizona, _____.

MAYOR

ATTEST:

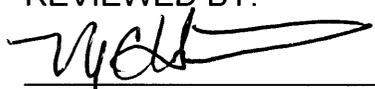
CITY CLERK

APPROVED TO FORM:



CITY ATTORNEY

REVIEWED BY:



CITY MANAGER

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9/17/2008 10:16 AM

ATTACHMENT A to Ordinance 10579

2602.1.2 “Gray Water Applications”

1. All new single family and duplex residential dwelling units shall include either a separate multiple pipe outlet or a diverter valve, and outside “stub-out” installation on clothes washing machine hook-ups, to allow separate discharge of gray water for direct irrigation.
2. All new single family residential dwelling units shall include a building drain or drains for lavatories, showers, and bathtubs, segregated from drains for all other plumbing fixtures, and connected a minimum of three (3) feet from the limits of the foundation, to allow for future installation of a distributed gray water system.
3. All gray water systems shall be designed and operated according to the provisions of the applicable permit authorized by ADEQ under the Arizona Administrative Code, Title 18, Chapter 9.