



GRAY WATER IRRIGATION GUIDE

Amendments to the Water Quality Act now allow the discharge of up to 250 gallons per day of residential “gray water” under certain conditions and without a special permit.

Gray water is defined as “untreated household wastewater that has not come in contact with toilet waste and includes wastewater from bathtubs, showers, washbasins, clothes washing machines and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers or laundry water from the washing of material soiled with human excreta, such as diapers”.

Gray water is distinguished from “black water”, which is wastewater from toilets, kitchen sinks and dishwashers. Black water should never be reused in the home because of the high risk of contamination by bacteria, viruses, and other pathogens.

Gray water may contain varying concentrations of disease-causing organisms that are washed off during bathing and from clothes during laundering, and may also contain fats, oils, grease, hair, lint, soaps, cleansers, fabric softeners and other chemicals. Gray water may also contain elevated levels of chlorides, sodium, borax, and sulfates, and have a high pH (is alkaline) that may be harmful to some plants. Gray water should not be used to irrigate root crops, or edible parts of food crops that touch the soil.

A permit is not required to apply less than two hundred fifty gallons per day of private residential gray water for the resident’s household gardening, composting or landscape irrigation if the following conditions are met:

- ⇒ The gray water distribution system must be constructed so that overflow from the system drains into the sanitary sewer or septic system. In some cases, a liquid waste permit may be necessary if an on site septic system is modified.
- ⇒ A gray water storage tank must be covered to restrict access and to eliminate habitat for mosquitoes or other vectors. Standing water left in place for more than seven days has the potential to allow mosquitoes to breed and hatch.
- ⇒ The gray water system must not be located in a floodway.
- ⇒ Gray water is discharged only in areas where there is vertical separation of at least five feet between the point of discharge and the ground water table to protect ground water resources from possible contamination. Current Liquid Waste Disposal Regulations require that gray water is not applied within 100 feet of a domestic well or within 200 feet of a public water supply.
- ⇒ Gray water pressure piping is clearly identified as carrying non-potable water.
- ⇒ Gray water is used on the site where it is generated and may not run off the property.
- ⇒ Gray water is applied in a manner that minimizes the potential for contact with people or domestic pets. Gray water application methods that reduce contact include drip irrigation, shallow piping systems, or mulch trenches.
- ⇒ Ponding of gray water is prohibited and application of gray water must be managed to minimize standing water and to prevent saturation of the soil.

- ⇒ Gray water must not be sprayed. Low-pressure drip irrigation or bubblers located under mulch help to prevent misting and exposure to gray water.
- ⇒ Gray water must not be discharged to a watercourse. Current Liquid Waste Disposal Regulations require that discharges of gray water be at least 100 feet from streams or lakes or 25 feet (plus the depth of the arroyo) from an arroyo.
- ⇒ Gray water use shall comply with all applicable municipal or county ordinances and local building codes.

The full text of the act can be found here:

<http://www.legis.state.nm.us/Sessions/03%20Regular/FinalVersions/house/HB0114.htm>

Because most outdoor irrigation is seasonal, it may be necessary to divert gray water to the sanitary sewer or septic system during the non-growing season.

Gray water systems designed to discharge more than 250 gallons per day require a permit from the New Mexico Environment Department.

For additional information contact the New Mexico Environment Department's (NMED) Ground Water Quality Bureau or your local NMED field office at the number below.

NMED Ground Water Quality Bureau (505) 827-2900

NMED Field Offices

District 1

Albuquerque	(505) 841-9450
Farmington	(505) 327-9851
Gallup	(505) 722-4160
Grants	(505) 287-8845
Los Lunas	(505) 841-5280
Rio Rancho	(505) 892-4483
Socorro	(505) 835-1287

District 2

Santa Fe	(505) 827-1840
Espanola	(505) 753-7256
Las Vegas	(505) 425-6764
Raton	(505) 445-3621
Taos	(505) 758-8808

District 3

Las Cruces	(505) 524-6300
Alamogordo	(505) 437-7115
Deming	(505) 546-7559
Silver City	(505) 388-1934

District 4

Roswell	(505) 624-6046
Carlsbad	(505) 885-9023
Clovis	(505) 762-3728
Hobbs	(505) 393-4302
Ruidoso	(505) 258-3272
Tucumcari	(505) 461-1671

Other important sources for information on gray water, and gray water systems include:

Uniform Plumbing Code, Appendix G, Graywater Systems For Single Family Dwellings

The New Mexico Environment Department does not endorse the following worldwide web resources although they may contain useful information regarding gray water and it's use. (For search engines, key words include "greywater", "graywater", and "gray water").

http://www.cahe.nmsu.edu/pubs/_m/m-106.html

http://www.sahra.arizona.edu/programs/water_cons/tips/re-use/gray.htm

<http://interests.caes.uga.edu/drought/articles/gwlands.htm>

<http://www.epa.gov/OW/you/chap3.html>

<http://ag.arizona.edu/AZWATER/arroyo/071rain.html>

<http://www.wvu.edu/~agexten/hortcult/homegard/graywate.htm>

http://www.umassdroughtinfo.org/home_and_garden/gray_water.html