For additional information, contact the local office of the New Mexico Environment Department or New Mexico Cooperative Extension Service. In addition, visit the following websites:

www.nmenv.state.nm.us/fod/liquidwaste/

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

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

www.watercasa.org/pubs/

When using search engines, use key words such as "greywater," "graywater," and "gray water."

For additional copies of this brochure, contact:

New Mexico Office of the State Engineer
P.O. Box 25102, Santa Fe, NM 87504-5102
1-800-WATER-NM
www.ose.state.nm.us

Photos courtesy of Santa Fe Greenhouses.
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Using Gray Water in New Mexico's Residential Landscapes

Why Should I Use Gray Water?

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

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 the 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 is important to know what is contained in products that are put down household drains.

HANDY HINTS for Healthy Plants

Use biodegradable and environmentally friendly soap products — avoid soaps that contain borax and are high in salts and sulfates.

Avoid using chlorine bleach. Add white vinegar to the laundry's rinse cycle to lower the pH of gray water.

Mulch plants to reduce evaporation and encourage nature's soil-building processes.

Avoid dispersing hot water on plants — use a temporary storage tank if necessary.

Avoid putting hazardous wastes, such as those from home photo labs or washed car parts, down a sink drain.

Can Gray Water Be Used to Water Gardens?

Because of a new state law, a state permit is not required to apply less than 250 gallons per day of private residential gray water for a resident's household gardening, composting or landscape irrigation if the conditions described below are met. Gray water systems designed to discharge more than 250 gallons per day require a permit from the New Mexico Environment Department.

- Gray water should not be used in vegetable gardens to irrigate root crops or edible parts of food crops that touch the soil. However, gray water can be used on fruit trees.
- 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.
- If gray water is going to be stored, it should not be held more than 24 hours to prevent growth of bacteria. A gray water storage tank must be covered to restrict access and to eliminate habitat for mosquitoes or other vectors.
- Gray water should be 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 not be applied within 100 feet of a domestic well or within 200 feet of a public water supply.
- The gray water system must not be located in any area susceptible to flooding.
- Gray water pressure piping should be clearly identified as carrying non-potable water and not be connected with the drinking water system. (Purple pipe is traditionally used to denote gray water piping, but any easy-to-identify labeling is sufficient.) Alterations or additions to a plumbing system should be made by a licensed plumber, or a homeowner must apply for a homeowner's plumbing permit.
- Gray water must be used on the site where it is generated and may not run off the property.
- Gray water should be applied in a manner that minimizes the potential for contact with people or domestic pets. To avoid contact, gray water must be applied to a mulched area or through a subsurface piping or irrigation system.
- Ponding of gray water is prohibited, and application of gray water must be managed to minimize standing water, encourage infiltration, and prevent over-saturation of the soil.
- Gray water must not be sprayed.
- Gray water must not be discharged to a watercourse. Current liquid waste disposal regulations require that discharges of gray water be made 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, local building codes, state laws, and related regulations and guidelines.

Sample Gray Water Systems

Adapted from Graywater Guidelines, Water Conservation Alliance of Southern Arizona