



Reusing Graywater is Smart Conservation

Common sense says water should be reused as many times as possible. The water that is produced by most households should be reused.

What is graywater?

- Graywater (also spelled “greywater” or “gray water”) is water from showers, tubs, bathroom sinks, and clothes washers. Graywater *does not* include sewage.
- Homes, schools, offices and other buildings where people live or work produce a significant amount of graywater, approximately 60% of total indoor water use.

Graywater is an ideal resource for reuse.

- Landscaping irrigation is often the single biggest category of urban water use, accounting for up to 70% of total water urban use, particularly in warmer inland areas. Fortunately, graywater is ideal for irrigating landscaping, and can make good use of the 60% of indoor waters appropriate for graywater reuse.
- Outdoor graywater use requires no treatment. Simple [laundry-to-landscape systems](#) are inexpensive to install and do not require a permit. Graywater systems can be designed to use gravity rather than a pump, saving energy in the reuse process. Graywater is safe for use when [simple guidelines](#) are followed. Millions of systems have been in use for decades without any confirmed threats to public health.
- Homes, institutions, and businesses produce a steady stream of graywater year round. It is estimated that 37 gallons of graywater per person per day are available in Southern California’s urban area. Even if only 10% of households had graywater systems, the reduction in water use could equal the output of an entire desalination plant. In the Los Angeles area, graywater reuse capacity could range from 50 to 165 million gallons per day.

Graywater is an abundant, safe, reliable, local water source and more needs to be done to take full advantage of this resource.

- California in 2009 approved Chapter 16 of the State Plumbing Code that includes common-sense standards and makes graywater reuse legal. A “laundry-to-landscape” system--where drain water from the clothes washer goes directly out to irrigate plants--can be put in without a permit.
- Local building and public health officials are sometimes wary. They can make it difficult to get permits for other systems from tubs and bathroom sinks. Permit costs can be very high. More advocacy and resources for local officials are needed to eliminate these roadblocks.
- Cities and water agencies all over California are eager to reduce the amount of drinking water used for irrigation and toilet flushing. San Francisco has a major grant program for large new buildings that reuse graywater for toilet flushing. Santa Clara Valley Water District and others provide rebates or subsidies toward “laundry-to-landscape” systems or graywater permit fees. The State should support investments in these kinds of incentives rather than pushing for new water supply infrastructure.
- The optional Tiers 1 and 2 of California’s recently adopted CalGREEN Building Code mention graywater as a way to reduce potable water use on landscapes. But there is no incentive for developers to use them. The provisions of these tiers should be made mandatory.
- GreenPointRated and LEED give points for graywater systems. These ratings systems for new homes and buildings help consumers understand how “green”, or sustainable, they are. Public education about these rating systems is needed to make them more relevant.
- A laundry-to-landscape system can often be installed by an informed homeowner without a permit. Many small landscaping and plumbing businesses have specialized in the design and installation of residential graywater systems. Larger and more complex systems are designed by engineers. More training and certification is needed for tradespeople. More information about graywater is needed so the public feels confident hiring these local green job providers.

Everyone can play a role in making graywater more accessible.

Want to find out more?

Greywater Action (<http://greywateraction.org/>) offers workshops for do-it-yourselfers and training and a certification program for graywater installers.

Oasis Design (<http://oasisdesign.net/greywater/>) provides background and research.

Brad Lancaster (<http://www.harvestingrainwater.com/greywater-harvesting/>) has practical tips based on years of experience in Arizona.

Wholly W2O (<http://http://www.whollyh2o.org/graywater.html/>) has basic information on laws, design, tips and uses.