

# Recycle graywater to conserve water resource

Most people living in sunny New Mexico have no choice but to limit the water they use. Water bills and covenants, not to mention our consciences, demand that we find alternatives to this draining problem.

One alternative is to use gray water for plants and trees in the landscape. In so doing we apply permaculture's Law of Return, which states that nature demands payment for that which we take from her. Rather than merely taking water out of the aquifer until it runs dry, we can decide to reduce our use and nurture the landscape (with this nutrient-rich resource) in the process.

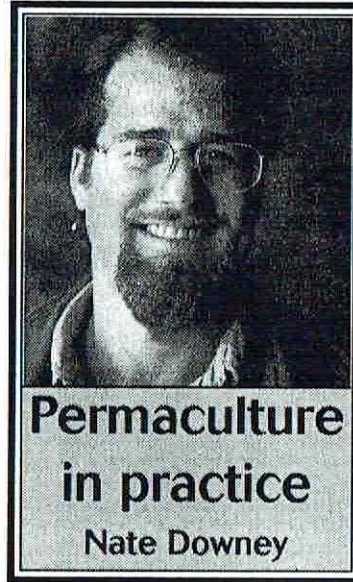
In the broadest sense the term gray water refers to waste water, except for toilet water (black water), that flows down household drains. Although safely using gray water is not rocket science, mistakes can be very dangerous. Due to the difficulty of filtering disease-laden fats, oils and grease, waste water from kitchen drains should not be

used.

Laundry machine water can be used as long as detersives, liquid fabric softeners and pollutants such as gasoline are not included. Waste water from showers and tubs is also an acceptable source. Bathroom sinks are generally viewed as the safest sources of gray water.

For health reasons, gray water should not be used above ground. This makes it incompatible with spraying on lawns. The resource is usually used in trenches filled with gravel or pumice. In 1994 California made the use of gray water legal in drip irrigation tubing - as long as it is buried nine inches underground.

One of the best references I have found on the subject of installing gray water systems is Robert Kourik's *Gray Water Use in the Landscape* (Metaphoric Press, 1988). The Cooperative Extension Service and the New Mexico Environment Department also have valuable information regarding



the safety and legality of using gray water.

It is legal to divert gray water to your landscape in New Mexico. Unfortunately, it's not an easy or inexpensive undertaking for law-abiding citizens. In fact the legal on-site treatment of gray water is only slightly less expensive than the on-site treatment of black water.

According to our state's liquid waste disposal regu-

lations, gray water must first pass through an entirely separate septic tank before entering one of several approved filtration and dispersal systems. Variances can be granted by the state Environment Department, but these are not often obtained.

The conservative stance that New Mexico currently takes is understandable. No one wants to put people or the natural environment in risky or hazardous situations. But as water rights become increasingly expensive, hopefully our state will look to the successes of other jurisdictions such as the state of California and the city of Tucson, Ariz.

There is also an unrelated bureaucratic obstacle for residents hooked up to municipal sewer systems. There will likely be objections from city officials who long ago realized that their treatment facilities will not function if too many people divert gray water from the sewer. The reason for this is that if facilities were forced to treat a greater percent-

age of black water, at some point there would not be enough liquid effluent to dilute the excess solids.

Fortunately, as is often pointed out in this column, "the problem is the solution." The solution is not to make gray water illegal in municipalities but to encourage the installation of composting toilets, which would reduce the quantity of solid wastes at sewage treatment facilities. This would help the environment and municipal budgets.

As we soon leave this hot, dry fall-winter of 1999 in the dust, the bottom line is that we will need to come up with some alternatives to our water woes. Gray water recycling is one such alternative that needs strong public support as well as intrepid and visionary regulatory action.

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