

## **IN DEPTH: RESIDENTIAL REAL ESTATE**

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Saving Water

# **Keep your lawns -- and your pockets -- full of green**

Linda Stone

"Green Building" is a comprehensive method of construction that results in homes that use very little energy and water, and may even generate their own power and employ rainwater catchment. There are a number of specific elements that constitute a green construction project. One of the most important, especially in South Texas, is water conservation.

Techniques for conserving water can be employed indoors and outdoors. Examples of indoor conservation would be low-flow fixtures, water-saving appliances, on-demand hot water, graywater systems, and overflow and condensate capture. Examples of outdoor conservation would be xeriscaping, rainwater catchment for irrigation, no built-in irrigation, and permeable exterior surfaces. Rainwater catchment, condensate capture and graywater systems provide some of the most substantial returns for homeowners in the way of water and cost savings.

Rainwater catchment is the collection of rainwater for later use. There are many methods to catch rainwater, from barrels set out in a yard to an extensive rooftop collection system. The collected water is most often used for irrigation, but can also, with the proper filtration and purification, be used for indoor applications. A small-scale irrigation system can use materials obtained from hardware and garden stores. Simple modification of 55-gallon barrels or similar containers to screen out mosquitoes and allow connection of a garden hose is the easiest way to build a small system. For rainwater storage of more than 100 gallons, containers can be found at farm and ranch outfitters.

Useful information about employing rainwater catchment is readily available through various organizations. Workshops on converting 55-gallon drums into rain barrels are available. More elaborate systems might require consultation with an established rainwater harvesting company.

Condensate capture is the reuse of condensate from air conditioning for landscape irrigation or for reuse in other industrial processes. Condensate is naturally produced

when warm moisture-laden air passes over the cooling coils of an air-conditioning system. The average single-family home produces five to 10 gallons of condensate per day, while commercial and industrial facilities produce thousands of gallons of condensate daily. Condensate is an attractive resource for several reasons. Not only is it produced through the normal, daily operation of air-conditioning equipment, it is a high-quality source of water that requires minimal treatment before reuse. Unlike rain, which may come in sporadic events, condensate is produced regularly during the hottest months when the need for irrigation is the greatest. Like rainwater harvesting systems, the components of a condensate collection system can be purchased at home improvement centers and farm and ranch supply stores.

A graywater system collects water after it has been used for bathing and washing clothes and redirects it for another use, generally for irrigation. Hundreds of thousands of gallons of can be saved through graywater reuse. Some people already practice a form of graywater conservation if they drain washing machine water into their yard for irrigation. However, this activity is not allowed if the water migrates into a neighbor's yard, runs down into the street, or pools in the homeowner's yard due to an inability of the ground to absorb the graywater.

It does not require a great deal of materials for a homeowner to create a simple graywater system. The most basic system, utilizing washing machine water, would include a simple valve, hose, and a container that could hold the water long enough to cool off before distributing the graywater across the lawn. Professionally installed systems may be available in the near future, once the Texas Commission on Environmental Quality (TCEQ) finishes reviewing proposed regulations for governing the possible uses of graywater. After the publication of established regulations, systems could be incorporated into the design of new homes and other structures to divert all allowable graywater sources for particular purposes. These systems would include a valve allowing the homeowner to determine whether graywater would be diverted to a landscape or conventionally directed to the sewer.

## **Dollars and sense**

Ultimately, a green home costs less to operate and maintain and keeps its value over time. Anyone can employ green building methods on a new or existing home. In order to obtain official certification, however, the owner must work with a Build San Antonio Green™ certified architect or builder. Build San Antonio Green is a residential green building program developed by the Metropolitan Partnership for Energy and co-administered with the Greater San Antonio Builders Association. For a list of certified architects and builders, visit [www.buildsagreen.org](http://www.buildsagreen.org).

*Linda Stone is director of the Metropolitan Partnership for Energy, which is a nonprofit collaborative effort of local governmental entities aimed at increasing the San Antonio area's energy efficiency and sustainability by providing the region with energy leadership, education and expertise. E-mail Stone at [lstone@mp4e.info](mailto:lstone@mp4e.info). Architect*

*Stephen Colley (stephencolley@stic.net) and SAWS conservation planner Brian Lillibridge (blillibridge@saws.org) contributed to this article.*

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