



UNIVERSITY OF  
FLORIDA

IFAS EXTENSION

### **Harvesting Rainwater**

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Rainwater may not seem like something that can be harvested, but it is easy to do and takes a lot less effort than picking citrus or vegetables. Collecting and storing rainwater has been going on for hundreds of years. Ancient Rome used collected rainwater to irrigate plants. Before World War II, residents of Key West, including Ernest Hemingway, relied on rainwater collected in cisterns as their means of freshwater. Although we no longer have to use this old fashioned method in order to get our freshwater, we should re-examine this way to collect rainwater as a way to conserve water that not only benefits us but our environment.

By collecting and storing rainwater, we benefit by having a source of irrigation water during periods of drought and a better quality of water for plants that doesn't contain chlorine, lime, or calcium. In addition, a rain barrel helps direct moisture away from building foundations.

Another benefit that may not be as obvious is reducing the amount of groundwater used for irrigation. A majority of our residential water comes from groundwater aquifers, and over 50 percent of this residential water is used outdoors. If too much groundwater is removed from the aquifer without being replenished with rain, saltwater intrusion can occur. This happens when large amounts of saltwater move into an aquifer's freshwater supply and make the water unusable and increase the treatment cost. Also, using groundwater for irrigation decreases the groundwater that is available to us for drinking because about 95% of our drinking water comes from groundwater. Even though Florida's population is increasing, our water supply is not. Collecting, storing, and irrigating with rainwater can help us all in the long run by making more groundwater available for drinking water.

Our waterbodies, like the Indian River Lagoon, benefit from collecting rainwater as well because the amount of stormwater runoff that flows off our lawns and impervious surfaces is reduced. During a rainstorm that takes place over a 24-hour period and produces one inch of rain, more

than 700 gallons of water will run off a roof that is 1,200 square feet. Just taking into account the number of houses in Indian River County, over 40 million gallons of stormwater runoff can be generated from one inch of rain. As the runoff flows over our lawns, parking lots, and streets, it picks up fertilizers, pesticides, and loose soil. When this runoff reaches the Indian River Lagoon, it harms the sensitive lagoon system. The fertilizer pollutants result in algal blooms that decrease dissolved oxygen levels in the water, while the pesticides are toxic to our aquatic organisms. The loose soil adds to the muck problem, can smother aquatic plants and less mobile wildlife, and makes the water cloudy. This turbidity decreases the amount of light that reaches the lagoon's bottom surface, which causes harm to the aquatic organisms that rely on sunlight for survival such as seagrass. In addition, the influx of freshwater into the brackish lagoon disrupts the balance between the freshwater and saltwater. This negatively impacts the wildlife that have adapted to live in the brackish water because they can't tolerate living in a freshwater habitat.

One way to collect rainwater and reap the benefits is a rain barrel. A rain barrel is made of a plastic food-grade barrel that is modified by adding a spigot at the bottom. It can be connected directly to the gutter. If you don't have gutters, the rain barrel can be securely covered with a screen mesh and placed under an area of roof that sheds a lot of water.

Although manufactured rain barrels can be purchased, they are very simple and inexpensive to make on your own. The Extension Service can provide you with more information and will be conducting Rain Barrel Workshops over the next few months. Please check our web site at <http://www.indian.ifas.ufl.edu> or call (772) 770-5030 for workshop dates. Currently, the closest supplier of food-grade barrels for the workshops is in Okeechobee. If anyone knows of a supplier of food-grade barrels that is closer to Vero Beach, please call the Extension Service.

Extension Happenings for the week of August 15: Introduction to Florida Yards and Neighborhoods, 10:30am – 12:00pm on August 17 at the North County Library.