

Calculating Your Water Savings

To calculate the amount of water that can be harvested this is a good formula to remember: 1 inch of rain on a 1,000 sq. ft. roof yields 623 gallons of water. Calculate the yield of your roof by multiplying the square footage of your roof by 623 and divide by 1000.

Example:

Roof 40 x 50 feet = 2,000 sf

2000 x 623 gallons = 1,246,000

1,246,000 divided by 1,000 = 1246

For each 1 inch of rain, this roof would yield 1,246 gallons of water.

46.56 average inches per year would result in the harvest of 58,014 gallons if it were all stored.



Whether you are considering a cistern system or adding a rain barrel to your landscape, rainwater harvesting can be financially and environmentally rewarding.

The University of Florida does not endorse specific businesses, however, it is sometimes difficult to find vendors for rainwater harvesting and we would like to recognize the consultant used in this project:

BRAE Rainwater Technologies

1 (800) 772-1958 www.braewater.com

For more information about harvesting rainwater please visit the Florida Extension Website at www.SolutionsForYourLife.ufl.edu



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Rainwater Harvesting

UF/IFAS Sumter County Extension

Bushnell, Florida

Rainwater Harvesting—the Heart of Our Florida Friendly Demonstration Landscape

The Sumter County Extension Office moved to the West Central Florida Agricultural Center at the Sumter County Fairgrounds in January 2006. A grant from the Withlacoochee Regional Water Supply Authority made it possible for the Florida Friendly Demonstration Landscape to be developed. The Sumter County Master Gardeners were instrumental in the garden design and have continued to work in



maintenance and improvements in the landscape. The garden now includes a bog garden, butterfly garden, landscaping with wildflowers demonstration (Florida Wildflower Council grant) and composting demonstration.

Rainwater Harvesting System

The size of the roof of the “Ag Center” is approximately 38,000 square feet and when it rains a great deal of water pours off of the roof. For this reason, two 3,000 gallon cisterns were installed and attached to the roof with an elaborate downspout system.



For demonstration purposes the cisterns were installed above ground and a decorative wood wrap added. The downspouts are designed to hold hardy plants in the “arms” but were capped off instead. It was feared that the plants would either be displaced by the force of the rainwater or would not survive the Florida heat.

The cisterns are connected underground, and a pump delivers water to a low-volume irrigation system. The system is also attached to the City of Webster public water supply and can be activated when the cisterns are empty.

The average annual rainfall in Sumter County is 46.56 inches per year. The rainwater management system in this example is expected to save \$1,100 per year in water costs, with a projected payback of the installation cost in seven years.

The 6,000 gallon storage capacity provides a 57% reduction in municipal water use for this half acre garden. If the storage capacity was twice that amount, the garden could be almost entirely irrigated by rainwater, but with long periods of dry weather it is necessary to use an additional water source.



The soil was amended with compost from the FORCE project (Florida Organic Recycling).