



Drought Springs a Well of Community Support

Full Mitigation Best Practice Story

Multiple Counties, Florida



Sarasota, FL- In 1992, Sarasota, Manatee and Polk counties entered into their second multi-year drought. For the first time, the Southwest Florida Water Management District imposed mandatory water restrictions as residents reported wells could not supply enough water for drinking and cooking. Drought remediation and water conservation became a priority, and the University of Florida's Sarasota County Extension Office offered a new educational tool with the Florida House Learning Center.

"Sarasota County Extension partnered with Florida House Institute to build the center after previous conservation education efforts failed," said education specialist Betty Alpaugh. "Even though radio, television and print ads notified people of the drought situation, water used by each person in the county increased during the crisis."

On Earth Day in 1994, the 1,557 square foot learning center opened its doors to visitors who may have seen demonstrations of water-saving techniques for the first time. On display were drought-resistant landscaping, low water use appliances and cisterns that collect and reuse non-potable water for irrigation.

As technologies advanced, the learning center demonstrated dual-flush toilets, high-powered, low-flow showerheads and water-recycling equipment. Based on national consumption figures, the water-saving tools could reduce average daily water usage by one third, to less than 50 gallons a day.

A dual-flush toilet tank is one way to conserve water. The unit resembles a standard fixture, but has two flush controls to select 0.8 of a gallon of water for a liquid flush or 1.6 gallons of water for a solid flush.

Another type of toilet features a system without the more common and often water-wasting flapper. Water loss from rubber flaps can reach 200 gallons a day per toilet. A system without a flapper collects water in a trough and uses it for flushing. As another benefit, non-conventional toilets do not require any extra installation measures or special hardware.

The Florida House Learning Center's showerhead exchange program attracted many Southwest Florida residents. Those who turned in old showerheads, which use up to 10 gallons of water, received new, high-powered, low-flow heads that use only 2.5 gallons of water per minute.

"I replaced the heads in all my showers and get a stronger water flow, using a third of the water," Alpaugh said.

The learning center also advocates the benefits of cistern systems. Some visitors installed the systems to collect rainwater for irrigation purposes or for non-consumptive uses, such as washing clothes or flushing toilets. Cisterns range in size from 50 gallons to buried systems exceeding 1,200 gallons.

The smaller cistern unit can be installed to outside wall studs with metal bands on the top and bottom to stabilize it. Passive units collect rainfall without motors. Some fill by opening the lid before rain, while others use a pipe junction connected to a home's downspout with a flow valve into the unit. An outflow connection feeds from the cistern to the dishwasher, washing machine, toilets and sprinklers.

Conscientious consumers can further reduce waste through the use of water-efficient appliances. Some appliances have a storage tank that recycles water used in the wash and rinse cycles. Recycled water from dishwashers and washing machines can also be used to irrigate landscapes.

Along with reusing wastewater, landscaping with water-wise products and plantings can preserve the water table. For example, the center displays paving and ground cover materials that allow water to soak into the ground beneath. Visitors can research many types of plants that thrive well in the Florida climate and use less water.

"As a result, people are planting more native plants and turf types that need a third less care and use far less water," Alpaugh said.

The learning center displays numerous native plants and works closely with the University of Florida Extension Office, so people can determine plantings that best fit their care and watering needs. Besides demonstrating drought-resistant landscaping, or xeriscaping, and showing visitors how to transform their lawns with turf replacements, such as fescue grass, the center teaches visitors about decorative touches that increase water flow into the water table rather than into the sewers or streets.

Though drought education was the initial focus of the facility, the center added a number of displays focusing on hurricane resistance and how to react to storm threats. As a result, visitors can examine seven different shutter types, hurricane-resistant windows, windborne debris-resistant screens, safe rooms, Florida Building Code roofing techniques and reinforced garage doors.

“We try to help people become informed consumers by educating them on products that reduce their risk of loss during disasters,” said Alpaugh. “By displaying proven products, people can ask knowledge-based questions when they shop for items.”

Results of public surveys show radio and television drought education efforts of the 1990s failed, but the learning center’s surveys conducted over its 12-year history show a 35 percent improvement in drought-resistant behavior among visitors.

The house started in 1992 with public and private donations of goods and services equal to \$125,000. Today, Sarasota County provides the \$27,000 annual operating budget and the Florida Extension Office supplies professional support. As a non-profit organization, the Florida House Learning Center accepts donations.

“While the center continues to teach about wise water use, it has grown to help thousands understand what they can do to live with natural disasters without suffering loss,” Alpaugh said. “So many things depend on water: effective hygiene, sanitary conditions, manufactured products and recreation. Becoming aware of drought-resistant measures and then implementing them will ensure Florida water will be available for future generations.”

Activity/Project Location

Geographical Area: **Multiple Counties in a State**

FEMA Region: **Region IV**

State: **Florida**

County: **Manatee County; Polk County; Sarasota County**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Hurricane/Tropical Storm; Drought**

Activity/Project Type: **Education/Outreach/Public Awareness**

Activity/Project Start Date: **05/1992**

Activity/Project End Date: **04/2004**

Funding Source: **Non-profit organization (NPO)**

Activity/Project Economic Analysis

Cost: **\$125,000.00 (Estimated)**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **No**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2004**

Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: <http://sarasota.extension.ufl.edu/FHLC/FlaHouseHome.shtml>

Reference URL 2: <http://www.waterwise.net>

Main Points

- In 1992, Sarasota, Manatee and Polk counties entered into their second multi-year drought.
- The Southwest Florida Water Management District imposed mandatory water restrictions as residents reported wells could not supply enough water for drinking and cooking.
- The Florida House Learning Center was opened to demonstrate water saving techniques.
- The Center has proven a success with a 35% improvement in drought resistant behavior among its visitors over the 12 years it has been operational.



The dual flush toilet allows the user to select a 0.8 or 1.6 gallon flush.



Florida House Learning Center