

# A More Sustainable Florida

Projects around the state — from ‘smart’ ponds to water conservation and solar-powered neighborhoods — are enlisting Floridians in conserving natural resources under mounting pressure.

By Laura Cassels

## Water Wise

Facing shortages, an Ocala developer and Polk cities embrace conservation efforts.

**Kenneth D. Colen**, president and developer of On Top of the World Communities in Ocala, is building out a 13,000-acre master-planned community geared to adults 55 and older. But he is worried about water.

About 1,100 people move to Florida daily, according to the U.S. Census Bureau. Planners and regulators say there is not enough water readily available for so many people, forcing utilities to look for other sources. To postpone the inevitable, water regulators established Florida Water Star certification standards that are being adopted by some local governments and developers to conserve water.

“It’s real. It needs doing. The time is now,” says Colen, whose family business dates to 1947. On Top of the World adopted water-efficiency practices that exceed Florida Water Star certification and require builders and landscapers to use them in its community. Bay Laurel Center Community Development District, the water and wastewater utility serving On Top of the World, Stone Creek Community and Calesa Township, requires all new homes to earn Florida Water Star certification to receive water services.

In neighboring Polk County, 11 Florida communities have adopted Water Star practices into law. Mulberry was first, in 2018. Frostproof is the most recent, in October, and Lake Wales and Winter Haven were in the process of doing the same as 2022 came to a close.

“Alternative water supplies come with massive price tags,” says Robin Grantham, Florida Water Star program administrator at the Southwest Florida



Water Management District, one of three districts that administer Water Star programs, as does the Florida Green Building Coalition. “That price tag means the cost of water is going to go up for Florida residents.”

“Therefore, if we’re able to conserve the water resources that we have right now through programs such as Florida Water Star, we’re able to bump out the need for the alternative supply as much as possible,” Grantham says. “When you’re looking at those higher price tags, that’s why it’s really a great selling feature of Florida Water Star: Saving money on their water bill, especially when you’re looking at retirement communities, living on fixed incomes.”

### Pricey projects

One way to get additional water is to drill past the upper layer of the Floridan Aquifer, which supplies 90% of Floridians’ potable water, into the Lower Floridan Aquifer, where





With conventional supplies of water running low in parts of the state, Florida Water Star aims to encourage water conservation, which also prevents runoff that carries contaminants into springs, lakes, rivers and bays, fueling toxic algae blooms.

water and solids are mixed and much harder to process, Colen says. Another option, also difficult and costly, is desalination. And then there's "blending" — the term for purifying wastewater to drinking-water quality.

Lake Alfred City Commissioner Nancy Daley and Auburndale City Commissioner Keith Cowie say their city ordinances require builders and landscapers to implement Florida Water Star conservation practices — estimated to save roughly 50,000 gallons of water yearly per home — because they know their cities are outgrowing the conventional water supply.

"Conservation is the most effective and least expensive way," Daley says. "The development community at first didn't get it, but now they see it as a selling point (for buyers attracted to water cost savings)."

"Cities are at capacity in pumping. That's the reality of the problem," says Cowie. "Water's going to cost more." Auburndale and Lake Alfred are among 16 members

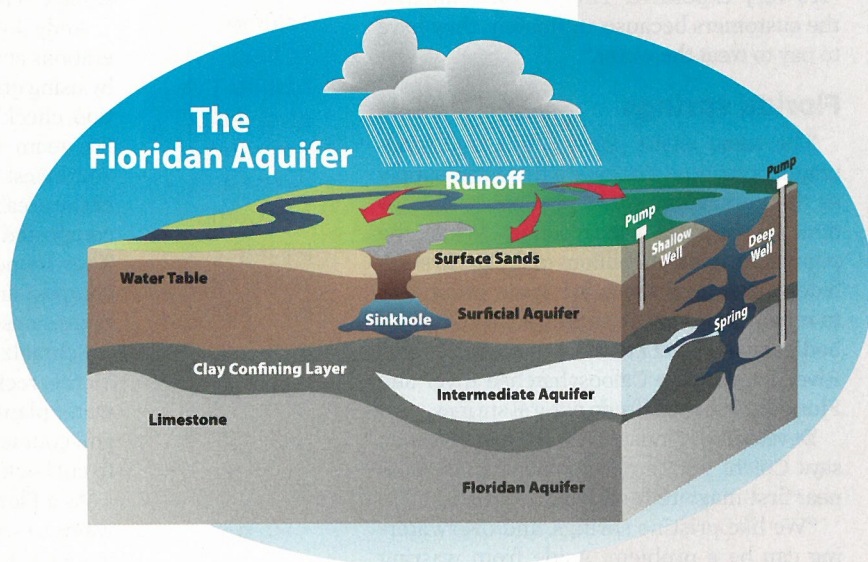


illustration: Southwest Florida Water Management District



*The Polk Regional Water Cooperative forecasts a water deficit of about 25 million gallons per day by 2045. Its projects to supplement the water supply by tapping “alternative” sources are estimated to cost \$567 million.*

of the Polk Regional Water Cooperative, which is already designing facilities to reach additional water supplies this decade.

“The partner governments all understand that the development of sufficient water supplies is an urgent problem and is worth their full effort and collaboration to solve in a regional manner,” says cooperative Executive Director Eric DeHaven. “The majority of Polk County’s water supply comes from the Upper Floridan Aquifer, which is located relatively close to the surface. This aquifer is stressed by Polk County’s present water needs. (The coalition) is pursuing the construction of two multi-million-dollar well-field supply facilities in both southeast and west Polk County that will pump water from the mostly untapped Lower Floridan Aquifer located over 2,000 feet below the ground.”

But there’s at least one downside.

“This process has a cost attached to it because the water is loc

ted deeper underground,” DeHaven says.

“Those wells cost millions of dollars,” says Bryan Schmalz, water utilities director of Bay Laurel Center Community Development District, which serves On Top of the World. “It’s very expensive. That, in turn, impacts the customers because, ultimately, they have to pay to treat the water.”

### Florida springs

The same smart construction and landscaping practices that ration the water supply as the population grows also offset damage done to adjacent water bodies. While the population expands, billions of dollars in state, federal and local funds are spent every year to repair, or at least slow the decline of, water bodies such as the Florida Everglades, Indian River Lagoon, the Caloosahatchee River and Florida’s first-magnitude natural springs.

Development must be smarter and cleaner, says Colen, whose development in Ocala is near first-magnitude springs.

“We like pristine springs, and overwatering can be a problem. Aside from wasting the resource, it can also transport nitrates down to the aquifer. This is our drinking water as well. We don’t want to see it con-



Concerned about a shortage of water, developer Kenneth Colen says, “We’re mindful of the (water) volume. It takes volume to have homes. I’ve often said, if it came out of a gas pump, people would really be mindful of it.”

taminated or damaged,” Colen says, acknowledging that large developments such as his take a toll on water.

“We’re mindful of the volume. It takes volume to have homes. What you do with it after that is largely driven by education and to a certain extent by enforcement — reminding people that water is a resource not to be wasted,” he continues. “I’ve often said, if it came out of a gas pump, people would really be mindful of it.”

To offset the toll, Florida Water Star requires water-saving fixtures and appliances in homes and commercial

buildings, micro-irrigation and smart landscaping that features hardy grass, plants and trees that thrive with little water and minimal fertilizer.

Runoff from lawns, fields, farms and septic tanks causes water pollution that fuels toxic algae blooms in springs, lakes, rivers and bays — as evidenced by fish kills, coral die-offs, red tide and expanses of blue-green algae.

“That’s why we have the impaired water bodies we do at Silver Springs, Rainbow Springs and all over the state of Florida,” Schmalz says, adding that the nitrogen concentration in Rainbow Springs is about five times higher than the Florida Department of Environmental Protection sets for aquatic ecosystems.

Andy Jorgensen, director of community maintenance operations at On Top of the World, says his team reduces runoff by using efficient, low-flow sprinkler heads, pressure regulation, check valves and other devices to maintain the grounds. His team worked with the University of Florida and the Southwest Florida Water Management District to test whether the area’s sandy soil retains water better when mixed with composted material prior to construction and landscaping. They found that it does, suggesting that homeowners with compost-amended lawns could reduce their irrigation run times, conserve water and prevent runoff.

Schmalz and Jorgensen also collaborate to keep nitrogen in the reclaimed wastewater from Schmalz’s Bay Laurel water plant from exceeding how much nitrogen Jorgensen’s golf courses can utilize by way of irrigation — another effort to cut back on excess pollutants running off into water.

As a Florida Water Star administrator, Grantham says she wants to see the program’s best practices replicated throughout Florida. Parts of California and Arizona ceased issuing new water-consumption permits last year because of severe water shortages that practically drained the historic Colorado River and the once-sprawling Lake Mead at Hoover Dam.