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Disney World's Cutting Edge Conservation

In Florida, another water-challenged state where water restrictions had been in place throughout 2007, some 50 million tourists visit the Orlando area annually, injecting huge revenues into the popular tourist spot. Among the places to which they flock is Walt Disney World, where potable water is provided through deep wells.

"We're very fortunate that the water we pull out of the Floridan Aquifer is very clean, so we only need to chlorinate it for distribution and treatment," notes Ivey Burns, Disney World manager of Global Water Systems and Water Conservation Projects. "That water is distributed throughout the property, and we have our own in-house sewage-return system, where we recover a significant amount of the water and then develop that into reclaimed water."

There also are measures that Disney World takes inside of its hotel properties, such as low-flush toilets, reduced-output showerheads, and faucet fixtures with infrared controls that automatically shut off when there is no motion for hand-washing. Part of the foundation of Disney World's water efficiency efforts is the use of ozone to treat water.

"Ultraviolet is a new-and-burgeoning technology we've fully embraced, and it works extremely well in conjunction with ozone," notes Burns. "We have converted over many of our smaller fish systems that will run completely off of ultraviolet sterilization. Some of them use hybrid systems of ultraviolet and ozone—they work remarkably well together."

Reedy Creek Improvement District, Disney World's water provider, has, for 15 years, utilized reclaimed water to meet non-potable needs throughout the service area. The water is treated to advanced levels that exceed state and federal requirements and meet drinking water standards, Disney officials say.

Reclaimed water is used to irrigate the landscape and golf course—which spans more than 1,800 acres—as well as street wash-downs for the theme park and resorts, and bus washing. Reclaimed water also is returned to the aquifers through Rapid Infiltration Basins—permeable-earthen basins designed to treat and disperse wastewater—located on the property.

"We've worked very hard on developing our reclaimed water," says Burns. "Of the total acres that are under irrigation here at the property, 80% is irrigated with reclaimed water. That is water that has been returned to the treatment plant, has been reprocessed, and is now being reused."

"We invest very heavily in developing our reclaimed water system," continues Burns. "Putting in all of those pipes can be very expensive, but we felt it was the right thing to do, and it has worked very well for us."

Presently, Disney World is in the process of increasing its level of reclaimed water use to encompass 100% of its property area, says Burns. He believes Walt Disney World's efforts continue to partner with the state of Florida in addressing its ongoing water shortage issues.

"With the tremendous increase in population and growth in the central Florida area, we have to continually be smarter in how we utilize our water resources," he states.

Burns adds that Disney World officials are particularly "proud" of its series of weather stations used to control water waste. When weather station technology became available 17 years ago, Disney World installed two main weather stations and "smart" controllers. Disney World now has more than 800 controllers throughout its properties, in addition to 80 rain sensors and more than 11,000 valves used to deliver the irrigation. The weather stations record the weather during the day. Sophisticated computer programs are used to calculate envirotranspiration, which measures the amount of water used by a plant.

"The irrigation is automatically dialed up or down, depending on if it's a bright, sunny, or a hot day, and then the next day—or whenever the irrigation is scheduled—they deliver the water which is adjusted to the weather conditions," says Burns. "We have really embraced that technology, and all of our irrigation on the property is controlled by this system.