

## CITY OF SANFORD WATER CONSERVATION PLAN

It is the City's objective to conserve potable water supplies. Water conservation measures will be considered in construction or improvement of the City's utilities. The following efforts have been made for the purpose of water conservation.

- The Cities of Sanford and Lake Mary and Seminole County reached an agreement to reduce groundwater withdrawals from Floridan Aquifer by expanding reclaimed water use in lieu of potable water for irrigation. A Tri-Party Reclaimed Water and Surface Water Augmentation System Expansion and Optimization Study have been completed.
- The City will utilize the St. Johns River 7.3 MGD Augmentation System to meet irrigation demands.
- The City is developing a recharge program to reduce impacts due to groundwater withdrawals. Areas which are crucial to groundwater recharge are protected against development that may be detrimental to the City of Sanford's potable water supply.
- The City has disallowed the use of potable water supplies for irrigation purposes in areas where the City has made reclaimed water available.
- The City will coordinate with the District and FDEP to deal with the upcoming TMDL and WLA issue in order to protect surface water of St. Johns River.
- The City's "*Utilities Standards and Specifications Manual*" (*Utilities Manual*) has been approved as the Land Development Regulations (LDRs). The [Utilities Manual](#) describes the detailed standards and specifications and design standards for water conservation during the design and construction of potable water, wastewater, and reclaimed water facilities that are to be constructed within, dedicated to, owned by, maintained by, or operated by the City.
  - The Utilities Manual requires that a fully automatic reclaimed water irrigation system shall serve all landscaped and sodded areas of the development, including all adjacent rights-of-way and alleys. Connection distances and minimum line sizes are shown in **Table 1**.
  - The City requires that all new developments within the City's service area utilize dual distribution system so that irrigation needs are met by using the available lowest quality water. Developments that are not required to connect to existing reclaimed water lines shall be connected to an alternative water supply system utilizing the available lowest quality water such as a shallow well, a brackish well, surface water or storm water. These irrigation lines shall be capable of connecting to the City's reclaimed water lines when reclaimed water becomes available in the future. All planned landscaping shall require an irrigation system. Each home and business shall have an individual reclaim/alternative irrigation meter.

<b>Table 1 Reclaim Water Connection Distances</b>		
<b>Type and Quantity of Development</b>	<b>Distance from Existing Reclaimed Water Line (Linear feet)</b>	<b>Min. line size</b>
1. Single family residences (individually owned)	100	2-inch
2. Single-family residential developments		
2 -10 houses	400	2-inch
11-35 houses	1,400	4-inch
36-120 houses	2,000	6-inch
121 or more houses	50 ft. each additional house	8-inch
3. Multi-family or Town home developments		
1-100 units	1,500	4-inch
Greater than 100 units	50 ft. each additional unit	6-inch
4. Commercial or Industrial developments		
4,999 or less Sq. ft.	900	2-inch
5,000 - 25,000 Sq. ft.	1,250	4-inch
25,001 - 60,000 Sq. ft.	1,500	6-inch
Greater than 60,000 Sq. ft.	200 ft. each additional 100,000 sq. ft.	8-inch

- o The [Utilities Manual](#) requires all developers to submit water budget plans prepared by a certified landscape architect or certified contractor that account for all water usage on a site. The plan must include the water requirements for each landscaped or turfed area.
  - i. For residential developments, the water budget plan must demonstrate that water requirements for landscaping do not exceed the equivalent residential connection (ERC) of 300 gallons per day. The plan must also include an assurance that the water budget plans are available to every prospective home buyer.
  - ii. For commercial, industrial and multifamily developments, the developer must demonstrate compliance with the City's take-back reuse program for future growth and development. This program requires new developments that connect to the City's wastewater system to "take-back" the same amount of highly treated effluent as generated by the developments. Effluent from the developments will receive tertiary treatment, which can be used for non-potable water purposes such as irrigation and fire protection.
  - iii. All developments, whether on the City's reclaimed water system or on an alternative water system, shall submit an irrigation plan on a form supplied by the Utilities department.

- iv. The Utilities Manual provides landscape techniques for conserving water. At least twenty percent (20%) of all landscape material obtained from off-site sources for use on any site shall have a soil moisture range of 'dry'. No more than forty percent (40%) of all plant material shall have a high water demand. Plants shall be grouped according to their water needs and soil conditions. If plant placement is done correctly as follows, once plants are established, little to no supplemental irrigation will be necessary.
  - Natural zone: In this area, place plants that have adapted to the wet and dry extremes of Florida's climate so that regular watering (once plants are established) won't be necessary, except during prolonged drought.
  - Drought-tolerant zone: In this area, place plants that can survive extended periods of time without rain or supplemental irrigation.
  - Oasis zone: In this area, place plants that may require some watering.
- The City's water utility will continue to use conservation measures such as use of reclaimed water for irrigation, improving and accelerating leak detection surveys and repair programs, installing and calibrating meters and stabilizing and equalizing system pressures, water conservation blocks, and fixture exchanges. The programs for technological procedural, and/or programmatic improvements to the production facility, transmission lines, and distribution system to decrease water consumption include:
  - Multi-year well metering program
  - Water line replacement Capital Projects Program
  - Regular calibration of water facility master meters
  - Meter testing, repair and replacement programs
- The City's employee awareness and customer education program concerning water conservation includes:
  - Brochure mailouts
  - City Hall Brochure rack
  - Bill Backer messages 8 times a year
  - Speakers bureau
  - Florida Friendly/ drought tolerant demonstration projects
  - Toilet rebate
  - Automatic meter reading/ data logging
  - Water Wise Education Events
- All new or renovated buildings are required to install water conserving plumbing fixtures that are at a minimum consistent with the requirements of the State Water Conservation Act (Section 553.14, F.S.).

- The City has adopted a conservation rate structure for multi-family units that are different from the rate for single-family units. The rate structure for single family, multi-family, and commercial water and wastewater usage is presented in [The City of Sanford Services Guide](#).

As a result of the city's effort, the City has achieved virtual total reuse and conserves (approximately) 5 MGD of ground water through its water reclamation program at a host of sites, including a City-owned citrus/hayfield, parks, golf courses, and commercial, residential and government owned properties. Additionally, the City is continuing to require new developments to install dual distribution systems to utilize reclaimed/surface water to meet irrigation demands and conserve groundwater supplies for future potable demands. The City's active water conservation program including the water conserving rate structure for both the potable system and the reclaimed/surface water system has resulted in reduction of per capita consumption. The City has developed procedures and time frames for implementation, and for periodic assessment and revision of the Water Conservation Plan.