POTABLE WATER ELEMENT

DATA & ANALYSIS

OSCEOLA COUNTY COMPREHENSIVE PLAN 2025

Prepared By:
Osceola County Planning Department
1 Courthouse Square
Kissimmee, Fl 34741

TABLE OF CONTENTS

LIST OF TABLES

MAPS

CHAPTER SEVEN

POTABLE WATER ELEMENT
(Section 163.3711(6) (c), F.S. & Rule 9J-5.011, F.A.C.)

A. INTRODUCTION

The provision of potable water facilities is integral to ensuring the public health, safety, and welfare of a community. All local governments, even those that are not utility providers, must ensure that an adequate potable water supply is available to support future populations. Osceola County is addressing the future need for water resources through the protection of natural resources within its jurisdiction. Additionally, the County is partnering with local governments and state agencies to pursue water supply planning in a regional manner.

Osceola County is not a provider of potable water service. Potable water has always been supplied to the residents of the County by governmental utilities, major private utilities, or individual private facilities, such as package plants and individual potable water wells. Due to the County and the City of Kissimmee's desire to find ways to develop an efficient and environmentally-sensitive approach to the comprehensive supply, distribution, and treatment of water, the City, County, and area state representatives drafted a special bill creating Tohopekaliga Water Authority, which the Florida Legislature approved during the 2003 legislative session. This consolidated governmental utility authority utilized existing resources to avoid duplication of effort, prevented the inefficient expansion of potable water facilities, and developed a cooperative regional approach to the provision of services.

1. Potable Water Facilities and Systems

A potable water supply system consists of a water source, a treatment plant, and a storage and distribution network. Either surface or groundwater, or some combination of the two, constitute the supply source for a system. The selection of a source for a system must consider the type and quality of source available and the cost of developing the source for use. Before consumption, most water must be treated to remove impurities. After treatment, the water is supplied to individual users through a network of pipes and storage reservoirs. Large transmission lines, called distribution mains, carry water to major demand areas and interconnect with smaller lines, which eventually supply individual users. Water is delivered under pressure within the distribution system to ensure adequate flow meets customer demand. To provide adequate quantities and pressure to meet peak use and fire flow demands, storage tanks are linked with the distribution system.

2. Regulatory Requirements

Two water management districts oversee Osceola County: the St. Johns River Water Management District (SJRWMD) and the South Florida Water Management District (SFWMD). The SJRWMD includes the eastern portion of the County along Brevard and Indian River Counties. While the SJRWMD region of the County is largely undeveloped, the SFWMD encompasses the County's high-growth areas and the Cities of Kissimmee and St. Cloud. Therefore, Osceola County must coordinate with each of the water management districts when addressing water resources protection, identifying water sources for public use, and meeting future state mandates.

Florida Department of Environmental Protection (FDEP) has primary responsibility for the State Safe Drinking Water Program under Chapter 62-555, Florida Administrative Code (F.A.C.), by regulating public drinking water (potable water) systems, including: (1) community water systems serving 25 residents or more; and (2) non-community water systems serving 25 transient/non-residential persons daily. FDEP permits new systems, monitors compliance and enforces regulations. Florida Department of Health (FDOH) administers regulatory programs for private water systems (wells), and all public water-supply systems not regulated by FDEP, by setting water-quality standards. In addition, FDOH has authority over the location of private wells if a septic tank is installed. Water-Use Permits for permission to extract water other than at domestic rates are issued by the water management districts in their respective areas of jurisdiction.

Locally, the Board of County Commissioners has established five separate districts entitled Osceola Water Districts in order to conserve, protect, and manage Osceola County's water resources. The water districts comprise those portions of unincorporated Osceola County outside of the designated service areas of either municipal or private utilities, including the City of St. Cloud, Reedy Creek, , current and past holding of Florida Water Services, and that portion of the TWA service area formerly owned by the City of Kissimmee. The water districts were created pursuant to the County's home rule authority and Part II of Florida Statute Chapter 153. The Board of County Commissioners governs each water district.

Each water district, under the aegis of the County Commission, is empowered to enter into financing or bonding arrangements, encumber resources for the purpose of financing capital expenditures, and negotiate contracts for the establishment or expansion of water extraction and distribution systems. The County will review the purpose and tasks of each water district at least every five years to determine whether revisions in the enabling legislation need to be made. Additionally, the County will explore and implement, if determined to be necessary, any other mechanisms that could be enacted to assist in the conservation, protection, and management of its water resources, consistent with Florida Statutes. Revisions to the enabling legislation of the water districts, or the mechanism implemented by the County, must not conflict with the exclusive authority of FDEP and the water management districts to regulate the consumptive use of water as provided under Chapter 373, F.S.

B. POTABLE WATER FACILITIES INVENTORY

Osceola County relies on potable water systems, which are operated by the Tohopekaliga Water Authority, the City of St. Cloud, and the Reedy Creek Improvement District (RCID). Approximately 117 non-central public water treatment facilities have a restricted service area or are regulated by the Public Service Commission (PSC). A description of the major potable water suppliers is provided below.

1. Governmental Utility Companies

a. Tohopekaliga Water Authority (TWA)

TWA provides potable water to residents and businesses within the City of Kissimmee and to portions of Osceola County's unincorporated northwest area and to portions of Orange County's southwest area. The TWA service area is shown in Map 7-2. The TWA provides water service to approximately 241,000 residents in the City of Kissimmee and unincorporated County. TWA estimates that 54 percent of their water demand is generated by residential uses, 36 percent is attributed to commercial uses, 5 percent is wholesaled to the Celebration (mixed-use) development, and 10 percent is diverted to reuse or non-account uses (flushing and construction). The TWA consists of 4 sub-areas and 14 water supply facilities, all of which draw their water from the Floridan Aquifer. Due to the excellent quality of groundwater from deep within this aquifer, the TWA treatment facilities need only provide chlorination, hydrogen sulfide removal, and ph adjustment in some areas prior to distribution; except for the Harmony WTP which will also incorporate Total Organic Carbon (TOC) removal.

South Florida Water Management District issued TWA a consumptive use permit (CU49-00103-W) that is set to expire on June 14, 2027. TWA is required to submit compliance reports to SFWMD by March 31 of 2013, 2018, and 2023. CU49-00103-W permits an average potable water daily flow of 36.5 million gallons per day (MGD) and a maximum daily allocation of 51.86 MGD. According to the consumptive use permit, TWA anticipates serving 201,605 persons in the year 2013. CU49-00103-W also includes those areas that previously had been operated by Florida Water Services under seven different consumptive use permits. Those seven permits were all merged into CU49-00103-W. The present source of raw water to TWA is groundwater from the Floridan Aquifer System. By the year 2013, the consumptive use permit requires a minimum of 15 MGD of TWA's water supply will be provided by alternative water supply (AWS) projects. Alternative water supply projects identified in the consumptive use permit include a Kissimmee River Basin project and the proposed Cypress Lake Brackish Groundwater Wellfield.

TWA's potable central water system currently provides an average of approximately 31.9 million gallons per day (MGD) to its customers. The combined capacity of the TWA water treatment plants is 72.1 MGD. The TWA operational level of service standard for potable water is 98 percent of permitted water capacity and potable water pressure shall be provided at no less than 40 pounds per square inch at property lines, excluding fire demand. At times of fire demand, potable water pressure will be provided at no less than 20 pounds per square inch at property lines.

1) East of I-4 Sub-Area

This sub-area is composed of eight water treatment plants:

- Camelot West;
- Richard McLaughlin (North Bermuda);
- Parkway;
- Spring Lake Village;
- Intercession City
- Fountains
- Pine Ridge; and
- Buenaventura Lakes Village.

The extensive interconnection of the Richard Mc Laughlin, Camelot West, and Parkway water distribution systems allows these plants to operate as one facility. The remaining facilities operate independently. The permitted/combined capacity within the East of I-4 Sub-Area is 37.126 MGD.

The Richard McLaughlin and Parkway water treatment plants were expanded in the 1990s and have a life expectancy of 30 years. The Camelot West Water Treatment Plant was upgraded and expanded in the early 1990s and has a life expectancy of 30 years. Existing demand on these systems is 18.74 MGD.

2) West of I-4 Sub-Area

This sub-area consists of the Northwest Water Treatment Plant and the Southwest Water Treatment Plant. The Northwest Water Treatment Plant is in excellent condition, was recently expanded in 1999, and has a life expectancy of 30 years. The permitted/combined capacity within this sub-area is 18.00 MGD. Existing demand on these systems is 10.7 MGD.

3) East Osceola Sub-Area

This sub-area consists of the Harmony, Lake Ajay and Bay Lake Estates Water Treatment Plants. The Harmony Water Treatment Plant is located on the south side of U.S. Highway 192 approximately nine miles southeast

of St. Cloud. The plant was constructed in 2002 to service the Harmony Development of Regional Impact. Bay Lake Estates WTP and Lake Ajay was acquired by TWA from Florida Water Services in November 2003. Bay Lake: PWS# 349-0090 is located at 2444 Heron Court, Kissimmee, FL 34759 and has a maximum day operating capacity of 198,000 gpd. Lake Ajay is connected to the St. Cloud water system. The permitted/combined capacity within this sub-area is 1.498 MGD. Existing demand on these systems is .18 MGD.

4) Poinciana Sub-Area

Tohopekaliga Water Authority (TWA) acquired the Florida Government Utility Authority. The TWA now serves the Poinciana development with central water. The overall Poinciana service area includes areas within both Osceola and Polk Counties. The utility serves a mixture of industrial and residential customers with residential being the predominant customer. The system serving Poinciana consists of essentially six WTP facilities.

All of these Water Treatment Plants draw their water from the Floridan Aquifer System. Due to the excellent quality of groundwater from deep within this aquifer, the treatment facilities need only to provide chlorination prior to distribution. The combined capacity of the system's water treatment plants is 15.465 MGD with the current average daily flow of 4.441 MGD. Listed below are the water treatment plants serving the Poinciana sub-area:

1) Water Treatment Plant #1

This WTP is located at 5205 Robert McLane Road in Kissimmee, Florida and was first constructed in 1978. The maximum design capacity of the WTP is 2.804 MGD. Current average daily demand is 0.844 MGD. The support facilities at this plant include two deep well pumps, three high service pumps, one ground storage tank (0.05 MG) and one elevated storage tank (0.40 MG). The plant has 100% stand-by power generation capacity.

2) Water Treatment Plant #2

This WTP is located at 1010 Peabody Road in Kissimmee, Florida and was first constructed in 1988. The maximum design capacity of the WTP is 2.592 MGD. Current average daily demand is 1.241 MGD. The support facilities at this plant include three deep well pumps, four high service pumps, one ground storage tank (0.6 MG) and one hydropneumatic tank (0.01 MG). The plant has 100% stand-by power generation capability.

3) Water Treatment Plant #3

This WTP is located at 400 S. Country Club Road in Kissimmee, Florida and was constructed in 1973. The maximum design capacity of the WTP is 1.58 MGD. Current average daily demand is 1.023 MGD. The support facilities at this plant include three pumps, two of these are deep well pumps and the third is a submersible pump, three high service pumps, one ground storage tank (0.35 MG) and one hydropneumatic tank (0.01 MG). The plant has 100% stand-by power generation capability.

4) Water Treatment Plant #4

This WTP is located at 3464 Hawkins Drive in Kissimmee, Florida and was constructed in 1984. This plant was renovated and has been rebuilt in 2005. The maximum design capacity of the WTP is 0.894 MGD. The support facilities at this plant include two wells, two high service pumps, one ground storage tank (0.27 MG) and one hydropneumatic tank (0.004 MG). The plant has 100% stand-by power generation capability. This plant is in its final commissioning stage and hope to put it on line by January 2006.

5) Water Treatment Plant #5

This WTP is located at 2000 Hemlock Avenue in Kissimmee, Florida and was initially constructed in 1984. This plant was renovated and was rebuilt in 2003. The maximum design capacity of the WTP is 3.780 MGD. Current average daily demand is 1.63 MGD. The support facilities at this plant include three deep well pumps, two high service pumps, one ground storage tank (3.50 MG) and two hydropneumatic tanks (0.01 MG) each. The plant has 100% stand-by power generation capability.

6) Water Treatment Plant #6

This WTP is located at 3600 Pleasant Hill Road in Kissimmee, Florida and was constructed in 2003. The maximum design capacity of the WTP is 3.780 MGD. Current average daily demand is 0.438 MGD. The support facilities at this plant include two deep well pumps, three high service pumps, one ground storage tank (1.50 MG) and one hydro-pneumatic tank (0.01 MG). Plant has 100% stand-by power generation capability.

Although TWA now serves the Poinciana Area, a separate consumptive use permit (CU49-00069-W) is presently under review by the SFWMD. If approved, the consumptive use permit will allow for 10.1 MGD and a maximum daily allowance of 17.32 MGD. It has been estimated that of

the 49,029 Poinciana residents served by the water system in 2008, approximately 33,000 Poinciana residents (68%) are Osceola County residents.

b. City of St. Cloud

The City of St. Cloud currently provides potable water service to properties within the City limits and to adjacent areas of unincorporated Osceola County. The City of St. Cloud Service Area established by ordinance as provided by Chapter 180, F.S. is illustrated in Map 7-2 and is also referred to as the St. Cloud Urban Service Area. St. Cloud Utility services also extend to specific locations outside of this boundary including lands near Narcoosee Road north of the service area, and the Florida Turnpike Canoe Creek Service plaza located south of the service area. These areas are specifically identified by the Special Act forming the TWA in 2003. Further refinement of specific service areas to facilitate the more efficient delivery of services occurred with the execution of the "Interlocal Agreement Between City of St. Cloud and Tohopekaliga Water Authority Relating to Potable and Non-Potable Water and Wastewater Boundaries; Service and Delivery" which is recorded in the Osceola County Public Records OR3079/263.

South Florida Water Management District has issued the City of St. Cloud a consumptive use permit (CU49-00084-W) that is set to expire on June 14, 2027. The City is required to submit compliance reports to SFWMD by March 31 of 2013, 2018, and 2023. According to the consumptive use permit, the City of St. Cloud anticipates serving 65,610 persons in the year 2013. CU49-00084-W permits an average potable water daily flow of 9.7 million gallons per day (MGD) and a maximum daily allocation of 13.58 MGD. The present source of raw water to St. Cloud is groundwater from the Floridan Aquifer System. By the year 2013, a minimum of 15 MGD of TWA's water supply is supposed to come from alternative water supply (AWS) projects. Alternative water supply projects identified in the consumptive use permit include a Kissimmee River Basin project and the proposed Cypress Lake Brackish Groundwater Wellfield.

The City of St. Cloud potable water system includes the majority of the City's incorporated area, adjacent lands within the Urban Service Area, as well as users outside the Urban Service Area located east of East Lake Tohopekaliga. As of September 2007, the City system serviced 15,298 potable water customer connections. Using a ratio of 2.5 people per connection, this represents a potable water service population of approximately 38,245 persons. Of these connections, an estimated 14,586 (95%) were residential and 12 (5%) were non-residential meters. Approximately 22 percent of this customer base life in that portion of the City Urban Service Area located outside of the City's limits. The entity

responsible for the operation and maintenance of the City's central water system is the St. Cloud Environmental Utilities Department.

The predominant land use serviced by the central system is low to medium density residential. A majority of the land within the City's service area is still vacant. St. Cloud's central water system consists of four interconnected water treatment plants, seven public water wells, four ground storage tanks, two elevated storage tanks, and one hydropneumatic tank. All of these systems draw their water from the Floridan Aquifer. The smallest of the City's facilities provides only chlorination as treatment. The two facilities that have served the City since the 1960's provide aeration and chlorination prior to distribution. These treatment approaches had been sufficient since construction of each of the plants. However, reduction in disinfection byproducts limits by the EPA and FDEP created a need for modification of the City's water production approach. The City recently completed construction on its fourth water treatment plant, which is designated as Water Treatment Plant #4, or the "H. Clay "Junk" Whaley, Sr. Water Plant". This plant was constructed both to address growth needs and the above referenced regulatory changes. Treatment Plant #4 in addition to modifications of the existing facilities is summarized herein. Table 7-3 lists the existing demand, capacities, and available surplus for these systems through the planning horizon.

1) Water Treatment Plant #1

Water Treatment Plant (WTP) #1 is located on the eastern edge of downtown St. Cloud on 10th Street and was constructed in 1961. The plant was renovated in 1990 to add of new chlorination and fluoridation facilities and safety equipment. New auxiliary power generation equipment was added in 1991. This plant has several support facilities including one well, three high service pumps, and one 500,000-gallon ground storage tank. While this plant could be utilized for an extended period, the City is underway with efforts to rehabilitate and consolidate this facility with Water Treatment Plant #2. Completion for these activities is targeted for no later than 2013.

The maximum design capacity of this treatment plant in combination with WTP #2, WTP #3, and WTP #4 is 15.85 MGD based upon high service pump capacity with the largest pump out of service. The permitted average day withdrawal through the SFWMD Water Use Permit is 9.7 MGD and the permitted maximum month withdrawal is 13.76 MGD. The average annual demand on the system effective September 2007 is 5.3 MGD.

2) Water Treatment Plant #2

Water Treatment Plant #2 is located in the heart of downtown St. Cloud at 1630 10th Street, and was constructed in 1965. The plant was renovated in 1990, to add new chlorination and fluoridation facilities, new auxiliary power generator, safety equipment, and new structural components.
Its support facilities include: two wells, three high service pumps and a 500,000-gallon ground storage tank. This plant also has space for a fourth high service pump. While this plant could be utilized for an extended period, efforts are underway to rehabilitate and consolidate this facility with Water Treatment Plant #1. Completion of these activities is targeted for no later than 2013.

The maximum design capacity of this treatment plant in combination with WTP #1, WTP #3, and WTP #4 is 15.85 MGD based upon high service pump capacity with the largest pump out of service. The permitted average day withdrawal through the SFWMD Water Use Permit is 9.7 MGD and the permitted maximum month withdrawal is 13.76 MGD. The average annual demand on the system effective September 2007 was 5.3 MGD.

3) Water Treatment Plant #3

Water Treatment Plant #3 is located west of the City outside the City limits on Emperor Drive. This plant was formerly known as the Cane Brake Treatment Plant, prior to acquisition by the City.
While this plant could be utilized for an extended period, this plant has minimal capacity as compared to the other three facilities. Rather than perform upgrades to address disinfection byproduct issues at this facility, it is anticipated that this facility will be decommissioned and the capacity incorporated either into WTP#4 or the rehabilitated WTP #1/#2. Completion for these activities is targeted for no later than 2013.

The maximum design capacity of this treatment plant in combination with WTP #1, WTP #2, and WTP #4 is 15.85 MGD based upon high service pump capacity with the largest pump out of service. The permitted average day withdrawal through the SFWMD Water Use Permit is 9.7 MGD and the permitted maximum month withdrawal is 13.76 MGD. The average annual demand on the system effective September 2007 was 5.3 MGD.

4) Water Treatment Plant #4

Water Treatment Plant #4 was commissioned and connected to the City's distribution system in March 2008. WTP #4 is located at 3201 Kissimmee Park Road, west of the Florida Turnpike near the Kissimmee Park Road

Turnpike Exchange. The plant design incorporates use of the Magnetic Ion Exchange (MIEX) process to address removal of hydrogen sulfide and mitigation of disinfection byproduct formation. WTP #4 has an individual capacity of 9 MGD and is supported by 3 wells, 5 high service pumps, and two ground storage tanks.

The plant has an individual capacity of 9 MGD. The maximum design capacity of this treatment plant in combination with WTP #1, WTP #2, and WTP #3 is 15.85 MGD based upon high service pump capacity with the largest pump out of service. The permitted average day withdrawal through the SFWMD Water Use Permit is 9.7 MGD and the permitted maximum month withdrawal is 13.76 MGD. The average annual demand on the system effective September 2007 was 5.3 MGD.

c. Reedy Creek Improvement District

The Reedy Creek Improvement District (RCID) primarily serves the varying needs of the Walt Disney World theme parks and support services. A portion of the RCID service area is located in Osceola County and RCID provides potable water to two resorts and a sports complex that are located wholly or in part in Osceola County. The RCID is the sole potable water provider within its jurisdictional limits. Nearly all development within the RCID is connected to the central supply system with the exception of a small area on the north shore of Bay Lake, which is served by an independent satellite well. The RCID is divided into two subdistricts: Subdistrict I serving the City of Bay Lake and Subdistrict II serving the City of Lake Buena Vista. The predominant land uses, in both subdistricts, are characterized by large-scale resort and entertainment complexes, support service areas, and undeveloped open space. The Floridan Aquifer supplies the RCID with all of its potable water. SFWMD Consumptive Use Permit CU 48-00009-W for the RCID allows 8.552 billion gallons annually (23.4 MGD) to be withdrawn with a maximum daily allocation of 35.61 MGD.

1) Subdistrict I

Subdistrict I is divided into northern and southern regions. Pump Station A services the northern portion of the Subdistrict I while and Pump Stations B and D service the southern portion. The pumping facilities are discussed below.

a) Pump Station A

Pump Station A is located north of the Magic Kingdom and is fed by two wells with a third emergency well available. The two active wells have a combined capacity of 8,000 GPM while the pump station itself has a capacity of 10,000 GPM. Station A has a

3.0 million gallon steel reservoir with five 2,500 GPM high service pumps providing the required pressure for the distribution system.

b) Pump Station B

Pump Station B is located in the vicinity of Disney/MGM Studios and is fed by three wells with a combined pumping capacity of 8,000 GPM while the station has a capacity of 15,000 GPM. Station B has a 2.0 million gallon concrete reservoir and uses six 3,000 GPM booster pumps to pressurize the system.

c) Pump Station D

Pump Station D, constructed in 1998, is located in the All Star Resort vicinity and is fed by two wells with a combined capacity of 8,000 GPM. Station D has a 1.25 million gallon storage reservoir and uses three 3,200 GPM high service pumps to pressurize the system.

Three independent wells located within Subdistrict I are not connected to the central system. One of these wells serves the mobile homes on Bay Lake while the other two provide irrigation water to support facilities in the Bear Island Road area.

2) Subdistrict II

Subdistrict II is serviced by pump station C located on the east side of Buena Vista Drive near the Disney Institute. Two wells with a capacity of 7,500 GPM provide water to this station. The station has a capacity of 10,200 GPM and uses six 1,700 GPM high service pumps to pressurize the system. Station C has two 1.0 million gallon reservoirs. Additionally, a third well and pump station exists within Subdistrict II. This well serves as a secondary source of drinking water. The well is connected to a 0.23 million-gallon storage tank and uses two booster pumps, 1,000 & 500 GPM, to pressurize the system. The booster pumps are operated by a timer or by low system pressure. The two subdistricts are connected at two points by 16-inch mains. The entire distribution system consists of a looped network comprised mostly of PVC, ductile iron and cast iron piping ranging in size from 4 to 24 inches. Extension of both systems will be required to serve new developments.

d. Interlocal Agreements

TWA, the City of St. Cloud, Orange County Utilities, Polk County Utilities, and the Reedy Creek Improvement District have entered into a joint interlocal agreement to create STOPR Utilities. One of the purposes of this interlocal

agreement was to jointly submit competing consumptive use permits to meet 2013 water supply demands. TWA and Polk County entered into an interlocal agreement to provide emergency and short-term water service interconnections and to help meet supply demand. The City of St. Cloud and TWA have an agreement for the provision of bulk service and emergency potable and non-potable water and wastewater service as well as the adjustment of service territory boundaries. TWA also has a bulk sales agreement with O&S Water Supply Company, Inc., a private company serving the Pleasant Hill Lakes and Bella Lago subdivisions, and with the Enterprise Community Development District, which distributes water to residents of Celebration. Reedy Creek Improvement District has an interconnection with TWA.

TWA has an interlocal agreement with the Kissimmee Utility Authority (KUA) to provide KUA with reclaimed water for cooling water to the electric power generation facility at the Cane Island Power Park (CIPP). KUA then returns the reclaimed water to TWA for reuse. As the KUA is constructing an additional generating unit at the facility, TWA has worked with KUA to amend and restate the 1993 interlocal agreement. A detailed discussion of the agreement between TWA and KUA is found in Appendix 1 of this element.

2. Major Private Utility Companies

The Florida Water Services was a major private utility company operating central water facilities in the County. This Company has been purchased by Toho Water Authority and is included in all calculations in TWA projections and demands. Florida Water Services operates central water for the Buenaventura Lakes Development. In 1989, the utility provided an estimated 15,302 unincorporated County residents with 83 GPD of potable water. The service area for the utility is illustrated in Map 7-1. Florida Water Services has one water treatment facility. The permitted capacity of the facility is for an average flow of 2.68 MGD. Currently, the actual average daily flow is 1.265 MGD. Raw water is treated by the facility through chlorination and aeration. The raw water from the Floridan aquifer is tapped by two wells. The permitted maximum daily withdrawal allocated to the Utility by the SFWMD is 5.10 MGD.

O&S Water Company is a privately held water utility that serves Pleasant Hill Lakes and Bella Lago subdivisions. O&S Water Company received Consumptive Use Permit 49-01207-W from the SFWMD allowing an annual allocation of 0.42 MGD and a maximum allocation of 0.64 MGD. Consumptive Use Permit 49-01207-W has set to expire on May 15, 2008, and they are currently negotiating a renewal with SFWMD. O&S operates a single water treatment facility (WTF) using two 10-inch diameter wells cased to between 130 and 160 feet and having a total depth of 450 feet. O&S water use began in 2002 and has increased steadily to serve an estimated 1,800 in 2005. Residential growth for the O & S Water Company is projected to grow through build-out in 2013 with an estimated 4,255 residents. Water use is expected to remain level after that point at 0.42 MGD. Therefore, no future facilities are anticipated by O & S Water Company in the next 10 years.

3. Non-Central Public Water Treatment Facilities

As previously mentioned, 117 non-central public drinking water systems have been identified for the County. These non-central systems serve specific developments and are restricted from serving areas outside their developments. Many of these facilities are concentrated in the northwest portion of the County. Each of the drinking water systems usually operates with one treatment plant, one production well or several wells, if the system is a large capacity drinking system and a distribution pump. Chlorination is the typical means of disinfection used by most of these drinking water systems. For many of these systems, chlorination is the only treatment provided. According to FDEP officials, these non-central water systems are frequently found in violation of Florida's Drinking Water Rules.

C. ANALYSIS OF FUTURE POTABLE WATER NEEDS

The County's growth management policy has been to encourage compact development in public facility service area that surrounds the cities. However, as a result of the 1986 Future Land Use Map that designates numerous service areas and the mobility of non-central public water systems, the County has continued to experience growth in areas lying outside of urban centers.

In addition to the Potable Water Element, the Future Land Use Element (FLUE) will evaluate the issues involving provision of services within the County to manage growth and prevent urban sprawl. The FLUE will also coordinate utility service areas within the urban areas of the County. The Urban Area is a sustainability region identified in the FLUE The development expected to occur within the area will include the greatest densities and intensities within the County. In addition, the Urban Growth Boundary (UGB) area will be the concentration of a majority of the infrastructure improvements. The borders of the UGB have been determined largely upon projected central utility service areas. The distinction between this area and others is that connection to central utilities is mandatory.

This mandatory connection to central potable water facilities will require providers of central utilities to provide capacity in a timely fashion. During the periodic review and update of the Comprehensive Plan, the County will endeavor to evaluate the performance of the central utility providers to ensure that the mandatory connection policy does not create an undue hardship for development in urban areas. Additionally, interlocal agreements with the Tohopekaliga Water Authority, the City of St. Cloud, and other utility providers will be necessary to assist in the planning for future utility expansions.

The following is an analysis of current facilities and a discussion of future County needs for potable water facilities and services:

1. Analysis of Major Public Utility Provider Facilities

a. Tohopekaliga Water Authority (TWA)

At present, the TWA has a combined capacity of 72.08 MGD. Existing demand on the system is approximately 31.9 MGD. As such, the system has 40.18 MGD of surplus capacity available for future water demands. Despite the surplus capacity, it is anticipated that expansion and improvements to the existing facilities will be required to maintain sufficient quantity and quality of potable water to meet future demands.

1) East of I-4 Sub-Area

Currently, the available surplus capacity within this sub-area is 18.386 MGD. This sub-area will meet future demand requirements by expanding the Richard McLaughlin, Camelot and Parkway facilities. Additionally, construction of distribution mains along U.S. 192 and U.S. 17-92 will be constructed to increase capacity and service new developments.

2) West of I-4 Sub-Area

Currently, the available surplus capacity within this sub-area is 11.893 MGD. This sub-area will meet future demand requirements by expanding the Northwest and the new southwest facilities. Additionally, construction of distribution mains along CR 545 and Hartzog Road are planned.

3) East Osceola Sub-Area

Currently, the available surplus capacity within this sub-area is 1.318 MGD. Future demand requirements will be met by expansion of the Harmony WTP. The Harmony WTP is currently in design for an upgrade to remove TOCs from the raw water supply. The Lake Ajay WTP was decommissioned in 2006 and wholesale service is provided to Toho Water Authority by St. Cloud via an agreement between Toho and St. Cloud. The Bay Lakes system will connect to the Harmony System. The Harmony WTP will be expanded to meet proposed development.

Table 7-2 lists the existing and projected demand, capacities, and available surplus for these systems. In terms of the ability of supply meeting demand, SFWMD officials have stated that the TWA will exceed its current consumptive use permit for water withdrawal during the planning period. However, currently an engineering consulting firm is preparing an application for additional well fields, which will involve increasing the water allocated in the TWA's consumptive use permit. The Spring Lake Village and Morningside WTPs was connected to the East I-4 in September of 2007.

4) Poinciana Sub-Area

According to the TWA, there are no deficiencies within their systems. The TWA potable central water system currently provides an average daily flow of approximately 4.441 MGD to its customers and has approximately 8.114 MGD of surplus capacity. In addition, the consumptive use permit for the system allows for 5.82 MGD to be withdrawn.

b. City of St. Cloud

The City of St. Cloud's potable central water system currently provides approximately 5.3 MGD to its customers based upon an annual average. The combined capacity of the City's water treatment plants is currently 15.85 MGD based upon high service pump limitations, however, the City's use is permit limited to 9.7 MGD on an annual average basis and 13.76 MGD on a maximum month basis. Given this data, the City has approximately 4.7 MGD in available average day production capacity, which is anticipated to serve the City's water supply needs through approximately 2013.

As previously noted, the City is in the process of designing and permitting Water Treatment Plant #4. This plant coupled with additional distribution system improvements will ensure that available capacity is present to handle demands from growth and existing service demands.

c. Reedy Creek Improvement District

The SFWMD granted a consumptive use permit, which allows the RCID to withdraw 8.552 billion gallons per year. However, RCID's annual withdrawal during 2004 was 5.528 billion gallons, or about 65 percent of the amount permitted by SFWMD. Therefore, the system has adequate capacity to meet future needs.

2. Analysis of Non-Central Public Potable Water Facilities

For non-central public water supply systems, level of service may be expressed as minimum estimated flow guidelines used by the FDEP in the review of drinking water facility permit applications. These guidelines, which consider land use and defined service areas, are used to assure that public drinking water systems provide minimum levels of service. With the exception of private wells and systems serving fewer than 25 persons and fewer than 15 connections, FDEP reviews all permit applications for public water facilities.

Another concern for the County is operational problems frequently associated with the facilities. As previously mentioned, 117 non-central drinking water facilities occur throughout the County. FDEP records of the non-central public potable water facilities document several facility problems affiliated with the water systems. According to FDEP officials, the problems result from the inability of facility owners to support the high costs involved in the operation of a water facility.

To ensure the health, safety and welfare of residents within Osceola County, a more active role in the planning and regulation of non-central public potable water systems will need to be undertaken at the County level. The County must require new private central water facilities to be designed to meet standards that will facilitate connection to a public water system and when they become available, they must do so. Connection to a public water system may be required when it becomes an available option to the developer or homeowners when development is proposed for greater than three (3) lots.

3. Other County Water Planning Issues

a. Four Corners Area

Of special concern to Osceola County is the Four Corners Area, which is located in the northwest corner of the County where Orange, Polk, Lake and Osceola Counties come together. This area is one of the fastest growing portions of central Florida. The expanding urban areas of Orlando and Lakeland, and the proximity to major roadways and numerous tourist attractions such as Disney affect the area. The Tohopekaliga Water Authority provides potable water service within the Osceola County portion of the Four Corners Area. In 2001, the average monthly water demand was 6.70 MGD against a permitted capacity of 9.858 MGD. A projected increase in water demand is expected to be similar for the other three utilities servicing the area, Polk County, Southlake Utilities, Inc., and Lake Grove Utilities, Inc.

b. Priority Water Resource Caution Area

The County includes a Priority Water Resource Caution Area (PWRCA) in the northeastern corner of the County, within the SJRWMD. Although this area of the County is mostly undeveloped and is not a densely populated area, this area has a great potential for future growth. Development spurred by the Orlando International Airport and large developments of regional impact are located north of this area. In addition, the Harmony Florida Quality Development is located just to the east of this area and is proposed to grow in size, which will increase the population in this area. Thus, development in the area will have a direct impact on natural resources and water resources.

c. Water Transfers

The transfer of water is one of the major groundwater issues confronting the County. Through the years, the County has been involved in litigation with the South Brevard Water Authority concerning the transfer of groundwater from the County to southern Brevard County. The issue primarily resulted from the Water Authority's interest in the development of water supplies in this County because of its own inability to supply water from its local water supplies to accommodate Brevard County's future growth.

Another reason is Osceola County's concern that transporting water may damage the local environment and may possibly result in the loss of its water resources. This concern notwithstanding, the water management districts have been given the exclusive authority to authorize transports across county boundaries by the Legislature (s.373.223 (2) and s. 373.2295, F.S.).

In cases of inter-district transfers of water, when the applicable water management district grants a consumptive use permit under the provisions of Section 373.2295, F.S., for water use beyond the boundaries of Osceola County from which, or through which, the groundwater is withdrawn or transferred, and Osceola County denies a permit required under Chapter 125 or Chapter 153, F.S., for a facility or any infrastructure which produces, treats, transmits, or distributes such groundwater, the person or unit of government applying for the permit under Chapter 125 or Chapter 153, F.S., may appeal the denial to the Land and Water Adjudicatory Commission as provided in Section 373.2295(13), F.S., as amended. According to the SJRWMD Water Supply Plan (2000), a PWRCA results when water resources are not able to serve existing legal users and future needs and are not adequate for water resources and related natural systems. Based on data compiled by the SJRWMD, and projected for this PWRCA area within the County, significant water supply problems may occur in 2010. In determining these future conditions, the SJRWMD considered a number of factors, including impacts to natural systems, groundwater quality, existing legal users, and failure to identify an adequate public water supply source. The SJRWMD also inventoried water uses in the PWRCA and analyzed groundwater flows in 1990. Based on this information and projected withdrawals and future needs to 2010, the SJRWMD designated the area as a PWRCA.

The 2002 Legislation requires the County to coordinate with the water management districts in the development of any future 2020 water supply plans. In addition to cooperating in the development of these plans, the County must coordinate with the SJRWMD and SFWMD to assist in the implementation of the Natural Resources Utilization land use category. In addition, the County must determine how to identify strategies to improve the water quality and the quantity of water within the PWRCA in the future or if it must identify new potable water sources to serve a growing population.

d. Responsible Use of Water Supplies

In order to conserve, protect, and manage Osceola County's water resources, the County has established Water Districts. The County shall review the purpose and tasks of each Water District at least every five years to determine whether revisions in the enabling legislation need to be made. Additionally, the County shall explore and implement, if determined to be necessary, any other mechanisms that could be enacted to assist in the conservation, protection, and management of its water resources, consistent with Florida Statutes. Neither revision to the enabling legislation of the Water Districts nor the mechanisms implemented by the County shall conflict with the exclusive authority of FDEP and the water management districts to regulate the consumptive use of water as provided under Chapter 373, FS.

4. Future Water Supply Planning Efforts

Planning for the protection of water resources and protecting future potable water supplies is an important concern for the County. To protect its water resources within the County, the County has established a wellhead protection area policy in its Comprehensive Plan; created a Future Land Use Map category specifically to regulate the location of potable water facilities; and formed the Tohopekaliga Water Authority with the City of Kissimmee. Regionally, the County coordinates with the SJRWMD and the SFWMD in water planning efforts. The following is a summary of these efforts:

a. Wellhead Protection Areas

The standards for wellhead protection, based on Rule 62-521.200(7), F.A.C., will assist the County in regulating land use activities and Future Land Use Map categories in the areas surrounding existing and proposed potable water supply systems. These regulations allow the County to establish protection areas around potable water wellheads to ensure that the public health, safety, and welfare are protected.

Based on these state rules, uses such as solid waste disposal operations as defined in Chapter 62-701, F.A.C.; any sanitary disposal facility, excluding septic tanks; the land application of any reclaimed wastewater; and the disposal of sludge materials will be prohibited within 500 feet of a potable water wellhead. In addition, these rules limit the distances on site sewage treatment and disposal systems and hazardous substances, as defined by the Environmental Protection Agency, may occur near a potable water wellhead. In certain situations, exemptions may be granted for utilities, continuous traffic, vehicle use, and the application of pesticides and herbicides within the wellhead protection area.

The County has entered into a contract with the Cities of St. Cloud and Kissimmee and SFWMD for the evaluation of the County's wellhead situation for the development of a comprehensive wellhead protection plan. In addition to the

wellhead protection activities, the County has established the Tohopekaliga Water Authority. The primary responsibility of the Authority is to promote the responsible, equitable and economical use of the County's water supplies. Furthermore, the Authority will ensure that future potable water wells in Kissimmee and unincorporated Osceola County will be protected through the use of the potable water wellhead protection area.

b. Water Supply Planning by Water Management Districts

Osceola County is regulated by two water management districts, SJRWMD in the eastern portion of the county and SFWMD in the western portion. By coordinating with both districts, the County will make optimum use of current water facility resources which may significantly reduce the need for future water supply source development and facility construction. Efficient water use was the first consideration of both the SJRWMD and SFWMD when planning for future water demands.

1. SJRWMD District Water Supply Plan 2005

The 2005 District Water Supply Plan (DWSP 2005) addresses current and future water use and traditional and alternative water sources and water conservation required to meet 2025 water supply needs while sustaining water quality and protecting wetland and aquatic systems. DWSP 2005 is designed to meet the requirements of the water supply planning provisions of Section 373, FS and is based on a planning horizon extending through 2025.

The SJRWMD goal in projecting water use was to reasonably estimate needs based on the best information available. The methodology used to develop estimates of existing ad projected water use is described in WSA 2003. Projections have been made for public supply, domestic self-supply and small public-supply systems, commercial/industrial/institutional self-supply, thermoelectric power generation self-supply, agricultural self-supply, and recreational self-supply. SJRWMD made its own water use projections based on estimates of population growth within the service area boundaries of public suppliers.

Total Water use in 5-year increments

	Projected Water Use in MGD					
	1995	**2005**	**2010**	**2015**	**2020**	**2025**
Osceola County	16.56	16.57	16.58	16.59	16.60	16.60

Source: SJRWMD, 2005 District Water Supply Plan; figures only include water withdrawn in SJRWMD; and includes public supply, domestic, agriculture, recreation, commercial/industrial, and power generation.

Total water use in SJRWMD is projected to increase from 1,363 mgd in 1995, the base year for assessing the impacts of water use on water resources and related natural systems, to 1,786 mgd in 2025. This growth represents an overall increase of 31%. Total water use from 2000-2025 is projected to increase from 1,486 mgd to 1,786 mgd, an increase of about 20%. Within the same time period, the public supply category of water use is projected to grow by 84%, from 453 to 836 mgd.

SJRWMD - Osceola County			
Water Use Category	1995 Withdrawal	2025 Projected Withdrawal	Percent Change
Domestic Self-Supply	.78	.78	0
Agriculture/Recreational	1.82	1.69	-7
Total	**2.60**	**2.47**	**-5**
Projected Available Reuse	**0.0**	**0.0**	**0**

Current water demand in Osceola County may be divided into three categories: public supply/domestic self-supply, commercial/industrial use, and agricultural/recreational use. As projected by the *District Water Supply Plan 2005*, it is anticipated that the future agricultural demand is expected to decrease by 7 percent, as many ranch and farmlands succumb to development pressures.

St. John's River / Taylor Creek Reservoir Water Supply Project. The Taylor Creek Reservoir is located in Orange and Osceola counties near the St. John's River and SR 520. The reservoir was designed to provide flood control and water supply in the upper St. John's river drainage basin. As currently envisioned, the project will include the design and construction of a complete water supply system, including diversion facilities, such as a pumping station and pipeline, so that water withdrawn from the St. John's River can be transported to the reservoir. Expanding the city of Cocoa's existing water supply system was identified in 2004 as an option for helping to meet future water supply needs in east-central Florida. Many times during the year, additional storage space is available in the reservoir. The opportunity exists to capitalize on this available storage space by diverting water from the St. John's River into the reservoir, increasing the amount of water available to be withdrawn for water supply by 40 mgd or more. Six water suppliers and two water management districts have signed a Memorandum of agreement to work together to plan and prepare a preliminary design for this alternative water supply project.

2. SFWMD Kissimmee Basin Water Supply Plan

The Kissimmee Basin Water Supply Plan, prepared by the SFWMD, is another study intended to provide a framework to address future water use decisions. Osceola County is located in the Upper Kissimmee Basin, which is primarily influenced by urban demands and contributes to the groundwater depression occurring in the Upper Floridan Aquifer in central Florida. Water quality in the

Floridan Aquifer System (FAS) is generally very good, but concentrations of chloride and total dissolved solids increase in eastern Orange and Osceola counties. The Surficial Aquifer System (SAS) is not a viable alternative water source due to low production rates and poor water quality.

Demand projections are based on the extrapolation of trends, circumstances and industry intentions that change over time. For example, observed and projected growth in citrus acreage has reversed into a decline, while there have been acreage increases in ornamental nurseries, it is not equivalent to the reduction in citrus acreage. The major driving force behind the significant growth in water demands reflected in the 2005-2006 KB Plan Update is the region's anticipated population growth. Most of this growth is expected to take place in the portions of Orange and Osceola counties, which lie within the planning area. The Year 2025 was identified as the planning horizon for the assessment of water use impacts. By the end of this 20-year planning timeframe, average water demand is projected to increase 64 percent. In 2000, the total estimated water use for the Kissimmee Basin (KB) Planning Area was approximately 263 million gallons per day (MGD). Current trends indicate average water demand will reach 432 MGD by 2025. Agriculture, historically the region's largest water user, will soon be surpassed by Public Water Supply as the area's population continues to increase and agricultural lands decrease.

SFWMD Demand Projections by Use

	Projected Average Daily Flow (MGD)					
Water Use	**2005**	**2010**	**2015**	**2020**	**2025**	**% Change**
Public Supply	46.43	60.37	74.90	83.44	95.03	49
Domestic Self-Supply	3.86	3.98	4.09	4.21	4.33	16
Agriculture/ Recreational	7.40	8.32	9.22	10.13	11.03	67
Commercial/ Industrial	0.38	0.44	0.49	0.55	0.61	62
Totals	**58.07**	**73.11**	**85.7**	**98.33**	**110.94**	

One method of offsetting the effects of withdrawals on environmental features is to provide increased recharge to the FAS. One area where this occurs is in the western portion of this basin. One method for this recharge to occur is rapid infiltration basins (RIBs). Utility providers in Osceola County currently use these RIBs to provide treated wastewater recharge to the SAS and FAS. Utilization of this recharge concept also provides the benefit of minimizing impacts to wetlands.

Kissimmee Chain of Lakes Long Term Management Plan. In April 2003, SFWMD initiated an interagency project to develop a Kissimmee Chain of Lakes Long Term Management Plan. The goal of this plan is to improve, enhance

and/or sustain KCOL ecosystem health while also considering and balancing the effects of management practices on downstream ecosystems including the Kissimmee River, Lake Okeechobee, and the St. Lucie and Caloosahatchee estuaries. The plan is intended to complement existing local government and watershed projects such as the Kissimmee Basin Water Supply Plan, Total Maximum Daily Loads, Lake Okeechobee Protection Plan, and SFWMD land management activities.

c. Water Conservation and Reuse Programs

Voluntary residential and commercial water conservation will be achieved through the County's participation in water conservation efforts of the water management districts. Locally, the County must promote the use of water-saving plumbing devices including low-flow toilets, showerheads, and faucets within new developments, as well the development and expansion of reclaimed water systems. In addition, all public water suppliers are required to submit water conservation plans to the St. Johns River Water Management District as part of the reasonable-beneficial use criteria of consumptive use permitting. These plans shall be submitted prior to development approval and should address the following items: an irrigation hours ordinance (consistent with Rule 40-2.042, F.A.C.); a reclaimed water feasibility analysis; a landscape ordinance based on Florida Yards and Neighborhoods practices; an ultra-low volume fixture ordinance; a rain sensor devise ordinance; a water conservation based rate structure; a leak detection and repair program; and water conservation public education programs.

Osceola County's recently adopted amendments to the Comprehensive Plan include several policies addressing the conservation of water supplies and reduction of water demands. To implement these policies, Osceola County will be considering changes to the Land Development Code that will require more efficient irrigation and landscaping practices, as well as Land Development Code amendments that will restrict developments known to adversely affect the quality and quantity of surface waters, including natural groundwater recharge areas, wellhead protection zones and surface waters used as a source of public water supply. It is anticipated that many of the LDC amendments will be consistent with the conservation measures adopted by the TWA Board of Supervisors. Included in those measures are the following measures:

- restricting landscape irrigation to two days a week;
- utilizing Florida Water Star criteria for the construction of new single-family residences;
- limiting the use of St. Augustine turf to front yards and entries;
- requiring the construction of dual distribution systems in all developments to provide for non-potable irrigation;
- prohibiting the use of potable water for irrigation in new developments while requiring the use of reclaimed water, stormwater and other sources of non-potable water;

- prohibiting construction of irrigation wells into the Floridan aquifer.

Recently, the Osceola County Board of County Commissioners approved development orders for the Toho Preserve, Green Island and Edgewater Developments of Regional Impact (DRI). Several of the provisions of those development orders regarding water quantity and quality as well as green design landscaping address the measures adopted by TWA's Board of Supervisors.

Osceola County also provides public education programs on the subject of water conservation. The County's Public Information Office lists water conservation information on the County's website and actively supports the public education efforts of the public water utilities. The County's Extension Services also provides water conservation education programs to the general public, commercial landscapers, builders, developers, school teachers, students, and farmers and ranchers.

Both of the major water suppliers in Osceola County conduct their own water conservation programs. In addition to the previously discussed conservation measures adopted by TWA's Board of Supervisor's, the Authority also provides several conservation programs including, but not limited to, the following:

- Water conservation initiative programs, including free commercial water audits, free rain sensors and installation, free pre-rinse spray valves for restaurants, free irrigation evaluations for homeowners, and free landscaping and irrigation maintenance workshops;
- Water waste resolution enforcement; and
- In-school education and presentations to civic groups and homeowners association;

Presently, TWA employees a full-time water conservation coordinator and two part-time conservation staff.

The City of St. Cloud City Council is in process of considering land development code amendments that would implement the conservation measures adopted by TWA's Board of Supervisors. Additionally, the City of St. Cloud provides conservation information to its residents and water uses.

Water reuse in central Florida is accomplished primarily through the use of reclaimed water for irrigation. Reclaimed water is water that has received at least secondary treatment and basic disinfection, and it is reused after flowing out of a domestic wastewater treatment facility. Reuse is the deliberate application of reclaimed water for a beneficial purpose in compliance with the rules of Florida Department of Environmental Protection and water management district rules. Reclaimed water strategies in the regional water supply plans can includes such measures as development of urban reclaimed water systems, reclaimed water system interconnections, supplemental supplies for peak flows, and aquifer storage and recharge.

According to the SFWMD, Central Florida has been a leader in the application of highly treated reclaimed water as a source of irrigation, industrial uses and as a means of recharging the local aquifer system. With the Kissimmee Basin Planning Area, nearly 100 percent of wastewater is reused for landscape irrigation, agricultural irrigation, groundwater recharge, industrial uses environment enhancement and fire protection.

Within Osceola County, reclaimed water is used primarily for residential and golf course irrigation. Reclaimed water is also utilized for agricultural and industrial uses.

Both TWA and the City of St. Cloud operate wastewater treatment plants and reclaimed water distribution systems. TWA operates a network of 193 miles of reclaimed water distribution mains. Reclaimed water from TWA's water reclamation facilities is either used for irrigation customers or is routed to rapid infiltration basins for groundwater recharge. The City of St. Cloud operates a non-potable water high service pumping facility at its Southside Wastewater Treatment Plant and non-potable storage facilities at both Lakeshore and Southside Wastewater Treatment Plants. According the Kissimmee Basin Water Supply Plan Update, it is estimated that in the Year 2000 3.6 MGD of reclaimed water was generated by TWA and 1.7 MGD was generated by the City of St. Cloud. As of 2006, the City of St. Cloud was producing non-potable water at an average daily flow 2.0 million gallons per day.

As water suppliers within the Kissimmee Basin Water Supply Area are being required to increase the amount of potable water from alternative sources and to become less dependent on traditional groundwater sources, reclaimed water is looked at as an alternative to using potable water for landscape irrigation.

d. State Mandated Water Supply Planning Initiative

Due to the need to better coordinate comprehensive planning and planning for a community's future potable water needs, the state Legislature established a new law in 2002. Senate Bill 1906, effective May 31, 2002, requires local governments throughout the state to consider potable water demands in the comprehensive planning process. By considering potable water supply needs when reviewing the status of natural resources and other public facilities needs, a local government will be able to better provide essential public services to its future population.

The 2002 Legislation requires local governments that have a responsibility for its water supply facilities to include regional water supply plans into their comprehensive plan and requires local governments to develop a 10-year water supply facilities work plan demonstrating the local government's needs and future demands for potable water, as well as revising the five-year schedule of capital improvements.

As Osceola County does not have responsibility for the water supply facilities within its jurisdiction, and the County is not a utility provider at this time, the legislation requires the County to project its potable water supply needs for the

next 10 years. In addition, water suppliers must ensure that future potable water supplies will be available to serve future development.

The Osceola County Comprehensive Plan includes goals, objectives, and policies in its plan to coordinate with the water management districts and to consider the regional water supply plans in the comprehensive planning process. By including this direction in the Comprehensive Plan, Osceola County will be better able to conserve and protect its water resources. In addition, the County consulted the SJRWMD Water Supply Plan (2000) and the SFWMD Water Supply Plan (April 2000). The tremendous growth occurring in the East Central Florida region requires the County to become more proactive in its water resources planning efforts.

The County has completed its Ten Year Water Supply Facilities Work Plan, and it has been incorporated into this Data and Analysis Section as Appendix 1. As a result of developing the Work Plan, the County has been able to establish the following:

- Provide potable water demand projections that will assist the County with its planning and development actions;
- Identify alternative water supply sources that will help meet future water demand needs, consistent with the Regional Water Plans;
- Identify water supply capital projects to support existing and future development; and
- Create the basis of a unified work plan to be utilized by the Cities of Kissimmee and St. Cloud as well as the Toho Water Authority.

The County is also amending the adopted Goals, Objectives and Policies of the Potable Water, Intergovernmental Coordination, and Capital Improvements Elements to implement the Work Plan.

Potable water services within Osceola County's Urban Growth Boundary (UGB) are provided primarily by the Toho Water Authority (TWA) and the City of St. Cloud. Therefore, completion of the Work Plan required a cooperative effort between the County, the Cities and TWA.

Included within the narrative of the Ten-Year Water Supply Facilities Work Plan are the following findings:

- In the Year 2028, TWA may be providing potable water service to over 380,000 Osceola County residents;
- In the Year 2028, the City of St. Cloud Water System may be serving over 165,000 County residents;
- As the population within the County increases and development of traditional water supplies become limited, development of alternative water supplies may play a larger role in meeting water supply demands;

- Due to declining water quality and limited sources, groundwater from the Floridan Aquifer may not be relied upon to meet future potable water supply needs;

- Alternative water supply sources, such as brackish surface water and groundwater, fresh surface water from the Kissimmee River and Chain of Lakes and associated tributaries, runoff collection and storage, and reclaimed water may be utilized as alternative water source options within the Kissimmee Basin Planning Area.

e. Natural Resources Utilization Future Land Use Map Designation

Coordinating water supply planning is an essential part of comprehensive planning in Osceola County. Prior to the 2002 Legislative mandate discussed above, the County adopted the Natural Resources Utilization Future Land Use Map designation. This designation ensures that large-scale water supply users that extract 250,000 gallons or more per day provide environmental assessments. In addition to environmental assessments, impacts to natural resources, including groundwater and surface water sources must be addressed when water resource extraction facilities are built within the County.

f. Creation of a Regional Utility Authority

In late 2001, the County entered into an interlocal agreement with the Cities of Kissimmee and St. Cloud to create a local government working group and authorize the use of professional services relating to a study to determine the feasibility of creating a regional water and wastewater authority. In October 2002, the consultant submitted an executive summary to the cities and the County outlining the advantages and disadvantages of creating the regional utility authority and offering recommended actions. In late 2002, the City of St. Cloud decided to withdraw from the proposed authority. However Osceola County and the City of Kissimmee continued with the creation of the regional utility authority and entered into an interlocal agreement in early 2003.

During the 2003 legislative session a special bill was passed that created the regional utility authority known as Tohopekaliga Water Authority (TWA). The Authority's boundary consists of all areas within Osceola County, excluding the legal boundaries of the Reedy Creek Improvement District and the boundaries authorized by law to be served or provided water and wastewater by the City of St. Cloud.

The transferring of the existing utility systems to the Tohopekaliga Water Authority occurred through a transitional interlocal agreement. The City of Kissimmee's operational and administrative staff transferred to the operational and administrative staff of the Tohopekaliga Water Authority and all of Osceola County's right to acquire systems such as the Harmony system, the Poinciana system, and the Florida Water Services systems also transferred to the Authority.

The Tohopekaliga Water Authority is a regional approach that will provide a more efficient and comprehensive means of providing water to the citizens of Osceola County and cease the disjointed and fragmented nature in which water has traditionally been provided in the County.

D. CONCLUSION

Osceola County continues to grow at a rapid pace and with this growth comes an increased demand for water services. Since the goal of establishing a regional utility authority has now been realized, the Tohopekaliga Water Authority will be responsible for the planning, acquisition, development, operation and maintenance of water and wastewater management and delivery systems. Although Osceola County will not be involved in the distribution of potable water to consumers, it is essential that the County coordinate with the Tohopekaliga Water Authority to ensure that the quality of potable water is maintained and improved and that adequate supplies of potable water are available for the citizens of the Osceola County.

Further coordination between the County and the two water management districts will be crucial as the County approaches 2025. Although most of the County is not within a PWRCA, there are concerns whether future potable water resources will be available during the planning horizon of the Comprehensive Plan.

Because of the County's tremendous growth, an Urban Growth Boundary has been established that recognizes the area where the majority of new development takes place and where urban services and facilities either exist or are planned. Future Land Use Element Policy 1.1.5 requires that all new development within the UGB (with limited exceptions) connect to central potable water and wastewater systems. Furthermore, the TWA may investigate new sources of potable water, such as the Kissimmee River, Lake Tohopekaliga, and East Lake Tohopekaliga to accommodate future growth and protect the County's natural resources. Finally, water conservation and water resource planning strategies may continue to be used to further environmental protection.

Table 7-1: TWA Existing Facility Capacity and Methods of Treatment

Service Area & Treatment Plants	Permitted Capacity	Existing Demand (MGD)	Surplus Capacity (MGD)	Treatment Method
East of I-4 Sub-Area: Camelot West R. McLaughlin Parkway Spring Lake Village Intercession City Fountains Pine Ridge Buenaventura Lakes	37.126	18.74	18.386	Aeration & Disinfection PH Adjustment if Needed
West of I-4 Sub-Area: West of I-4 Northwest WTP Southwest WTP	18.00	6.107	11.893	Aeration & Disinfection PH Adjustment if Needed
East Osceola Sub-Area: Harmony Bay Lake Estates	1.498	0.18	1.318	Aeration & Disinfection PH Adjustment if Needed
Poinciana Sub-Area: WTP #1,WTP #2, WTP #3, WTP #4, WTP #5, WTP #6	15.456	6.9	8.556	Aeration & Disinfection PH Adjustment if Needed
System Totals:	72.0805	31.927	40.153	

Source: TWA Analysis of Population and Water Demand Projections to Support Water Supply Planning, May 2008

Table 7-2: TWA Projected Potable Water Demand and Capacity

	2008	2013	2018	2028
Capacity	72.08	72.08	72.08	72.08
Demand	31.93	54	58.5	71.3
Difference	40.15	18.08	13.58	0.78

Source: Osceola County Planning and Zoning, 2008

Table 7-3: City of St. Cloud Water Treatment Plants-2008

Water Treatment Plant	Location	Current Demand	Existing Production Capacity
WTP #1	70 10th Street		***9.7 MGD Permitted Average Day*** ***13.76 MGD Permitted Maximum Month*** ***15.85 MGD Maximum Capacity***
WTP #2	1630 10th Street		
WTP #3	Cane Brake		
WTP #4	3201 Kissimmee Park Road		
Total Existing		***5.3 MGD Average Day***	

Source: City of St. Cloud Water, 2008

Table 7-3: City of St. Cloud Water Treatment Plants-2008

Water Treatment Plant	Location	Current Demand	Existing Production Capacity
WTP #1	70 10th Street		***9.7 MGD Permitted Average Day*** ***13.76 MGD Permitted Maximum Month*** ***15.85 MGD Maximum Capacity***
WTP #2	1630 10th Street		
WTP #3	Cane Brake		
WTP #4	3201 Kissimmee Park Road		
Total Existing		***5.3 MGD Average Day***	

Source: City of St. Cloud Water, 2008

Table 7-4: City of St. Cloud Projected Future Water Demand

Year	Projected Average Demand (MGD)	Proposed System Capacity (MGD)
2005	4.0 MGD	***9.7 MGD Average Day Permitted*** ***15.86 MGD Maximum Day Existing***
2010	6.7 MGD	
2015	11.8 MGD	
2020	15.9 MGD	
2025	18.7 MGD	

Source: City of St. Cloud, 2008

Table 7-5: TWA Poinciana Area Water Treatment Plants – 2008

Water Treatment Plant	Location	Current Demand	Maximum Design Capacity for Entire System
WTP #1	5205 Robert McLane Rd.	1.184 MGD	***15.527***
WTP #2	1010 Peabody Rd.	1.722 MGD	
WTP #3	400 S. County Club Rd.	1.151 MGD	
WTP #4	3464 Hawkins Drive	0.129 MGD	
WTP #5	2000 Hemlock Avenue	1.784 MGD	
WTP #6	3600 Pleasant Hill Rd.	1.001 MGD	
Total		***6.971 MG***	

Source: Tohopekaliga Water Authority. 2008

Table 7-6: TWA Poinciana Area Projected Future Water Demand and Capacity

	2008	2013	2018	2028
Capacity	15.456	15.456	15.456	15.456
Demand	6.9	9.1	9.9	10.2
Difference	8.556	6.356	5.556	5.256

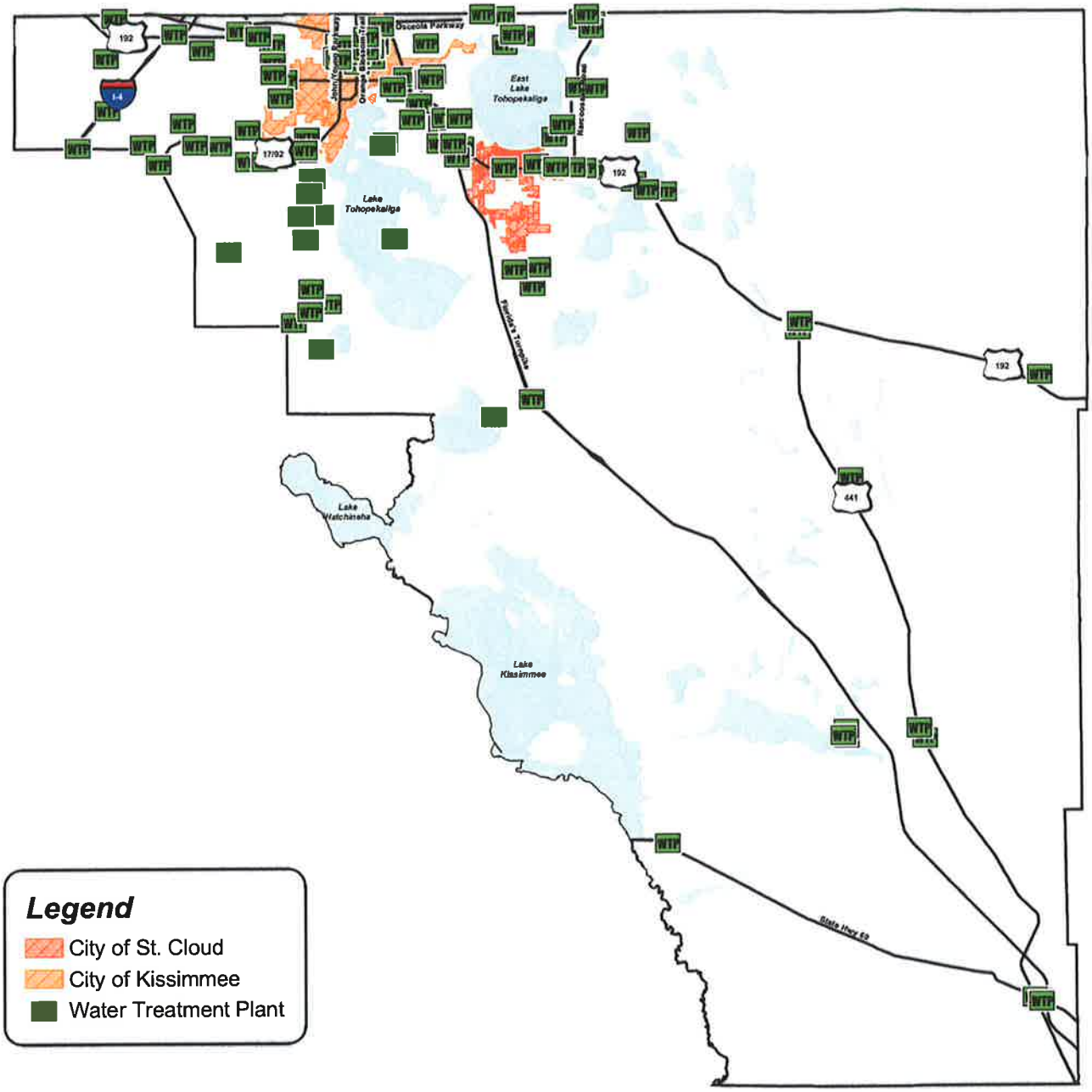
Source: Osceola County Planning and Zoning, 2008

Table 7-4: City of St. Cloud Projected Future Water Demand

Year	Projected Average Demand (MGD)	Proposed System Capacity (MGD)
2005	4.0 MGD	***9.7 MGD Average Day Permitted 15.86 MGD Maximum Day Existing***
2010	6.7 MGD	
2015	11.8 MGD	
2020	15.9 MGD	
2025	18.7 MGD	

Source: City of St. Cloud, 2008

Map VII-I Water Treatment Plant Locations



Legend

- City of St. Cloud
- City of Kissimmee
- Water Treatment Plant

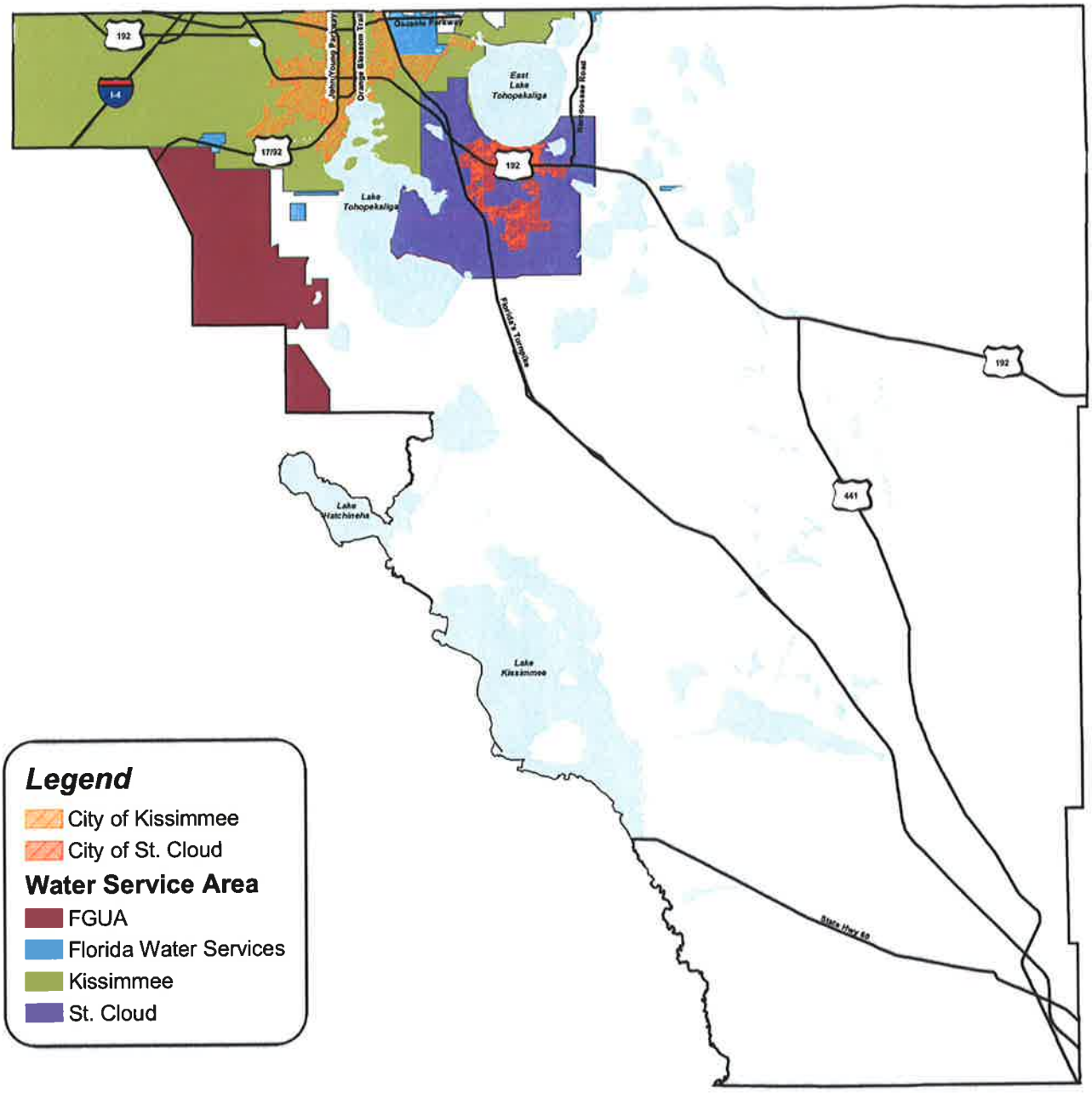
N
W E
S

0 2 4 8 12 16 Miles

This Map Produced By:
Osceola County Planning Department
GIS Section
18April2003

Treatment Plant data provided by
Florida Department of Environmental Protection

Map VII-II Water Service Areas



Legend

City of Kissimmee
City of St. Cloud

Water Service Area

FGUA
Florida Water Services
Kissimmee
St. Cloud

N
W E
S

0 2 4 8 12 16 Miles

This Map Produced By:
Osceola County Planning Department
GIS Section
18April2003

Service Area Data provided by the Respective Agencies

Potable Water Element Appendix 1
Osceola County Ten-Year Water Supply Facilities Work Plan
Osceola County Comprehensive Plan 2025

Osceola County Planning & Zoning Office

August 17, 2009

APPENDIX 1

OSCEOLA COUNTY TEN-YEAR WATER SUPPLY FACILITIES WORK PLAN

August 17, 2009

Osceola County

Ten-Year Water Supply Facilities Work Plan

Prepared For:

Florida Department of Community Affairs

Prepared By:

Osceola County Planning & Zoning Division

August 17, 2009

Table of Contents

List of Tables

List of Maps

List of Attachments

1.0 INTRODUCTION

The purpose of the Osceola County Water Supply Facilities Work Plan (hereinafter the Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the County's jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the water management district approves a regional water supply plan or its update. **The Kissimmee Basin Water Supply Plan Update** was approved by the South Florida Water Management District on December 14, 2006.

Within the Urban Growth Boundary, most residents of the unincorporated County obtain their water from the Tohopekaliga Water Authority (TWA), the City of St. Cloud, or O&S Water Company. Outside of the Urban Growth Boundary, residents obtain water from individual water wells. Map 1 illustrates the Osceola County Urban Growth Boundary.

As Osceola County is not a provider of potable water service, the Osceola County Water Supply Facilities Work Plan will reference the initiatives identified within the following documents:

- The Toho Water Authority (TWA) 2009-2013 Capital Budget;
- The City of St. Cloud Water, Wastewater and Non-Potable Water Master Plan Update Final Report of May, 2007, and the City of St. Cloud 2008 Master Plan Update Technical Memorandum dated October 31, 2008; and
- The South Florida Water Management District Kissimmee Basin Water Supply Plan 2005-2006 Update.

O & S Water Supply is a private company with a build out number of 4,255 in 2013. O & S has stated they do not plan to expand after build out. O & S indicated they do not have plans to build additional facilities.

According to state guidelines, the Work Plan and the comprehensive plan amendment must address the following:

- development of traditional and alternative water supplies; and
- bulk sales agreements and conservation and reuse programs necessary to serve existing and new development for at least a 10-year planning period.

This information will be found in the proposed update to the Data and Analysis Section of the Potable Water Element of the Osceola County Comprehensive Plan.

1.1 STATUTORY HISTORY AND REQUIREMENTS

The Florida Legislature has enacted bills in the 2002, 2004, and 2005 sessions to address the state's water supply needs. These bills, especially Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapter 163 and 373 Florida Statutes (F.S.) by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills

established the basis for improving coordination between local land use planning and water supply planning. The following highlights the statutory linkages:

1. Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district's regional water supply plan, [163.3177(4) (a), F.S.]

2. Ensure that its future land use plan is based upon availability of adequate water supplies and public facilities and services, [s.163.3177 (6) (a), F.S., effective July 1, 2005.] Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department for review. The submitted package must also include an amendment to the Capital Improvements Element, if necessary, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.

3. Ensure that adequate water supplies and facilities are available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving a building permit, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy. [s.163.3180 (2) (a), F.S., effective July 1, 2005.] This "water supply concurrency" is now in effect, and local governments should be complying with the requirement for all new development proposals*. Additionally, local governments should update their comprehensive plans and land development regulations as soon as possible to address these statutory requirements. The latest point at which the comprehensive plan must be revised to reflect the concurrency requirements is at the time the local government adopts plan amendments to implement the recommendations of the Evaluation and Appraisal Report (EAR).

4. For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:

    a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. 373.0361(7), F.S. [s. 163.3177(6)(c), F.S.];

*Osceola County adopted policies within its Comprehensive Plan addressing evaluation of Future Land Use Map amendments and the availability of facilities and services. This includes potable water services. Other adopted policies in ensuring that adopted potable water levels of service standards are met, consistency of new or expanded potable water treatment facilities with the Future Land Use Map, prohibition or extension of central potable water systems outside the Urban Growth Boundary, the prevention of development of subdivisions with each house on a separate potable water well, and regional coordination of water resources with local water suppliers and the two water management districts. The Comprehensive Plan also includes a policy stating that a certificate of occupancy will not be issued until a determination has been make that all classes of infrastructure are in place and available to serve the new development. This includes potable water services.

b. Identify the traditional and alternative water supply projects, bulk sales agreements, and the conservation and reuse programs necessary to meet current and future water use demands within the local government's jurisdiction [s. 163.3177(6)(c), F.S.]; and

c. Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development. [s. 163.3177(6) (c), F.S.] Amendments to incorporate the water supply facilities work plan into the comprehensive plan are exempt from the twice-a-year amendment limitation. [s. 163.3177(6) (c), F.S.]

5. Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five-year period.

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan, the applicable District Water Management Plan, as well as applicable consumptive use permit(s). [s.163.3177 (6) (d), F.S.]

   If the established planning period of a comprehensive plan is greater than ten years, the Work Plan must address the water supply sources necessary to meet and achieve the existing and projected water use demand for established planning period, considering the appropriate regional water supply plan. [s.163.3167 (13), F.S.]

7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities' plans. [s.163.3177 (6) (h) 1, F.S.]

8. Address in the EAR, the extent to which the local government has implemented the 10-year water supply facilities work plan, including the development of alternative water supplies*, and determine whether the identified alternative water supply projects, traditional water supply projects, bulk sales agreements, and conservation and reuse programs are meeting local water use demands. [s.163.3191(2)(1), F.S.]

*Alternative water supply, as defined in the South Florida Water Management District's Kissimmee Basin Water Supply Plan 2005-2006 Update, includes the following: salt water; brackish surface and groundwater; surface water captured predominantly during wet-weather flows; sources made available through the addition of new storage capacity for surface or groundwater; water that has been reclaimed after one or more public supply, municipal, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed water; stormwater; and any other water supply source that is designated as nontraditional for a water supply planning region in the applicable regional water supply plan.

2.0 BACKGROUND INFORMATION

2.1 Osceola County Natural Water Resources

Osceola County is located eastward of the center of the Florida Peninsula and covers 1506 square miles (1480.1 square miles in unincorporated areas, 9.2 square miles for St. Cloud and 16.7 square miles for Kissimmee). The County occupies the Osceola Plain, a broad, flat area of land lying immediately adjacent to the Lake Wales and Mount Dora Ridges on the northwest and west. Elevations range from a minimum of about 15 feet above the National Geodetic Vertical Datum (NGVD) in the northeast part of the County to a maximum of over 100 feet NGVD in the northwest part of the County near the top of the Lake Wales Ridge.

Osceola County is situated at the divide that defines the headwaters of two of Florida's best-known surface water systems—the Everglades and the St. Johns River. The Kissimmee River drains the western two-thirds of the County and flows south to Lake Okeechobee, thence through the Everglades to Florida Bay and the Gulf of Mexico. The eastern part of the County drains to the St. Johns River or its tributaries, which flow northward to empty into the Atlantic Ocean at Jacksonville. The hydrologic divide separating the Kissimmee River and St. Johns Basins in the County is located along a north-south treading line running from the Osceola-Orange County line east of Lake Preston, crossing U.S. Highway 192 one mile east of U.S. Highway 441 intersection near Holopaw, then intercepting the Osceola-Okeechobee county line at a point about 4 miles west of U.S. Highway 441. Map 2 illustrates the water basins within Osceola County.

The *Kissimmee River Basin*, which includes the Upper Kissimmee River Chain of Lakes (KCOL), provides a variety of economic, recreational, and aesthetic benefits, including world-class bass fishing and wildlife viewing. These lakes are part of the Central and Southern Florida Project that was authorized by Congress in the 1950s to provide flood protection for the region. In addition, these lakes and associated wetlands provide environmental benefits including habitat for fish and wildlife and nutrient removal. The Kissimmee Upper Basin, including the Kissimmee River Chain of Lakes, is shown in Map 3.

The *St. Johns River Basin* in Osceola County is characterized by numerous streams, small creeks, and sloughs which flow over flat terrain to the St. Johns River itself, the St. Johns Marsh, or Blue Cypress Lake. Streams included here as tributaries to the St. Johns River include Taylor Creek, Wolf Creek, Crabgrass and Bull Creeks, and Blue Cypress Creek. Osceola County's waters may further be divided into five watersheds and the Alligator Chain of Lakes.

The *Reedy Creek* watershed covers approximately 150 square miles of land in northwest Osceola County and neighboring Polk, Orange, and Lake Counties. The major stream in the watershed is Reedy Creek, a tributary to the Kissimmee River. The *Shingle Creek* watershed drains an area of about 89.2 square miles. Its surface waters flow south from Orange County and enter the northern part of Lake Tohopekaliga. The *Lake Tohopekaliga* watershed is a sub-basin of the Kissimmee River Basin, entering at the northwestern portion of Lake Kissimmee. East Lake Tohopekaliga is the major surface water feature of the *East Lake Tohopekaliga* watershed. Osceola County's portion of the Kissimmee River watershed consists of Lake Kissimmee and

the Kissimmee River Basin. Upstream of Lake Kissimmee, the Kissimmee River Basin in Osceola County includes many streams and chains of lakes. Nearly all of the County's 878 lakes having a surface area greater than 10 acres are located in the Kissimmee River Basin. These lakes cover about 15 percent of the County. Finally, the *Alligator Chain of Lakes* watershed encompasses a very large area in the eastern part of the County that is composed of lakes and wetlands, agricultural lands, and scattered clumps of residential development.

The *Floridan Aquifer*, underlying most of the state of Florida and all of Osceola County, is the primary source of water supply in the County. Water supplies have been developed from production zones at depths ranging from 500 feet to 1200 feet for agricultural, industrial, and domestic purposes. The Floridan Aquifer System provides a supply of freshwater, amounting to approximately 90 percent of all groundwater used in the County, including the public water sources of the Cities of Kissimmee and St. Cloud, as well as large citrus, ranching, and industrial users. The *Surficial Aquifer System* yields about 10 percent of water used in the County.

Wetlands, which can be found throughout Osceola County, are instrumental in providing fish and wildlife habitats, protecting water quality, preventing erosion and storing water. Osceola's wetlands are divided between urban wetlands, some of which have been damaged by development, and rural wetlands, some of which have been damaged by agricultural activities.

Policies within the Osceola County Comprehensive Plan require that wetland be designated as either urban or rural. Osceola's urban wetlands are found within the Urban Growth Boundary in the northwestern portion of the county. Reedy Creek Swamp, Davenport Creek Swamp, Lake Tohopekaliga, East Lake Tohopekaliga, Cypress Lake, and the Alligator chain of lakes contribute to this area. Uplands to the east of Reedy Creek provide habitat for birds with nesting and breeding sites, habitat for turkeys, feral pigs, and white-tailed deer.

The rural wetland portion of the county is dominated by the Big Bend Swamp, Bull Creek Swamp, Blue Cypress Wetland System, and the Econlockhatchee River Swamp. The Big Bend Swamp is a cypress swamp, with scattered freshwater marshes. The Bull Creek Swamp is scattered with cypress swamps and wetland hardwood hammocks. Swamp hardwood and cypress swamp blended with wetland hardwood hammocks make up the Blue Cypress Creek Wetland System. Finally the Econlockhatchee River Swamp is a cypress swamp blended with freshwater marshes and open-surface waters.

3.0 DATA AND ANALYSIS

3.1 Population and Water Demand Information

Osceola County is the 22nd most populous County within the State. The County, which includes the incorporated cities of Kissimmee and St. Cloud, was carved out of Orange County in 1887, and subsequently reduced to its current size with the creation of Okeechobee County in 1917. Osceola County is part of the larger region of Central Florida that includes Brevard, Lake, Orange, Polk, Seminole, and Volusia Counties, and the urban center of Orlando. In the two decades from 2005 to 2025, the population of this seven-county region is expected to increase from 3,521,813 to 5,187,800 residents (Bureau of Economic and Business Research (BEBR), University of Florida).

In 1960, Osceola County's population was 19,029. By the year 2003, Osceola County's population had grown by over 1,000 percent to 210,438. Based upon population projections from BEBR, Osceola County's population is projected to increase from 240,700 in 2005 to approximately 525,100 in the year 2025.

TABLE 1
OSCEOLA COUNTY POPULATION PROJECTIONS

YEAR	2005	2009	2010	2014	2015	2019	2020	2025
POPULATION	240,700	291,096	304,400	359,200	372,900	432,020	446,800	525,100

Source: BEBR, 2004, High

The Osceola County Comprehensive Plan, effective as of July 14, 2008, is based upon the high estimates of the BEBR. The State Department of Community Affairs authorized Osceola County to use BEBR high population estimates to support the Comprehensive Plan.

According to 2008 population estimated from the BEBR, approximately 65 percent of Osceola County residents live in the unincorporated County of Osceola County. Based upon that 2008 information, Osceola County Planning and Zoning Staff projected the future population of the unincorporated County as shown in Table 2.

TABLE 2
OSCEOLA COUNTY UNINCORPORATED POPULATION PROJECTIONS

YEAR	2009	2010	2014	2015	2019	2020	2025
POPULATION	189,979	198,469	234,198	243,131	281,677	291,314	342,365

Source: Osceola County Planning and Zoning, 2009

3.2 Maps of Current and Future Service Areas

Map 4, which is also found in the Data and Analysis section of the Potable Water Element, shows the service areas of the Toho Water Authority (TWA), the Poinciana Water System, the City of St.Cloud, and the O&S Water Supply Company.

3.3 Potable Water Level of Service Standard

Unincorporated areas of Osceola County within the Urban Growth Boundary (UGB) receive potable water services primarily from the TWA and the City of St. Cloud. TWA's service area includes the City of Kissimmee, unincorporated communities such as Buenaventura Lakes, Harmony, Poinciana, and unincorporated areas outside of City of St. Cloud's Service Area. The City of St. Cloud serves the City and several unincorporated areas in the eastern portion of the County.

The Osceola County Comprehensive Plan, which became effective on July 14, 2008, adopted the following potable water level of service standards:

- Toho Water Authority: 98% of the maximum permitted capacity; and minimum 20 PSI pressure will be maintained during fire flow conditions and 40 PSI at property lines.

- City of St.Cloud: 120 gallons per day per capita.

- Poinciana Water Supply System, formerly known as Florida Government Utility Authority: 122 gallons per day per capita.

The potable water level of service standards are listed in Policy 1.2.1 of the Potable Water Element of the adopted Osceola County Comprehensive Plan.

Both TWA and the City of St. Cloud~~,~~ stated that they have plans to address the potable water supplies for residents of the Cities of Kissimmee and St. Cloud and the unincorporated County within the UGB. County staff has developed a level of service standard based upon gallons per day per capita for residential and non-residential uses. A level of service standard based upon gallons per capital per day serves as a planning tool for the County.

3.4 Water Supply Facilities

This requirement is addressed in Section B of the Potable Water Supply Element Data and Analysis section. Map 5, which is also found in ~~the Data and Analysis section~~ in this document, indicates the location of water treatment plans, water supply wells, and wastewater treatment plants.

3.5 Design Capacity of Production and Treatment Facilities

This requirement is addressed in Section B of the Potable Water Supply Element Data and Analysis section.

3.6 Conservation and Reuse Practices and Regulations

These requirements are also addressed in Section C of the Potable Water Supply Element Data and Analysis section.

Osceola County, TWA and the Cities of Kissimmee and St. Cloud are working together to develop water conservation strategies, and Osceola County is developing amendments to landscaping requirements in its Land Development Code to implement water conservation strategies.

The Potable Water Element of the Osceola County Comprehensive Plan, approved by the Osceola County Board of County Commissioners on December 7, 2007 and effective on July 14, 2008, contained the following objective addressing water conservation:

Objective 1.3: Water Conservation
Osceola County shall annually review its Comprehensive Plan policies and Land Development Code regulations to address the conservation of water supplies and aim to reduce water demands by 5% proportionately in relation to growth by the year 2010.

The associated Policy 1.3.1 of the Potable Water Element includes, but does not limit the County to the following conservation measures:

- Requiring the installation of water conserving plumbing fixtures in new or renovated construction;
- Continuing to promote the efficient use of potable water in irrigation and landscaping practices through regulations in the Land Development Code;
- Coordinating with the Osceola County Soil and Water Conservation District, the County Extension Office and the South Florida and St. Johns River Water Management Districts to educate the public on the importance of water conservation and strategies for conserving water;
- Coordinating with water service providers to promote the use of water conserving techniques; and
- Cooperating with emergency water conservation measures of the South Florida and St. Johns River Water Management Districts, and the Water Service Providers.

In July of 2008, the Osceola County Comprehensive Plan became effective. Osceola County is in the process of amending its land development code to implement the conservation measures in Objective 1.3. The 2010 deadline to reduce water demands by 5 percent was not adjusted to meet the anticipated effective date of the Comprehensive Plan, and that date has been identified in the County 2008 Evaluation and Appraisal Report as a Comprehensive Plan deadline in need of revision. Modifying the deadline from 2010 to 2014 will allow the County time to implement the conservation methods listed in Objective 1.3 and will provide the County will enough time to evaluate the effectiveness of its conservation measure prior to the updating of the County's Ten-Year Water Supply Facilities Work Plan.

Since April of 2008, the Osceola County Board of County Commissioners has entered into development agreements for the four developments of regional impact (DRI) located on the eastern shore of Lake Tohopekaliga. It should be noted that the approved development orders for the Edgewater, Green Island, Toho Preserve and Tohoqua Developments of Regional Impact include provisions for water conservation. Among the water conservation measures required in

those development orders are the following:

- Water Star Conservation program;
- Use of native, drought tolerant, low maintenance vegetation, water conserving, green design principles for landscapes and buildings;
- Xeriscaping and water re-use;
- Design of golf courses to promote water conservation practices;
- Waterwise landscaping; and
- Construction and maintenance of dual water distribution systems

TWA has also provided information regarding its conservation strategy. TWA is in the process of developing and implementing its conservation strategy. Their strategy focuses on seeking to obtain significant reductions in future irrigation demand which presently comprises approximately 50 percent of overall water demand. TWA has implemented and is expanding a reclaimed water distribution system to offset the use of potable water with reclaimed water for landscape irrigation. Adoption of conservation strategies by Osceola County and the Cities of Kissimmee and St. Cloud through Land Development Code amendments will be a major factor in determining how much water will be saved in the future.

If, in accordance with Objective 1.3 of the Potable Water Element of the Osceola Comprehensive Plan, the conservation measures discussed above are adopted and implemented by the County and the Cities, and if the regulations do result in a five percent reduction in potable water demand, it is conceivable that potable water use countywide could be reduced by 2.66 mgd in 2014 and by 3.25 mgd in 2019. When the County updates the Ten-Year Water Supply Facilities Work Plan in 2014, Osceola County staff will have the information needed to discuss the offset of potable water demand resulting from water conservation strategies in more detail after those strategies are implemented.

3.7 Population and Potable Water Demand Projections by Water Utility Service Area

Population projections by utility service areas are based upon information provided by TWA and the City of St. Cloud. County staff estimated the percentages of the County's population served by the different utilities; for example, in 2009, it was estimated that approximately 83 percent of County residents lived in TWA's service area and 16 percent resided in St. Cloud's service area. These percentages do not appear to be static; in 2019, it is projected that approximately 75 percent of County residents will reside in TWA's service area, and in 2028, 67 percent will reside within TWA's service area. It is projected the percentage of County residents living in St. Cloud's service area will increase to 24.5 percent in 2019 and to 29.6 percent in 2028. The shifts in the percentage of customers served by the two major water utilities reflect a shift in development patterns within the County.

TABLE 3
POPULATION PROJECTIONS BY WATER UTILITY SERVICE AREA

YEAR	2009	2014	2019	2025	2028
UTILITY SERVICE AREA					
TWA including Poinciana	240,586	269,406	302,607	367,845	381,892
City of St. Cloud	47,884	86,489	125,312	153,000	167,635
O & S Water Supply Company	2,626	3,305	4,104	4,255	6,756
Total	291,096	359,200	432,020	525,100	565,421

Source: Osceola County Planning and Zoning, 2009

It should be noted that these population figures include County residents relying on domestic self-supply. Please see Section 3.12 of this Facilities Work Plan for a more detailed discussion of domestic self-supply within Osceola County.

The base year for the Work Plan is 2009, and 2019 is the required minimum 10-year time frame of the Work Plan. The year 2014 reflects a required five-year interval. The year 2028 reflects the time frame of the Osceola Comprehensive Plan.

The TWA service area consists of the City of Kissimmee and most of the unincorporated areas in the western portion of the County. Among the unincorporated communities serviced by TWA are Buenaventura Lakes, Harmony, Intercession City, Pine Ridge Estates, Poinciana, the resort areas west of the Kissimmee city limits, and the development of Toho Preserve located on the eastern shore of Lake Toho. The City of St. Cloud service area includes the City of St Cloud and adjacent unincorporated areas including the approved and proposed developments of Bella Terra, Edgewater, Friar's Cove, Green Island and Tohoqua located on the eastern shore of Lake Toho. The Poinciana Water System was operated by Florida Governmental Utilities until its purchase by TWA in 2007.
Residential water demand for TWA was determined through the use of a system wide consumption factor of 96 gallons per capita per day (gpcd). TWA broke down the residential consumption rate as follows:

- Sub-service area east of I-4 87 gpcd;
- Sub-service area west of I-4 146 gpcd;
- Celebration sub-service area 90 gpcd
- Poinciana sub-service area 82 gpcd

Note: Celebration sub-service area consumption rate is based 2008 potable water use/2008 population. Poinciana sub-service area consumption rate is equal to the 2008 potable use projection/(projected number of 2008 residential units x an average of 2.77 persons per residential unit).

Residential water demand for the City of St. Cloud is based upon a consumption rate of 123 gpcd provided in a July 14, 2008 letter from CH2M Hill and Reiss Engineering to TWA and the City of St. Cloud. According to the City of St. Cloud 2008 Master Plan Update Technical Memorandum dated October 31, 2008, the gross per capita usage rate of 123 gpcd is based on an analysis of the recent historical usage data for the City of St. Cloud utility service area. This value includes both residential and commercial usage, as well as water loss and unaccounted for

water. Recent historical potable water data (2002-2007) were evaluated to estimate a more current average gross per capita index value. The per capita usage index value is used with the future population projections to calculate the potable water demand projections. The past six years of data indicate the residential-only per capita index for potable water was approximately 96 gallons per capita per day (gpcd), and the gross per capita index including all potable customers was 119 gpcd. To account for potential increases in non-residential development and seasonal climate variability a gross per capita consumption rate of 123 gpcd was used for the City of St. Cloud. The City as indicated they will continue to aggressively implement conservation efforts to keep a relatively stable overall gross per capita value. Utilizing the gross per capita potable water use index of 123 gpcd, the potable water demands are projected to increase from 5.89 mgd in 2009 up to 15.41 mgd in 2019 on an annual average day demand basis.

The O&S Water Company is a private water utility that serves the Pleasant Hill Lakes and Bella Lago subdivisions. O&S operates one water treatment facility and two 10-inch diameter wells. O&S also has an agreement with TWA for bulk water purchases. In 2005, O&S was serving 1,800 residents. Under their existing consumptive use permit, O&S Water Company was limited to an annual allocation of 0.42 million gallons per day(mgd) with a maximum daily allocation of 0.64 mgd. The consumptive use permit anticipated a build-out of 4,255 residents by 2013, with water use expected to remain level at 0.42 mgd after that point. According to staff of the SFWMD, the District and O&S Water Company were negotiating a new consumption use permit. Details of the new consumptive use permit are not available at this time.

Staff notes that the service area of the O & S Water Company falls within the TWA service areas. As no residential consumption factor has been established for O & S, County staff decided to use the TWA consumption factor of 96 gpcd to make demand projections.

Table 4 shows projections of residential potable water demand by water utility service area. Residential potable water demand was determined by multiplying the projected service area population by a factor of 96 mgd.

TABLE 4
RESIDENTAL POTABLE WATER DEMAND PROJECTIONS
BY WATER UTILITY SERVICE AREA
(MILLIONS OF GALLONS PER DAY)

YEAR	**2009**	**2014**	**2019**
UTILITY SERVICE AREA			
TWA (including Poinciana)	23.1	25.9	29.1
City of St. Cloud	4.6	8.3	12.03
O & S Water Company	0.25	0.34	0.39
Total Projected Demand	27.95	34.54	41.52

Source: Osceola County Planning and Zoning, 2009

Generation rates for non-residential uses were based upon water demand factors utilized by the consulting firm of Hansen, Walter and Associates (HWA) in the preparation of recent applications of development approval for DRIs and DCIs on the eastern shore of Lake Toho.

According to staff of HWA, these factors were based upon information provided by the Florida Department of Environmental Protection, TWA, and the City of St. Cloud. The following factors were applied to generate non-residential demand:

- Hotel/motel-120 gallons per day per room;
- Commercial-retail service-0.1gallons per day per square foot; and
- School demand-10 gallons per day per student.

The non-residential water demand rates can be found in Attachment "A".
Square footage was determined by assuming a factor of four employees per 1,000 square feet of gross floor area. This was a factor obtained by staff from Kimley-Horn for commercial uses.

Table 5 shows the non-residential potable water demand projections by water utility service area.

TABLE 5
NON-RESIDENTIAL POTABLE WATER DEMAND PROJECTIONS
BY WATER UTILITY SERVICE AREA
(MILLIONS OF GALLONS PER DAY)

YEAR	**2009**	**2014**	**2019**
UTILITY SERVICE AREA			
TWA (Including Poinciana)	11.8	17.8	18.2
City of St. Cloud	1.29	2.34	3.38
O & S Water	0.06	0.06	0.06
Total Projected Non-residential Demand	13.15	20.2	21.64

Source: Osceola County Planning and Zoning, 2009

Table 6 lists residential and nonresidential potable water demand projections by water utility service area.

TABLE 6
RESIDENTAL AND NONRESIDENTIAL POTABLE WATER DEMAND PROJECTIONS
BY WATER UTILITY SERVICE AREA
(MILLIONS OF GALLONS PER DAY)

YEAR	2009	2014	2019
UTILITY SERVICE AREA			
TWA (Including Poinciana)			
Residential	23.1	25.9	29.1
Nonresidential	11.8	17.8	18.2
Total	**34.9**	**43.7**	**49.1**
City of St. Cloud			
Residential	4.6	8.3	12.03
Nonresidential	1.29	2.34	3.38
Total	**5.89**	**10.64**	**15.41**
O & S Water			
Residential	0.25	0.34	0.36
Nonresidential	0.06	0.06	0.06
Total	**0.31**	**0.41**	**0.42**
Total Potable Water Demand in Osceola County	**41.1**	**54.75**	**64.93**

Source: Osceola County Planning and Zoning, 2009
Note: TWA indicated that total water demand numbers for TWA include an unaccounted for water factor of 8.2 percent.

It should be noted that potable water demand anticipates serving include County residents presently relying on domestic self-supply. Please see Section 3.12 of this Facilities Work Plan for a more detailed discussion of domestic self-supply within Osceola County.

Projections for the Cane Island Power Plant
The Kissimmee Utility Authority (KUA) constructed and operates the electric power generation facility at the Cane Island Power Park (CIPP). There are presently three generating units at the facility. Toho Water Authority (TWA) provides reclaimed water to CIPP through a contract for cooling water. The contract was originally negotiated with KUA in 1993.

KUA and the Florida Municipal Power Agency (FMPA) are planning to construct a fourth power generation unit at CIPP. As part of the planning and permitting process for the fourth generation unit, KUA requested a commitment from TWA to provide the quantity of reclaimed water required for cooling four generating units. KUA provided an estimated quantity of approximately 6.7 mgd of reclaimed water necessary during peak operation of the CIPP, which would include all four units operating at maximum load.

This quantity of reclaimed water is about three (3) mgd more than the present maximum demand for the existing three generating units. Based on historic operating data, the projected peak

demands would only occur for short periods of five to ten days; intermittently, primarily during the summer. Normal average reclaimed water demand with the four generating units will be approximately 4.5 mgd around 2020. Based on the flow data and estimates, TWA should be able to meet the average daily demand and the peak demand.

To meet the reclaimed water requirements for CIPP, TWA has worked with KUA to amend and restate the 1993 agreement. The amended and restated agreement, which was approved on September 24, 2008, includes the following:

1. The term of the agreement will be for a thirty year period commencing with the initiation of operation of Unit 4. There is language that provides for a 10 year renewal with the ability of either party to terminate with notice at least 18 months in advance of the 30 year period.
2. CIPP is established as a priority customer and TWA commits to limiting or reducing service to other non-priority customers in the case of a shortage of supply.
3. KUA and FMPA have committed to contributing funding towards the construction of reclaimed water storage to meet peak demands if it is determined that additional reclaimed water storage for the system is necessary.

A recent site certification application for the Cane Island Power Plant Expansion caused concern on the behalf of staff of the State Department of Community Affairs (DCA) that water was being diverted from local water supplies to the Cane Island Plant Expansion, and that Osceola County needed to address the Cane Island water requirements in its Work Plan. Staff of the SFWMD district provided the following comments on DCA's concerns:

- The water produced from the Cane Island site is not counted in the volumes of water that TWA has identified under its potable demand numbers. The amount of water currently withdrawn from the site and the proposed new groundwater use has been evaluated by the SFWMD and was found to be available under the current groundwater limitations in central Florida; and
- The use of the water does need to be addressed in the 10-year facility plan because of TWA's commitment to reclaimed water deliveries to the power plant and because this is part of the County's overall growth.

TWA has provided further clarification regarding their commitment to provide an estimated 6.7 mgd of water supply to the electric power generation facility at the Cane Island Power Plant during peak operation. TWA does monitor and meter the amount of non-potable water sent to Cane Island, and TWA would reduce its supply to secondary uses (golf courses, landscape irrigation, etc.) in circumstances when the power plant needs additional reclaimed water. Additionally, per TWA, the cooling water demand for the Cane Island Power Plant is a non-potable demand supplied by reclaimed water and supplemental alternative water sources such as the TWA permit to withdraw up to four mgd from Shingle Creek to supplement reclaimed water supplies. The Cane Island Power Plant returns or discharges approximately one-third of the water provided for cooling purposes. TWA estimates that if the fourth generating unit demand is an average of 4.5 mgd, an average of 1.5 mgd of non-potable water is returned to TWA.

Population Outside of the Urban Growth Boundary
Osceola County staff estimates that in 2009, approximately 4,000 persons reside outside the Urban Growth Boundary (UGB). The TAZs outside of the UGB fall within the TWA service area. As the area outside of the UGB falls primarily within either the Rural/Agricultural Future Land Use Map category, which allows for one dwelling unit per five acres, and the Conservation Future Land Use Map category, which does not allow for residential development, no dramatic increase in population is anticipated outside of the UGB under the existing provisions of the County's Comprehensive Plan. It is projected that the 2019 unincorporated population outside of the UGB will be approximately 4,000. Presently, County residents residing outside of the UGB rely upon domestic self-supply for potable water service. A detailed discussion of domestic self-supply is found in Section 3.12 of this Facilities Work Plan.

3.8 Potable Water Demand Analysis

According to information obtained from the major water utilities and the South Florida Water Management District, daily withdrawal allocations for the major water utilities, as listed in their consumptive use permits are as follows:

- Toho Water Authority, including Poinciana46.5 million gallons per day;
- City of St. Cloud9.7 million gallons per day

By the end of Year 2013, both the Toho Water Authority and the City of St. Cloud anticipate receiving water supply from the Cypress Lake Wellfield Alternative Water Source (AWS) project. Presently, the TWA anticipates that 15 mgd of water supply from the Cypress Lake Wellfield will be permitted to supply customers in the TWA's service area, St. Cloud's service area, and customers in Polk County's service area. Of the total 15 mgd planned from the Cypress Lake Wellfield project, the City of St. Cloud anticipates receiving approximately 5.8 mgd of water supply in the 2009-2019 planning period. Although this project is anticipated at this time to be completed and placed in service by the end of 2013, the TWA does not anticipate receiving water supply from the Cypress Lake Wellfield project until after 2014. In addition to the Cypress Lake Wellfield project, the TWA also anticipates receiving an additional 5.0 mgd from the Taylor Creek Reservoir AWS project by 2016. Additional discussion of these AWS projects occurs later in this document. With regards to St. Cloud, the combination of current permitted groundwater supply of 9.7 mgd and the 5.8 mgd of anticipated AWS supply from the Cypress Lake Wellfield project is projected to be a sufficient quantity to meet the City's potable water demands through the end of the 2019 planning period. The City of St. Cloud will continue its planning, permitting and engineering efforts over the next ten years to pursue additional AWS quantities in order to meet post-2019 demands.

TABLE 7
DIFFERENCES BETWEEN TWA EXISTING POTABLE WATER DAILY GROUNDWATER WITHDRAWAL ALLOCATIONS/ANTICIPATED ALTERNATIVE WATER SUPPLY AND PROJECTED POTABLE WATER DEMAND (MILLIONS OF GALLONS PER DAY)

YEAR	2009	2014	2019
Daily Groundwater Supply Allocations	46.5	46.5	47.3
Anticipated AWS	0.0	0.0	4
Demand	34.9	43.7	49.1
Anticipated Five Percent Reduction from Conservation	0.0	2.2	2.5
Difference	11.6	5	4.7

Source: Osceola County Planning and Zoning, 2009

Under this scenario, the TWA water system appears to have adequate potable water treatment capacity through the Work Plan's 2019 ten-year time line.

TABLE 8
DIFFERENCES BETWEEN ST. CLOUD EXISTING POTABLE WATER DAILY GROUNDWATER WITHDRAWAL ALLOCATIONS/ANTICIPATED ALTERNATIVE WATER SUPPLY AND PROJECTED POTABLE WATER DEMAND (MILLIONS OF GALLONS PER DAY)

	2009	2014	2019
Daily Groundwater Allocation	9.7	9.7	9.7
Anticipated AWS	0.0	5.8	5.8
Demand	5.89	10.64	15.41
Projected Five Percent Reduction from Conservation	0.0	0.532	0.77
Difference	3.81	5.39	0.8

Source: Osceola County Planning and Zoning, 2009

Under this scenario, the City of St. Cloud would have adequate potable water treatment capacity through the Work Plan's ten-year time line. Significant regulatory changes affecting water supply planning efforts made their way to Central Florida in mid-2007 and continue to evolve. The Central Florida Coordination Area (CFCA) rule was adopted by each of the three water management districts (SFWMD, SJRWMD, and SWFWMD) having regulatory jurisdiction in the Central Florida area. The CFCA policy was adopted in an effort to provide consistency related to water supply permitting in the Central Florida area where actions by one district have the potential to impact users in adjacent Water Management Districts. This action was prompted by the prediction that consumptive use withdrawals from the Floridan Aquifer would begin to

cause environmental harm (primarily wetland impacts) at the estimate 2013 demand levels if diversion to alternative water supplies (AWS) did not occur. The net result of the CFCA rule is that withdrawals from the traditional use zones of the Floridan Aquifer are limited to their 2013 quantities. This means that future (post 2013) water demands will be required to be met utilizing AWS.

The City of St. Cloud 2008 Master Plan Update Technical Memorandum dated October 31, 2008 states that within the confines of the CFCA, the City of St. Cloud was issued a 20 year permit to withdrawal a negotiated 2013 demand of 9.7 MGD. This quantity of water is lower than City's demand projection quantity needed for the future based upon growth and is lower than the demand associated with the growth estimates generated from the County's comprehensive plan and the estimates contained herein. However, the ongoing nature and likelihood of continuation of the current economic slowdown results in a greater likelihood that this quantity may be accurate for the actual 2013 needs. As part of the specific requirements within the recent water supply permit issued by the SFWMD, the City of St. Cloud was required to actively develop specific AWS projects including the Cypress Lake Well Field (in a joint project with Toho Water Authority) and a potable water project withdrawing surface waters from the Upper Kissimmee Basin.

County staff performed the demand analysis based upon the difference between the permitted annual potable water allocation for O & S and projected potable water demand based upon the County's population projections.

TABLE 9
DIFFERENCES BETWEEN O & S POTABLE WATER ALLOCATION AND PROJECTED POTABLE WATER DEMAND (MILLIONS OF GALLONS PER DAY)

	2009	**2014**	**2019**
Capacity	0.42	0.42	0.42
Demand	0.31	0.41	0.42
Projected Five Percent Reduction from Conservation	0.0	0.02	0.02
Difference	0.1	0.03	0.02

Source: Osceola County Planning and Zoning, 2009

It is anticipated that the permitted daily potable water allocation will meet potable water demand through 2019. O & S Water and the SFWMD are presently negotiating a new consumption use permit. SFWMD staff has indicated that O & S has yet to identify additional potable water sources after 2013.

Non-potable Water Demand

A required portion of the Work Plan is an analysis of the amount of water required to meet non-potable water supply demand. Non-potable water has become a major resource for landscape irrigation. One of the purposes of the Work Plan is to identify alternative water sources to replace potable water as a resource for landscape irrigation.

TABLE 10
NON-POTABLE WATER SUPPLY AND DEMAND
TWA WATER SERVICE AREA
MILLIONS OF GALLONS PER DAY (MGD)

YEAR	2009	2014	2019
TOTAL RECLAIMED WATER SUPPLY	26.1	31.6	34.1
LESS DAILY REQUIREMENT FOR CANE ISLAND POWER PLANT	3	3	3
SUPPLEMENTAL WATER FROM SHINGLE CREEK		4	4
AVAILABLE RECLAIMED WATER SUPPLY	27.1	32.6	35.1
NON-POTABLE WATER DEMAND	17.1	21.9	25.4
PROJECTED FIVE PERCENT REDUCTION FROM CONSERVATION	0.0	1.1	1.3
DIFFERENCE	10.0	11.8	11.0

Source: Toho Water Authority, 2009

Table 10 projects non-potable water supply and demand for TWA. The total reclaimed water supply for TWA is based upon historical wastewater flow data and existing and projected future potable water flows. Non-potable water demand was also projected by TWA. It is anticipated there will be enough reclaimed water and supplemental stormwater from Shingle Creek to meet TWA's non-potable water demands.

TABLE 11
NON-POTABLE WATER SUPPLY AND DEMAND
CITY OF ST. CLOUD WATER SERVICE AREA
MILLIONS OF GALLONS PER DAY (MGD)

YEAR	2009	2014	2019
RECLAIMED WATER SUPPLY	2.57	5.18	7.8
NON-POTABLE WATER DEMAND	2.31	8.62	14.68
ANTICIPATED AWS	0	3.01	6.15
PROJECTED FIVE PERCENT REDUCTION FROM CONSERVATION	0	0.43	0.73
DIFFERENCE	0.26	0	0

Source: Osceola County Planning and Zoning, 2009

Table 11, which is based upon information received from the City of St. Cloud in 2009, indicates that the City will have enough reclaimed water supply and AWS water to meet the system' s non-potable needs. The City currently utilizes reclaimed water from their Southside Wastewater Treatment Facility for their non-potable water needs. The City recently received a permit to withdraw approximately 112,000 gallons per capita per day from on-site stormwater ponds at their municipal golf course to supplement their non-potable water supply. By 2014, the City plans to withdraw 2.07 mgd from the Lakeshore Stormwater Augmentation Project. To meet the projected non-potable water needs in 2019, the City of St. Cloud will continue to utilize the sources listed above, and the City has plans for implementing several other potential AWS supplies to meet their non-potable demands. Potential sources for alternative water supply sources through and up to 2019 include surface water withdrawal from East Lake Toho and requirements for stormwater recovery and storage included in all availability requirements to the DRIs within the St. Cloud service area. The future homes in these DRIs represent a large portion of the predicted non-potable demand in the 10 year planning horizon.

3.10 Alternative Water Sources

The use of alternative water sources is prominently addressed within the SFWMD's Kissimmee Basin Water Supply Plan 2005-2006 Update. The following issues were addressed within the **Kissimmee Basin Water Supply Plan 2005-2006 Update:**

- As the population within the planning area is expected to increase nearly 150 percent from 2000 to 2025, demands on the region's water supply are expected to increase 55 percent, and development of traditional water supplies become limited, development of alternative water supplies will play a larger role in meeting water supply demands;
- Due to declining water quality and limited sources, traditional groundwater from the Floridan Aquifer cannot be relied upon to meet future potable water supply needs; and
- Alternative water supply sources, such as brackish surface water and groundwater, fresh surface water from the Kissimmee River and Chain of Lakes and associated tributaries, runoff collection and storage, and reclaimed water were identified as alternative water source options within the Kissimmee Basin Planning Area.

Consumptive use permits recently issued to TWA and St. Cloud specifically address the use of alternative water sources to supplement the traditional groundwater source. With each of those consumptive use permits, the following alternative water sources are identified:

- Withdrawal of surface water from the Kissimmee River Basin; and
- Cypress Lake Brackish Groundwater Wellfield;

Both of these projects were identified within the **Kissimmee Basin Water Supply Plan Update**. Both consumptive use permits include provisions that by December 31, 2013, a minimum of 15

mgd from combined alternative water source projects is available for use within the water utility service areas of TWA, the City of St. Cloud, and Polk County.

Another potential source of potable water is the diversion of water from the St. Johns River into the Taylor Creek Reservoir or into a new reservoir. This existing 3,200 acre reservoir is located in northeastern Osceola County and southeastern Orange County. The St. Johns River Water Management District (SJRWMD) is coordinating an effort with SFWMD and six local utilities, as well as to utilize the St. Johns River with the Taylor Creek Reservoir or a new reservoir for potable and non-potable supplies.

The TWA, the City of St. Cloud and Polk County are part of the STOPR group (St. Cloud; Toho Water Authority; Orange County Utilities; Polk County Utilities; Reedy Creek Improvement District). The STOPR group was initially formed by these five utilities to jointly negotiate Water Use Permits with the SFWMD. Subsequently, STOPR has evolved into a group developing alternative water supplies to meet Central Florida's future water demands. The STOPR group is working with SFWMD district on the following:

- Implementing an agreement that will update data establishing the total water demand for consumptive use by the STOPR group through 2030, and possibly through 2050,
- Identifying and implementing viable innovative solutions and projects prioritized for both short-range and long-range implementation based on environmental, technical and financial feasibility

The STOPR group has developed a list of proposed alternative water supply projects (Table -17). To meet future needs, planning and development of the water supply sources shown in Table 17 will be accomplished through partnerships between the STOPR group and the appropriate water management districts.

Reclaimed water, as discussed in the Data and Analysis Section of the Potable Water Element, is seen not as a potable water source but as a substitute for potable water being used for landscape irrigation and other non-potable water uses. Both TWA and St. Cloud provide reclaimed water for non-potable uses such as landscape irrigation and as cooling water for an electrical generating power plant. The primary source of reclaimed water is treated wastewater from the utilities sanitary sewer systems.

Other alternative water supply measures identified in the **Kissimmee Basin Water Supply Plan Update** include new storage capacity for surface water and groundwater and the use of stormwater for aquifer recharge and landscape irrigation. Presently, TWA has the withdrawal and treatment capacity to supply four mgd average daily flow of stormwater from Shingle Creek to its South Bermuda Wastewater Treatment Plant to supplement reclaimed water supplies to assist meeting non-potable water demands. The City of St. Cloud also anticipates the increased use of stormwater for aquifer recharge and landscape irrigation. Additionally, Osceola County has included in the development orders for the four recently approved Lake Tohopekaliga DRIs provisions for stormwater detention facilities that can serve as water resources for landscape irrigation.

It should also be noted the **Kissimmee Basin Water Supply Plan Update** anticipated that significant portions of TWA and the City of St. Clouds water supplies would be comprised of alternative water sources. According to the Plan Update, it was anticipated that in 2025 forty-six (46) percent of TWA's supplies would come primarily from brackish groundwater and surface water. In comparison, sixty-five (65) percent of St. Cloud's supplies would come from reclaimed and surface waters, and 50 percent of Poinciana's would come from reclaimed water and sources to be determined.

A discussion of the use of seawater as an alternative water source is found in the **St. Johns River Water Management District (SJRWMD) 2005 District Water Supply Plan**. Due to the high costs of desalting seawater, SJRWMD stated that this source would not be developed as soon as some other potential sources. The SJRWMD also stated that coastal areas are more likely than inland areas the develop seawater resources.

3.11 Interlocal Agreements

In 2003, Osceola County and the City of Kissimmee entered into an interlocal agreement to proceed with the creation of an authority to provide water and sewer services to the City of Kissimmee and most of the unincorporated County. During the 2003 State legislative session, a special bill was passed that created the regional utility authority known as Tohopekaliga Water Authority (TWA). The Authority's boundary consists of all areas within Osceola County, excluding the legal boundaries of the Reedy Creek Improvement District and the boundaries authorized by law to be served or provided water and wastewater by the City of St. Cloud. Although the Osceola County Comprehensive Plan prohibits the use of central water and sewer systems within those portions of the unincorporated County outside of the Urban Growth Boundary UGB), most of the area outside of the UGB falls within TWA's service boundary. TWA would provide central water and sewer services to the most rural portion of the unincorporated County should the UGB ever be expanded or if the Comprehensive Plan is otherwise amended.

The transferring of the existing utility systems to the Tohopekaliga Water Authority occurred through a transitional interlocal agreement. The City of Kissimmee's operational and administrative staff transferred to the operational and administrative staff of the Tohopekaliga Water Authority and all of Osceola County's right to acquire systems such as the Harmony system, the Poinciana system, and the Florida Water Services systems also transferred to the Authority. Two members of the TWA Board of Supervisors are appointed by the Board of County Commissioners, two members are appointed by the Kissimmee City Commission, and the fifth member, who serves as the Board chair, is jointly appointed. The present interlocal agreement (ILA) between TWA, the County and the City of Kissimmee, is valid for 25 years, and the ILA will automatically renew for another 25 years until the parties renegotiate. This information is also available the revised Data and Analysis Section of the Potable Water Element that was transmitted to DCA for review.

The City of St. Cloud currently provides potable water and sanitary sewer services to properties within the City limits and to adjacent areas of unincorporated Osceola County. The City of St. Cloud Service Area was established in July 2002 by ordinance as provided by Chapter 180, F.S. This information is also available in the revised Data and Analysis Section of the Potable Water Element. In June, 2006, Osceola County entered into a joint planning area interlocal agreement with the City of St. Cloud, and the St. Cloud Service Area is included within the Joint Planning Area defined by this interlocal agreement.

TWA, the City of St. Cloud, Orange County Utilities, Polk County Utilities, and the Reedy Creek Improvement District have entered into several interlocal agreements and become known as the STOPR group. One of the purposes of these interlocal agreements was to work cooperatively in submitting competing consumptive use permits to meet 2013 water supply demands. TWA and Polk County entered into an interlocal agreement to provide emergency and short-term water service interconnections and to help meet supply demand. The City of St. Cloud and TWA have an agreement for the provision of bulk service and emergency potable and non-potable water and wastewater service as well as the adjustment of service territory boundaries. TWA also has a bulk sales agreement with O&S Water Supply Company, Inc., a private company serving the Pleasant Hill Lakes and Bella Lago subdivisions, and with the Enterprise Community Development District, which distributes water to residents of Celebration. Reedy Creek Improvement District has an interconnect with TWA. This discussion is also found in the revised Data and Analysis Section of the Potable Water Element that was transmitted to DCA as part of the Facilities Work Plan.

As was previously discussed TWA has an interlocal agreement with the Kissimmee Utility Authority (KUA) to provide KUA with reclaimed water for cooling water to the electric power generation facility at the Cane Island Power Park (CIPP).

Osceola County is amending the Comprehensive Plan to include enabling policies that will describe water supply arrangements between the County and its water suppliers to ensure the County will have water supply to meet its water demand over the next ten year planning period. The County will amend its Intergovernmental Coordination Element (ICE) to include policies recognizing that TWA will provide water and services to the City of Kissimmee and those portions of the unincorporated County not located within the City of St. Cloud's Chapter 180 service area. The County will also amend the ICE to include policies recognizing that the City of St. Cloud provide potable water services to those portions of the unincorporated County within the City's 180 service area and the Joint Planning Agreement between the City and the County. Furthermore, the County proposes to amend the ICE to reference existing policies listed under Objective 1.5 of the Potable Water Element addressing regional coordination of Water Resources.

O & S Water Company is a private company with a bulk sales agreement with TWA. An interlocal agreement between the County and O & S is not required.

3.12 Domestic Self-Supply

Domestic self-supply demand assessments were developed by the South Florida Water Management District (SFWMD) as part of the development of the "Kissimmee Basin Water Supply Plan 2005-2006 Update". SFWMD stated that domestic self-supply includes small supply systems with projected demands of less than 0.1 million gallons per day (MGD) in 2025, as well as residents that supply their own water needs. According to SFWMD, self-supply residents may be within utility service boundaries or outside of those boundaries.

Table 12 was created by Osceola County staff to project potential domestic self-supply population and demand. The table is based upon information provided by SFWMD in the "Kissimmee Basin Water Supply Plan 2005-2006 Update".

TABLE 12
OSCEOLA COUNTY DOMESTIC SELF-SUPPLY PROJECTED POPULATION AND DEMAND

YEAR	2009	2014	2019	2025	2028
Self-Supply Population	22,320	24,033	25,746	27,803	28,831
Self-Supply Demand in MGD	3.956	4.068	4.186	4.33	4.45

Source: Osceola County Planning and Zoning, 2009

Osceola County staff recognizes the domestic self-supply population and demand projections, and those projections are included in this narrative. The following information should be considered when reviewing the domestic self-supply data:

- The domestic self-supply population is already accounted for in the service area populations in Table 3. Demand and supply calculations for each water supplier will account for the domestic self-supply populations within the UGB;
- Since the SFWMD projections were created, Osceola County's Comprehensive Plan was adopted by the Osceola County Board of County Commissioners, along with a stipulated settlement agreement with the State DCA, on December 7, 2007. The adopted plan became effective on July 14, 2008. The following policies within the recently adopted plan address the use of potable wells and septic tanks within the UGB:
    - Policy 1.1.5. of the Future Land Use Element and Policy 1.2.2. of the Potable Water Element require all new development in the UGB to connect to *central potable water systems except where the development of fewer than* four adjacent single-family lots are possible and service does not exist within 200 feet; and
    - Policy 1.2.3. of the Potable Water Element requires existing development within the UGB connect with a central potable water system within one year of service being available.

- The concept of the UGB is to encourage compact growth that utilizes existing infrastructure and other services. Implementation of the UGB and the Osceola County

Comprehensive Plan is anticipated to reduce the number of individuals on domestic self-supply;

- With the exception of public health hazards or the protection of environmentally sensitive areas, the Comprehensive Plan does not allow for the use of central water and sewer systems outside of the UGB. County residents outside of the UGB will continue to utilize potable water wells.

4.0 CAPITAL IMPROVEMENTS

As Osceola County is not a provider of potable water to residents of the unincorporated County, the Capital Improvements Program adopted by the Board of County Commissioners does not include water supply facilities capital projects. Within the Urban Growth Boundary, capital improvements required to build and expand water supply facilities to serve existing and new development within the unincorporated County are provided by either the TWA or the City of St. Cloud. As of this time, O & S Water Company is not expanding to serve more than 4,255 residents of the Pleasant Hill Lakes and Bella Lago subdivisions. O & S Water Company is not anticipating additional capital improvements; therefore, there is no list of capital improvements from O & S Water Company. As part of the development of the Work Plan, Osceola County will include a list of capital projects to be undertaken by the TWA and the City of St. Cloud. As required, these projects will be either be adopted as part of the Potable Water Element or will be included in the Capital Improvements Element's Five-Year Schedule of Improvements.

4.1 Tohopekaliga Water Authority

TWA projects listed in the 10-Year Water Supply Facilities Plan are reflected in the **Tohopekaliga Water Authority 2009-2013 Capital Budget** as adopted by the TWA Board of Supervisors in the fall of 2008.

The TWA 2009-2013 Capital Budget is a five-year financing plan that covers expenditures for maintenance and replacement of existing potable water and sanitary sewer systems as well as the creation and expansion of new treatment systems to serve future needs. According to the Executive Summary of the 2008-2013 Capital Budget, TWA plans to spend nearly $325 million dollars between Fiscal Year 2008/2009 and Fiscal Year 2012/2013 for all capital projects. Approximately $69 million was approved for the Fiscal Year 2008/2009 for all capital projects. Generally, impacts fees are used to finance water and wastewater capital improvements and revenues raised through water, sewer and reclaimed water customer fees are utilized for operations, maintenance, repair and replacement. According to the TWA 2008-2013 Capital Budget, bond issues are proposed to finance several construction projects as well as alternative water supply projects.

Map 6 lists the major TWA capital projects and the sub-systems they are located in.

TABLE 13
TOHOPEKALIGA WATER AUTHORITY
WATER IMPACT PROJECTS SYSTEMWIDE
FY2008/2009-FY2012/2013

PROJECT	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	TOTAL
Private System Acquisition	$120,000	$120,000				$240,000
16" RM Connection Livingstone Rd/Sand Hill Rd & CR 545	$8,000		$607,000			$615,000
16" WM-Carroll St. Loop				$1,791,000		$1,791,000
Line Upgrades	$250,000	$250,000	$250,000	$250,000	$250,000	$1,250,000
20"WM Poinciana Blvd Ext from Pam Rd to US192	$1,791,000					$1,791,000
Water System Extensions to Developed Areas	$550,000	$550,000	$550,000	$550,000	$550,000	$2,750,000
North West WTP Reduced Well Field Pumping						
Boggy Creek Road (from Hilliard Isle Rd-Osceola Pkwy)	$4,050,000					$4,050,000
Southwest WTP-Phase 2 Expansion	0	0	$1,000,000	$4,630,000		$5,630,000
Parkway WTP Water Main	$680,000	$1,800,000	$2,400,000			$4,880,000
Goodman Road Easements	$45,000					
Reuse Main Extension to New Toho Admin Bldg	$100,000					$100,000
Parkway Ground Storage Tank Aerator Expansion	$105,000					$105,000
Martin Street Water Main Extension	$125,000					$125,000
Parkway WTP Water Main	$32,000					$32,000
Reuse Main Extensions	$82,500	$82,500	$82,500	$82,500	$82,500	$412,500
Simpson Road WMK Extension-U.S. 192 to Turnpike	$832,500					$832,500
South East Osceola County AWS Exploratory Wells	$7,012,000	$4,070,000	$1,505,000			$12,587,000
City Water Impact Projects	$45,000		$434,000			$479,000
County Water Impact Projects	$1,600,000					$1,600,000
Harmony WRF Effluent Line			$275,000			$275,000
Harmony Water Main Upsizing			$700,000	$98,000	$98,000	$896,000
Water Use Permitting-Wetland Monitoring	$330,000					$330,000

TABLE 13
TOHOPEKALIGA WATER AUTHORITY
WATER IMPACT PROJECTS SYSTEMWIDE
FY2008/2009-FY2012/2013

PROJECT	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	TOTAL
16" Water Main on Ham Brown Road-Lizzia Brown and Cresto		$335,000				$335,000
Poinciana 20 WUP Mitigation	$400,000	$400,000				$800,000
New Water Main Reedy Creek-Marigold to Poinciana Boulevard	$2,307,000					$2,307,000
Water Main Extension from Lake Marion Drive-Lake Hatchineha Road				$500,000	$2,750,000	$3,250,000
Poinciana Water Treatment Plant #5 Expansion					$9,275,000	$9,275,000
TOTAL	$20,466,000	$7,636,000	$7,880,000	$8,002,000	$13,006,000	$56,990,000

Source: Tohopekaliga Water Authority, 2008

TABLE 14
TOHOPEKALIGA WATER AUTHORITY
WATER IMPACT FEE REVENUES SYSTEMWIDE
FY2008/2009-FY2012/2013

SOURCES	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	TOTAL
CARRYOVER FUTURE CAPITAL OVERLAY	$21,603,000	$7,515,000	$5,775,000	$4,630,000	$4,463,000	$43,986,000
CURRENT YEAR REVENUE PROJECTIONS						
Water Impact Fees	$5,463,000	$5,713,000	$6,713,000	$7,863,000	$8,763,000	$34,515,000
Hydraulic Shares	$45,000	$25,000				$70,000
Interest Earnings	$1,114,000	$403,000	$266,000	$217,000	$345,000	$2,345,000
TOTAL PROJECTED REVENUES	$6,622,000	$6,141,000	$6,979,000	$8,080,000	$9,108,000	$36,930,000
TOTAL SOURCES & CARRYOVER	$28,225,000	$13,656,000	$12,705,000	$12,710,000	$13,571,000	$73,860,000

Source: Tohopekaliga Water Authority, 2008

Project descriptions of water impact projects from the TWA 2009-2013 Capital Improvements Program are found in Attachment B.

According to the TWA 2009-2013 Capital Budget, the Authority approved spending nearly $20.5 million on impact fee projects in Fiscal Year 2008/2009, and the Authority anticipates

spending nearly $57 million on impact fee projects intended to serve new and anticipated development between Fiscal Year 2008/2009 and Fiscal Year 2012/2013
The TWA 2009/2013 Capital Budget identifies five alternative water supply projects. Two of these projects (the Taylor Creek Reservoir Surface Water Treatment Plant, and the Cypress Lake Brackish Water Treatment Plan), have been identified in both the Kissimmee Basin Supply Plan 2005-2006 Update and the TWA Consumptive Use Permit Application. TWA anticipates spending nearly $109 million of revenue bond money on alternative water supply projects between FY2008/2009 and FY2012/2013.

Although the TWA 2009-2013 Capital Budget did not identify any potential projects between Fiscal Year 2013/2014 and 2018/2019, Table 17, "Proposed Alternative Water Supply Projects Table", lists several alternative water supply projects proposed by the STOPR group.

TABLE 15
TOHOPEKALIGA WATER AUTHORITY
ALTERNATIVE WATER SOURCES PROJECTS
FY2008/2009-FY2012/2013

PROJECTS	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	TOTAL
Reedy Creek Stormwater Capture (AWS)			$750,000	$1,500,000		$2,225,000
Reuse Main-St. Cloud-Parkway WRF Interconnect			$2,600,000			$2,600,000
Taylor Creek Reservoir Surface WTP			$750,000	$12,500,000		$20,000,000
Poinciana Blvd Alternative Water Supply Main		$500,000	$2,500,000			$3,000,000
Cypress Lake 15 MGD Brackish Water WTP		$3,275,000	$77,625,000			$80,900,000
TOTAL	0	$3,775,000	$90,975,000	$14,000,000		$108,725,000

Source: Tohopekaliga Water Authority, 2008

- Reedy Creek Stormwater Capture-construction is anticipated for Fiscal Year 2011/2012. Stormwater runoff from Reedy Creek or the Bonnet Creek Drainage Canal will be withdrawn, treated and used for irrigation and will also be applied for TWA's rapid infiltration basins to recharge the Floridan aquifer. The project is estimated to meet a six mgd need within this sub-area.
- Taylor Creek Reservoir Surface Water Treatment Plant-previously identified as a joint project between TWA and five other utilities. As stated earlier, TWA anticipates receiving up to five mgd from this project by 2016.

- Cypress Lake 15 MGD Brackish Water Water Treatment Plant-previously identified as a joint project between TWA, St. Cloud and Polk. TWA's 2009/2013 Capital Budget anticipated construction of the plant in Fiscal Year 2010/2011; however, the TWA 2010/2014 Capital Budget may show a later construction date. TWA anticipates receiving water from the Cypress Lake project after 2013.

TABLE 16
TOHOPEKALIGA WATER AUTHORITY
ALTERNATIVE WATER SOURCES REVENUES
FY2008/2009-FY2012/2013

REVENUE SOURCES	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	TOTAL
2009/2011 Bond Issues	$16,450,000	$3,775,000	$90,975,000	$14,000,000		$125,200,000
TOTAL PROJECTED REVENUES	$16,450,000	$3,775,000	$90,975,000	$14,000,000		$125,000,000

Source: Tohopekaliga Water Authority, 2008

Table ~~20~~ 17 STOPR GROUP PROPOSED ALTERNATIVE WATER SUPPLY PROJECTS

Alt No.	Tiers Ranking	Water Supply Alternative	Source		Intended Use			Storage		Conjunctive Use		Estimated Time to Implement (Years)
			SW	GW	Potable	Non-potable	Recharge	Reservoir	ASR / Ground	Y	N	
1	1	***Cypress Lake Wellfield***		✓	✓					✓		2013
		The Cypress Lake Wellfield alternative water supply project is a planned TWA project to supply potable water to TWA, St. Cloud and Polk County beyond 2013. The project will rely on groundwater from the Lower Floridan Aquifer. The source is not an Upper Floridan fresh water supply and meets the South Florida Water Management District Alternative Water Supply definition. It is anticipated that this project will provide approximately 15 MGD of potable water.										
2	1	***Stormwater Capture***	✓			✓	✓	possibly ✓		✓		2013-2025
		Evaluate the feasibility of capturing and treating stormwater to use for non-potable needs. Toho Water Authority has began a study to evaluate capturing stormwater from adjacent properties near its S. Bermuda Water Reclamation Facility to beneficially augment reclaimed water supplies at the plant for distribution to its customers. Toho Water Authority has also established a policy to evaluate stormwater capture as an irrigation source for new private development projects.										
3	1	***Water Conservation***										2008-2025
		Develop and implement policies, regulations, and programs focused on reducing existing and future irrigation demand.										
4	1	***Taylor Creek Reservoir***	✓		✓	✓	✓	✓	✓	✓		2016
		The Taylor Creek Reservoir is a joint water supply project between six utilities (Toho Water Authority, City of Titusville, City of Cocoa, Orange County Utilities, Orlando Utilities Commission and East Central Florida Services, Inc.) and the St. Johns River Water Management District to develop a surface water treatment / alternative water supply project that will provide a capacity of approximately 70 MGD to meet future water needs for the region. TWA's allocation request from this project is 5 MGD. The source of the surface water will come from the St. Johns River.										
5	1	***Permit Conversions***		✓	✓					✓		2009-2015
		Evaluate converting existing irrigation (golf course and landscape) and agricultural well permits to potable water water supply permits.										
6	2	***South Osceola County Wellfield***		✓	✓					✓		2018
		Construct three test wells south of Cypress Lake to determine if additional groundwater is available for potable water needs. Expand the Cypress Lake wellfield into South Osceola County based on availability of water and future needs for STOPR Group.										
7	2	***Polk County S.E. Wellfield***		✓	✓					✓		2015
		Evaluate the feasibility of pumping groundwater from the Lower Floridan Aquifer as a water source for potable water needs. Polk County is taking the lead on this project.										
8	2	***Lake Kissimmee Surface Water***	✓		✓			✓		✓		2018
		Evaluate the feasibility of pumping surface water from Lake Kissimmee to use as a water source for potable needs.										
9	2	***Lake Hatchineha Surface Water***	✓			✓	✓	limited		✓		2013
		Evaluate the feasibility of pumping surface water from Lake Hatchineha to use as a water source for non-potable needs.										
10	2	***KBMOS+ (potable)***	✓		✓			✓		✓		2018
		Evaluation of the Upper Kissimmee River for the availability of surface water for water supply or supplemental water supply in conjunction with the restoration projects.										
11	2	***KBMOS+ (reclaimed & recharge)***	✓			✓	✓	✓		✓		2018
		Evaluation of the Upper Kissimmee River for the availability of surface water for water supply or supplemental water supply in conjunction with the restoration projects.										
12	2	***RIB Groundwater Recharge***		✓	✓	✓	✓			✓		2013
		Evaluate the discharge of excess reclaimed water, stormwater, and excess surface water to the Rapid Infiltration Basins west of ChampionsGate for direct aquifer recharge through the recharge zones in the area producing a quantity of water for future withdrawal.										
13	2	***Wellfield Optimization***		✓	✓					✓		2013-2016
		Evaluate all existing wells within the Central Florida Utility Coordination group to determine through optimization the functionality and operation of the wells to determine if more water can be withdrawn.										
14	2	***Backpump South of Kissimmee River Restoration***	✓		✓	✓		✓		✓		2020+
		Evaluate the feasibility of pumping the excess supply of surface water in the southern portion of the Kissimmee River before entering Lake Okeechobee to the north to use as a water source for potable and non-potable needs.										
15	2	***Polk County - Lower Floridan Ground Water***		✓	✓					✓		2012
		Evaluate the feasibility of pumping groundwater from the Lower Floridan Aquifer as a water source for potable water needs. Polk County is taking the lead on this project.										
16	3	***Brackish Aquifer Ground Water***		✓	✓					✓		2015-2025
		Evaluate the feasibility of pumping groundwater from the Brackish Aquifer Zone to use as a water source for potable needs.										
17	3	***Desalination - Ground Water***		✓	✓					✓		2020
		Evaluate the feasibility of pumping groundwater from the Boulder Zone to use as a water source for potable needs.										
18	3	***Agricultural Optimization***	✓	✓	✓	✓						2015-2025
		Work with agricultural operations that use significant quantities of water for irrigation to improve their water use efficiency and therefore capture the water savings.										
19	4	***Desalination - Ocean***	✓	✓						✓		2025
		Evaluate the feasibility of using sea water as a water source for potable and non-potable needs.										

Source: Toho Water Authority 2008

4.1 City of St. Cloud

Both the City of St. Cloud potable water and non-potable water capital improvement programs for the years 2008 through 2014 are found within the 2008 Master Plan Update Technical Memorandum (TM) dated October 31, 2008 as prepared for the City by the consulting firm of Reiss Engineering. The City of St. Cloud prepares its capital improvement programs biennially, and, according to the City staff the revised potable water, wastewater and non-potable water programs are contained within the technical memorandum.

According to the Master Plan Update, the City budgeted nearly $4.4 million for water projects in Fiscal Year 2009 and projected nearly $60 million dollars for water projects through Fiscal Year 2014. Over $4.1 million dollars was scheduled for non-potable water in Fiscal Year 2009, and it was anticipated the City will spend over $20 million between Fiscal Years 2009 and 2014. An alternative water supply project, entitled "AWS/Cypress Lake Wellfield", is listed as a water plant project and was scheduled to commence in Fiscal Year 2008.

According to the Master Plan Update, the water and non-potable water capital improvement plans are financed through a combination of impact fees, impact fee credits, repair and replacement funds (R&R), loans, and other non-repaid revenues (grants, developer contributions, etc.). Between Fiscal Year 2009 and Fiscal Year 2014, the City of St. Cloud anticipates approximately $60 million in revenue for water projects and approximately $20.3 million dollars in revenue for non-potable water projects. Table 19 and Table 21 identify anticipated funding for all potable water and non-potable water capital projects, including those projects not included within this text.

No potable water projects in the Master Plan Update were scheduled outside of the Fiscal Year 2008-Fiscal Year 2014 period. The following non-potable water project was scheduled outside of the Fiscal Year 2009-Fiscal Year 2014 period:

- Phase 2 Surface Water Augmentation -$3,750,000. Note: Treatment of surface water for augmentation of the public access reuse system from East Lake Toho

No specific fiscal year was provided for the completion of either project.

The Phase 2 Water Augmentation Project is projected to be funded by a combination of loans and other non-repaid sources.

Map 7 lists the proposed water capital projects for the City of St. Cloud. Project descriptions of the City's water and non-potable water projects are found in Attachment C.

TABLE 18
CITY OF ST. CLOUD
WATER CAPITAL IMPROVEMENT PROGRAM
FY2009-FY2014

PROJECTS	Funding Sources	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	TOTAL
Water Meter Installs	R &R-50%, Other Non Repaid-50%	$132,000	$217,570	$226,92	$236,683	$246,860	$257,475	$1,317,514
Misc Line Extensions/ Incl ROW	Impact Fees-50%, Other Non-Repaid-50%	$199,500	$206,691	$215,579	$224,849	$234,517	$244,602	$1,325,738
Misc Water Engineering	R &R-100%	$165,375	$173,644	$182,326	$191,442	$201,014	$211,065	$1,124,866
Misc. Line Repairs	R &R-100%	$168,000	$174,056	$181,54 0	$189,346	$197,488	$205,980	$1,116,411
Treatment Equipment	R &R-100%	$24,500	$206,345	$25,235	$212,535	$25,992	$218,911	$713,519
Lines Equipment	R &R-100%	$50,000	$200,351	$206,36 1	$212,552	$218,929	$225,497	$1,113,690
AWS/Cypress Lake Wellfield	Impact Fee-100%	$500,000	$500,000	$500,000	$12,500,000	$12,500,0 00		$26,500,000
Water Plant #4	Loans-90%;R&R-10%							$0-will be implemented after FY2014
Operations Management	R &R-100%	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$150,000
NE Booster Pump Station (Narcoossee)	Impact Fees-100%	$848,409						$848,409
New Nolte Road Extension-Narcoossee Road to Old Hickory Subdivision	Impact Fee Credits70%; Other Non-Repaid-30%	$150,000	$465,600					$615,600
New Nolte Road Extension-Old Hickory Subdivision to Michigan	Other Non-Repaid-67%; Impact Fee Credits-33%	$168,848	$168,848					$337,696
Pine Tree/Cord/Lakeshore Water Line Loop	Other Non-Repaid80%; Impact Fee Credits-20%	$46,431	$417,879					$464,310
Water Plant #1 & #2 Refurbishment	Loans-75%; R&R-25%	$1,300,000		$8,000,000	$9,000,000			$18,300,000
Wetland Mitigation	R&R-100%	$168,733	$45,712	$11,455				$225,900
Budinger Avenue Water Main	Impact Fees-100%							

TABLE 18
CITY OF ST. CLOUD
WATER CAPITAL IMPROVEMENT PROGRAM
FY2009-FY2014 (cont'd.)

PROJECTS	Funding Sources	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	TOTAL
New Nolte Road Extension-Michigan to Canoe Creek	Impact Fees-65%; Other Non-Repaid-35%		$50,000	$415,600				$465,600
Old Hickory Tree –New Nolte to Hickory Tree Elementary	Impact Fees-100%		$75,000	$176,600				$251,600
East 192 Line Extension Nora Tyson to Nova Road	Other Non Paid-30%; Impact Fee Credits-70%		$376,200					$376,200
Backflow Preventor Repair and Installation	R &R-74%, Other Non-Repaid-26%	$67,750	$71,022	$74,623	$78,892	$83,838	$89,338	$465,463
Water Plant #2 Decommissioning	R&R-100%					$400,000		$400,000
Water Treatment #1 Update Transmission Mains	R &R-100%			$435,000	$400,000			$835,000
Canoe Creek to WTP #4 Interconnector	Impact Fees-100%		$200,000	$1,500, 000				$1,700,000
Canoe Creek to New Nolte Interconnector	Impact Fees-100%		$230,000	$796,000				$1,026,000
Canoe Creek Christian Church Line Upgrade	Other Non-Repaid 100%							$0
Water Treatment Plant #4-High Service Pump	Loans-100%				$150,000			$150,000
TOTAL		$4,390,746	$3,427,718	$12,972,245	$23,421,300	$14,133,640	$1,477,869	$59,823,520

Source: City of St. Cloud, 2008

TABLE 19
CITY OF ST. CLOUD
POTABLE WATER CAPITAL PROJECT FUNDING SOURCES
FY2009-FY2014
(in dollars)

SOURCES	FY09	FY10	FY11	FY12	FY13	FY 14	TOTAL
Impact Fees	1,816,499	1,466,766	3,350,530	12,612,424	12,617,259	122,301	31,985,779
Impact Fee Credits	65,006	139,296	0	0	0	0	204,302
Renewal and Replacement	1,042,608	986,308	3,235,453	3,657,441	1,253,727	1,081,124	11,256,661
Loans	975,000	0	6,000,000	6,900,000	0	0	13,875,000
Other Non-Repaid Sources	491,633	835,349	386,263	251,435	262,654	274,444	2,501,778
Total Projected Revenues	4,390,746	3,427,718	12,972,245	23,421,300	14,133,640	1,477,869	59,823,520

Source: St. Cloud Water Wastewater and Reclaimed Water Master Plan Update, 2008

TABLE 20
CITY OF ST. CLOUD
NON-POTABLE WATER CAPITAL IMPROVEMENT PROGRAM
FY2009-FY2014

PROJECT	Funding Sources	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	TOTAL
Misc. Engineering	R&R-100%	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$357,100
Reuse Meters	Impact Fees-100%	$30,000	$110,250	$115,763	$121,551	$127,628	$134,010	$639,201
Misc Line Extensions	R&R-100%	$87,150	$91,508	$96,083	$100,887	$105,931	$111,228	$592,787
Misc Reuse Replacement/Rehab	R&R-100%	$0	$10,000	$15,000	$20,000	$22,000	$24,200	$91,200
West New Nolte (Michigan to Canoe Creek) Reuse Main	Impact Fees-65%; Other Non-Repaid-35%		$164,430	$305,370				$469,800
Lakeshore Stormwater/ Surface Water Augmentation	Impact Fees-100%	$1,500,000	$0	$0	$2,678,776			$4,178,776
Elementary School Upsizing	Impact Fees-100%	$123,456						$123,456
Budinger Ave Reclaim Main	Impact Fees-100%							$0
SSWWTF Reclaim Pond Expansion	Impact Fees-100%	$1,900,000						$1,900,000
Canoe Creek Road-North Reuse Main	Impact Fee Credits-40%; Other Non-Repaid		$295,800					$295,800
Master Plan/Model Updates	R&R-100%							$0
Hickory Tree North Reuse Main	Impact Fees-80%; Other Non-Repaid-20%		$400,000	$1,000,000	$1,500,000	$544,700		$3,444,770
Hickory Tree South Reuse Main	Impact Fee Credits-60%; Other Non-Repaid-40%		$340,000	$1,000,000	$1,500,000	$560,000		$3,400,000
East 192 Reuse Main Hickory Tree to Nova Road	Impact Fee Credits-30%; Other Non-Repaid-70%	$75,000	$300,000	$375,000				$750,000
Sawgrass/Cord Ave Reuse Main	Impact Fees-30%; Impact Fee Credits-30%; Other Non-Repaid-40%	$120,000	$1,716,600					$1,836,600
Phase 2 Surface Water Augmentation	Loans-80%; Other Non-Repaid-20%							$3,750,000
New Nolte Reuse Mains	Impact Fees-100%;	$120,000	$1,100,000	$1,000,000				$2,220,000
TOTAL		**$4,172,536**	**$4,724,653**	**$3,659,727**	**$5,981,989**	**$1,424,074**	**$336,442**	**$20,299,420**

Source: City of St. Cloud, 2008

- By 2014, the City plans to withdraw 2.07 mgd from the Lakeshore Stormwater Augmentation Project. That project is scheduled for completion during Fiscal Year 2012.

TABLE 21
CITY OF ST. CLOUD
NON-POTABLE WATER CAPITAL PROJECT FUNDING SOURCES
FY2009-FY2014

SOURCES	FY09	10	FY11	FY12	FY13	FY 14	TOTAL
IMPACT FEES	$3,928,686	$2,695,714	$2,011,845	$4,101,214	$669,320	$245,238	$13,652,016
IMPACT FEE CREDITS	$22,500	$412,320	$712,500	$900,000	$336,000	$0	$2,383,320
RENEWAL and REPLACEMENT	$52,500	$65,125	$72,881	$80,775	$85,814	$91,205	$448,300
LOANS	$0	$0	$0	$0	$0	$0	$0
OTHER NON-REPAID SOURCES	$168,851	$1,551,494	$862,500	$900,000	$332,940	$0	$3,815,784
TOTAL PROJECTED REVENUES	$4,172,536	$4,724,653	$3,659,727	$5,981,989	$1,424,074	$336,442	$20,299,420

Source: St. Cloud Water Wastewater and Reclaimed Water Master Plan Update, 2008

As previously stated, St. Cloud anticipates receiving 5.8 mgd from the Cypress Lake AWS project after it is completed in 2014. City staff also anticipates receiving 16.0 mgd by 2018 from projects to be undertaken after Fiscal Year 2014. Table 17, "Proposed Alternative Water Supply Projects Table", as referenced earlier in this section, lists several alternative water supply projects proposed by the STOPR group the City can utilize .

5.0 GOALS, OBJECTIVES AND POLICIES

The Osceola County Comprehensive Plan, as approved by the Osceola County Board of County Commissioners on April 21, 2008 and effective on July 14, 2008, contains several goals, objectives and policies (GOPs) addressing water supply issues. As the Comprehensive Plan recently became effective, Osceola County has not had the time to create programs or adopt land development code amendments needed to implement the Plan. A comprehensive evaluation of the effectiveness of the Comprehensive Plan's water supply and water resources GOPs will appear in the update to the Water Supply Plan as well as in the 2013 Osceola County Evaluation and Appraisal Report.

Coordination of land uses and future land use changes with the availability of water supplies and water supply facilities. To achieve compact urban growth in an area that is already served by utilities and other public services and facilities, the recently adopted Comprehensive Plan contains objectives and policies within the Future Land Use Element establishing an Urban Growth Boundary (UGB). Policies restrict the expansion of potable water and sanitary sewer services to the UGB and require new development in the UGB to connect to central potable water and sanitary sewer systems. Other objectives and policies in the Future Land Use Element address evaluation of Future Land Use Map amendments and the availability of facilities and services, the Natural Resources Utilization land use category and raw water resources, and wellhead protection . The Potable Water Element includes objectives and policies addressing ensuring that adopted potable water levels of service standards are met, consistency of new or expanded potable water treatment facilities with the Future Land Use Map, prohibition or extension of central potable water systems outside the UGB, the prevention of development of subdivisions with each house on a separate potable water well, and regional coordination of water resources with local water suppliers and the two water management districts.

Revision of potable water level-of-service standards for residential and non-residential users. Policies in the Potable Water Element and the Capital Improvements Element address the adopted potable water level of service standards. As part of the development of the Ten-Year Water Supply Facilities Work Plan, Osceola County staff shall evaluate the adopted level of service standards and consider any revisions if appropriate. The existing level of service standard for the Toho Water Authority (TWA) is an operational level of service and it cannot be used to project future needs. The level of service standard for the Florida Government Utility Authority (FGUA) is no long necessary TWA purchased FGUA and operates the water system. The level of service standard of the City of St. Cloud is based upon both residential and non-residential water consumption, and the County intends to adopt both residential and non-residential level of service standards. Additionally, the County prefers countywide level of service standards for both residential and nonresidential potable water uses. For these reasons, the County is replacing the adopted potable water level of service standards with the following standards:

Potable Water Supply Standards (in gallons per day-gpd)	Toho Water Authority (TWA)	City of St. Cloud Utilities	O & S
Residential	96 gpd per capita	96 gpd per capita	96 gpd per capita
Hotel/Motel	120 gpd per room	120 gpd per room	120 gpd per room
Commercial	0.1 gpd per gross square foot of floor area	0.1 gpd per gross square foot of floor area	0.1 gpd per gross square foot of floor area
Public or Private Schools	10 gpd per student	10 gpd per student	10 gpd per student
Operational Standard			
All Land Use Types	98 % of the maximum permitted capacity and minimum 20 PSI pressure will be maintained during fire flow conditions	Not Applicable	Not Applicable

Provision for the protection of water quality in the traditional and new alternative water supply sources. GOPs within the Potable Water Element address cooperation with State and Federal agencies, as well as with the TWA and the City of St. Cloud, regarding the monitoring of potable water. Policies within the Potable Water Element direct the County to adopt a 500-foot wellhead protection area, prohibit industrial and intensive commercial land use map amendments and related uses within the wellhead protection area, and to coordinate and support utility provides and water management districts in developing alternative water supplies. Policies in the Future Land Use Element regulate uses within a 500-foot radius of wellheads of public potable water supply wells as well as the constant revision of a Natural Resource Inventory that includes, but is not restricted to, aquifer recharge areas, wellhead protection areas and raw water extraction and production resources areas. GOPS within the Conservation Element address the conservation, restoration and protection of surface water areas, and the conservation and protection of groundwater resources through amendments to the Land Development Code and cooperation with Federal and State agencies. Amendments to the Land Development Code are to include restrictions on developments that could adversely impact surface waters, incorporate Best Management Practices, including landscaping design and appropriate use of reclaimed water, minimizing development impacts in areas where the potential for adversely affecting potable water supplies is significant. Policies within the Natural Aquifer Recharge Element address the incorporation of aquifer recharge protection regulations into the Land Development Code, the restriction of land use activities within prime and high aquifer recharge areas, and the possible acquisition of aquifer recharge areas for protection as conservation or open space areas.

Revision of priorities for the replacement of facilities, correction of existing water supply and facility deficiencies, and provision for future water supply and facility needs. As Osceola County is not directly responsible for water supply facility needs, the County is limited as to GOPs it can adopt regarding water supply facilities. Policies in the Potable Water Element

address the location of potable water plants and consistency with the Future Land Use Element, as cooperation with utilities and water management districts regarding the finding and development of new and/or alternative water supply sources. A policy in the Future Land Use Element addresses the provision of services and facilities, including water and wastewater systems, within Developments of County Impact.

Provision for conserving potable water resources, including the implementation of reuse programs and potable water conservation strategies and techniques. Policies in the Potable Water Element address the County coordinating with water utilities to require new development to utilize non-potable water for irrigation, as well as the use of water conservation measures such as irrigation and landscape practices, public education, installation of water conserving plumbing fixtures in new or renovated construction, and County cooperation with emergency water conservation measures.

Provisions for improved or additional coordination between a water supply provider and the recipient local government concerning the sharing and updating of information to meet ongoing water supply needs. Policies in the Potable Water Element address the adoption and review of the TWA Master Plan as well as working with the utilities and water management districts to ensure adopted levels of service are met and identified facilities deficiencies are corrected. The completion and adoption of a Ten Year Water Supply Facilities Plan should help implement the GOPs associated with this issue area.

Coordination between local governments and the water supply provider in the implementation of alternative water supply projects, establishment of level-of-service standards and resource allocations, changes in service areas, and potential for annexation. Osceola County's Intergovernmental Coordination Element (ICE) addresses the maintenance of interlocal agreements with agencies providing facilities and services. Policies in the ICE also address the use of joint planning agreements to address the manner in which infrastructure, including potable water and sanitary sewer facilities, will be located, developed, staffed and funded in unincorporated Osceola County prior to municipal annexation as well as coordination with utility providers within the County to determine the future location and service areas of central potable water and sanitary sewer facilities and services.

Coordination of land uses with available and projected fiscal resources and a financially feasible schedule of capital improvements for water supply and facility projects. The GOPs within the Capital Improvements Element tie the provision and maintenance of infrastructure within the Urban Growth Boundary to the GOPs of the Future Land Use Element and the Comprehensive Plan's Urban Growth Strategy.

The need for additional revenue sources to fund water supply and facility projects. The GOPS in the Capital Improvements Element recognize that funding to create new capacity for the processing of potable water, including water plans and water mains, are funded through the potable water utilities rates, fees and charges.

In addition, goals, objectives, and policies may need to be established or revised to address the new statutory requirements discussed in section 1.2. Policies should be particularly developed to address:

> *Coordination with the respective regional water supply plan*. The Conservation Element GOPs address coordination with the South Florida Water Management District in the implementation of the **Kissimmee Basin Water Supply Plan Update** and with the St. Johns River Water Management District's 2005 Water Supply Plan.

Need to update the Work plan within 18 months following the approval of a regional water supply plan.

The goals, objectives and policies of the Potable Water Element will be amended include the following:

Objective 1.6 Ten Year Water Supply Facilities Work Plan Osceola County shall develop and maintain a Water Supply Facilities Work Plan (Work Plan) for at least a 10-year planning period addressing traditional and alternative water supply sources, facilities, and issues necessary to serve existing and future development within unincorporated Osceola County.

Policy 1.6.1
The Work Plan shall be incorporated into the Potable Water Element.

Policy 1.6.2
Developing, maintaining and amending the Work Plan shall be a cooperative effort between the County, the Toho Water Authority, the City of St. Cloud, other water supply systems providing service to the unincorporated County, the South Florida Water Management District, and St. Johns River Water Management District.

Policy 1.6.3
The Work Plan shall be consistent with the most current Regional Water Supply Plans of both the South Florida Water Management District and the St. Johns River Water Management District.

Policy 1.6.4
The Work Plan shall be consistent with the most current water supply plans of the Toho Water Authority, the City of St. Cloud, and any other major providers of water to unincorporated Osceola County.

Policy 1.6.5
The Work Plan shall be consistent with the potable water levels of service (LOS) standards established in the Potable Water Element and the Capital Improvements Element.

Policy 1.6.6
The Work Plan shall identify feasible traditional and alternative water supply sources, including water conservation and reuse that are being utilized to meet existing and projected water demands.

Policy 1.6.7
The Work Plan shall be used to prioritize and coordinate the expansion and improvement of facilities used to withdraw, transmit, treat, store and distribute potable water to meet current and future needs within the unincorporated County.

Policy 1.6.8
The Work Plan shall be updated at least every five year, but no later than 18 months following adoption of the applicable Water Management Districts' Regional Water Supply Plan updates.

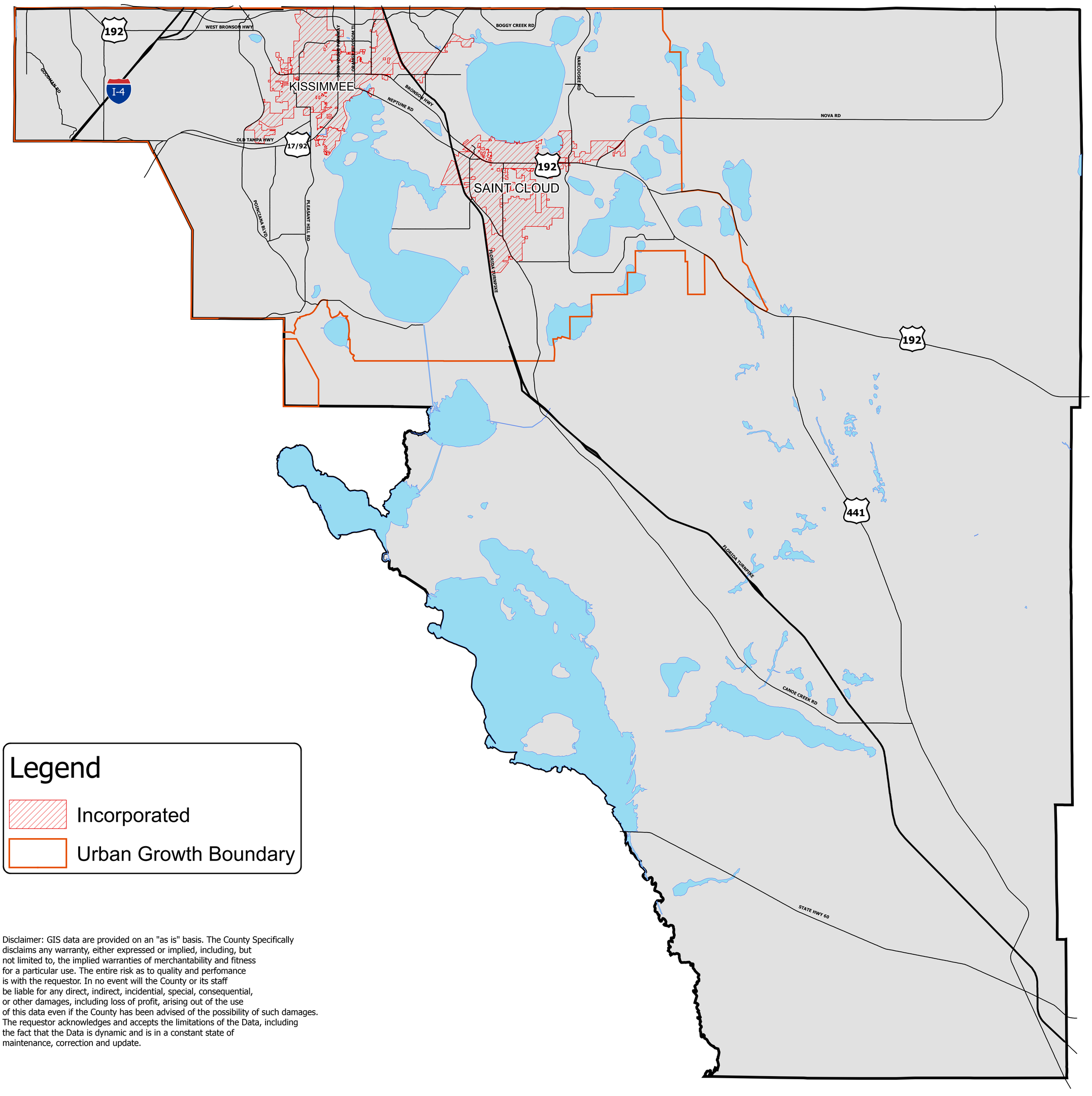
Policy 1.6.9
Capital projects scheduled in the first five years of the Work Plan shall be included in the Capital Improvements Element. This schedule shall be updated annually as necessary to maintain consistency with the capital projects listed in the Work Plan.

The Intergovernmental Coordination Element and the Capital Improvements Element shall be shall also be amended to reflect these proposed policies as appropriate.

Concurrency requiring water supply at building permit stage. The Capital Improvements Element GOPs address concurrency management and include a policy stating that Osceola County will not issue a certificate of occupancy until a determination has been made that all classes of infrastructure, including potable water and sanitary sewer facilities, are in place and available to serve new development. The Capital Improvements Element also includes a policy stating the County shall not issue a certificate of concurrency unless all public facilities are adequate and available to comply with the adopted level of service standards of the Comprehensive Plan. Attachment D contains a list of the specific goals, objectives and policies in the Osceola Comprehensive Plan addressing water issues.

MAPS

Map 1: Urban Growth Boundary



Legend

- Incorporated
- Urban Growth Boundary

Disclaimer: GIS data are provided on an "as is" basis. The County Specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and perfomance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidential, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

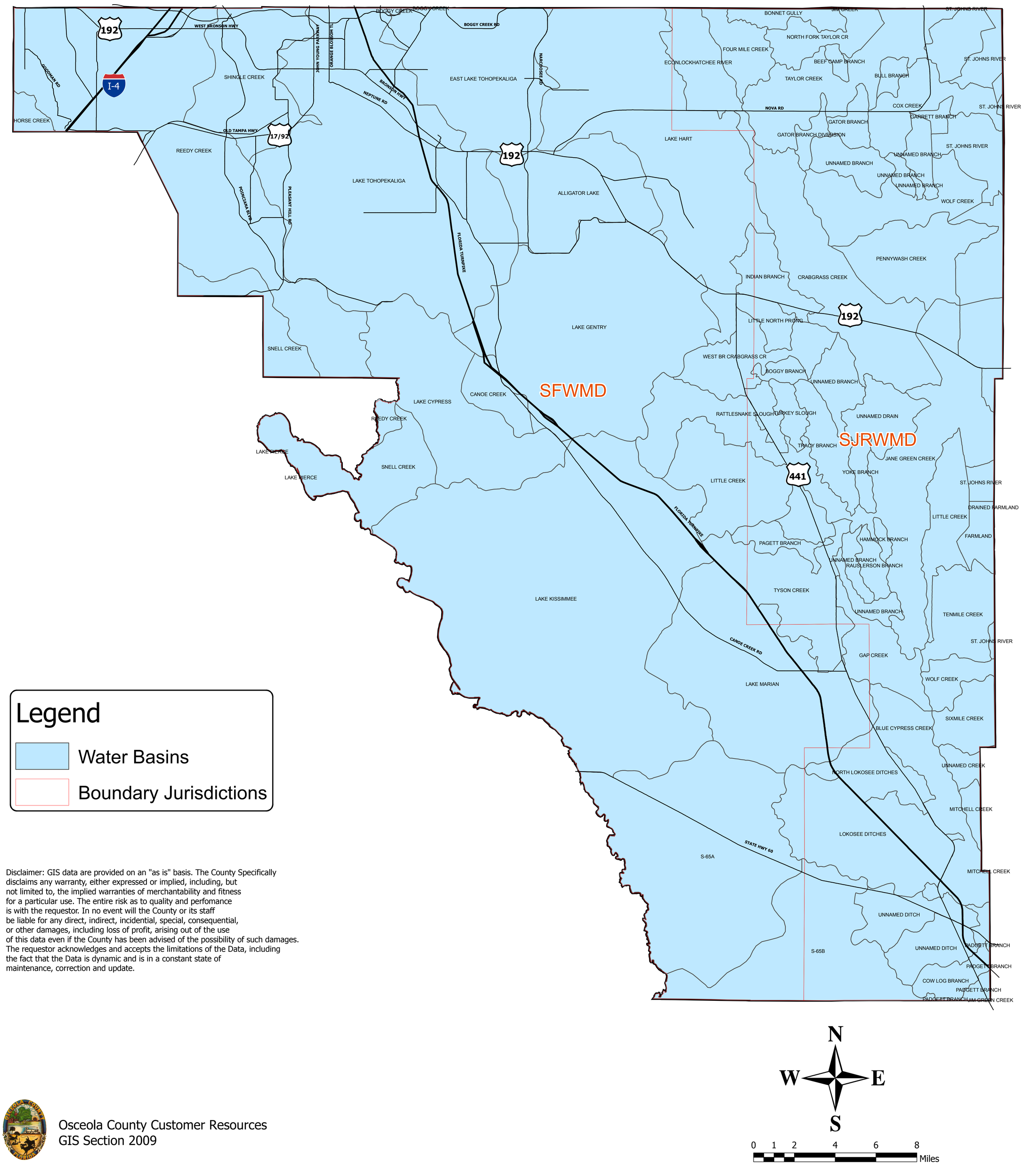
N
W E
S

0 1 2 4 6 8 Miles

Osceola County Customer Resources
GIS Section 2009

File: I:\CustomerRequests\County\Osceola\Planning\StevenJosephson\UrbanGB.mxd

Map 2: Water Basins



Legend

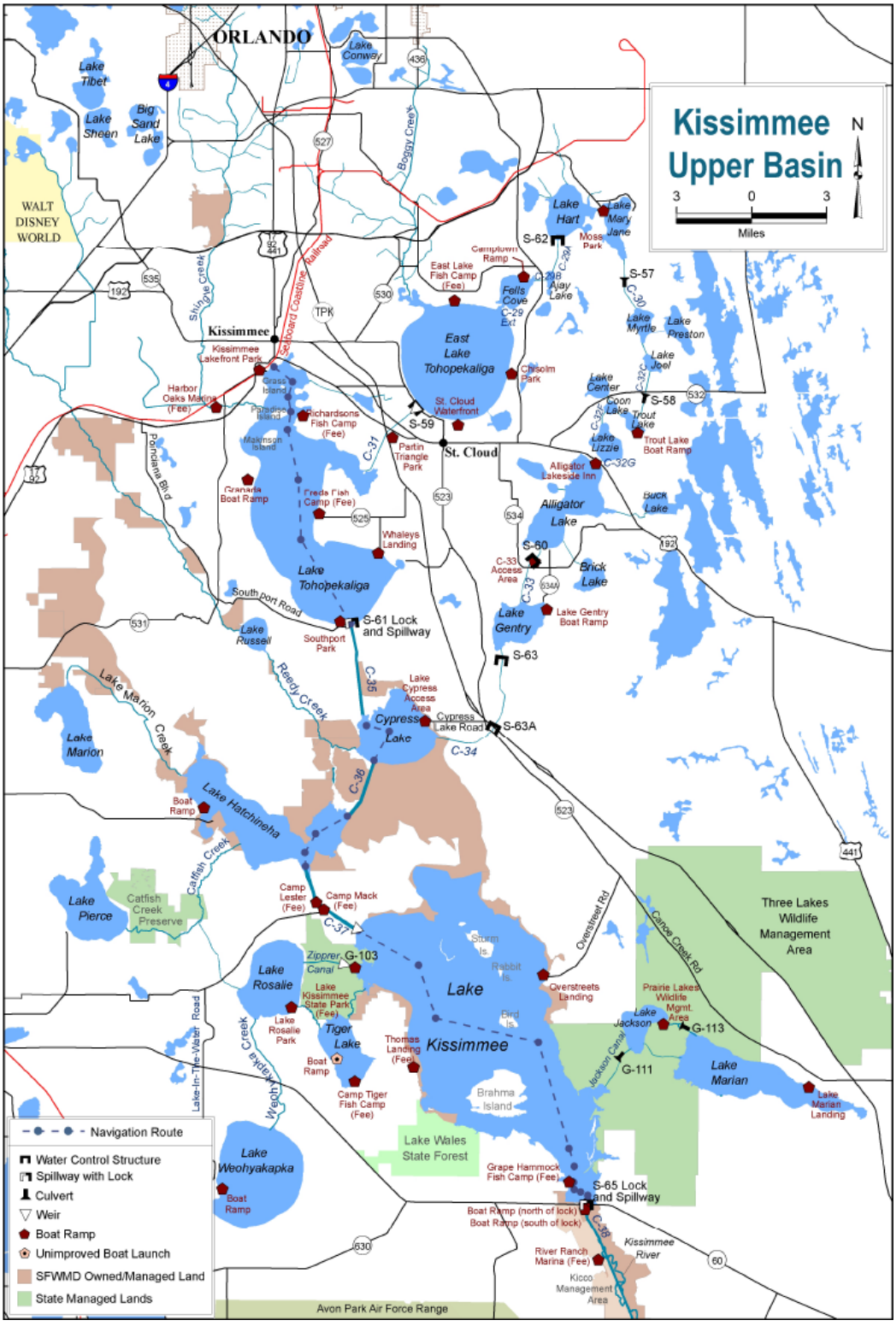
- Water Basins
- Boundary Jurisdictions

Disclaimer: GIS data are provided on an "as is" basis. The County Specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and perfomance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidential, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

Osceola County Customer Resources
GIS Section 2009

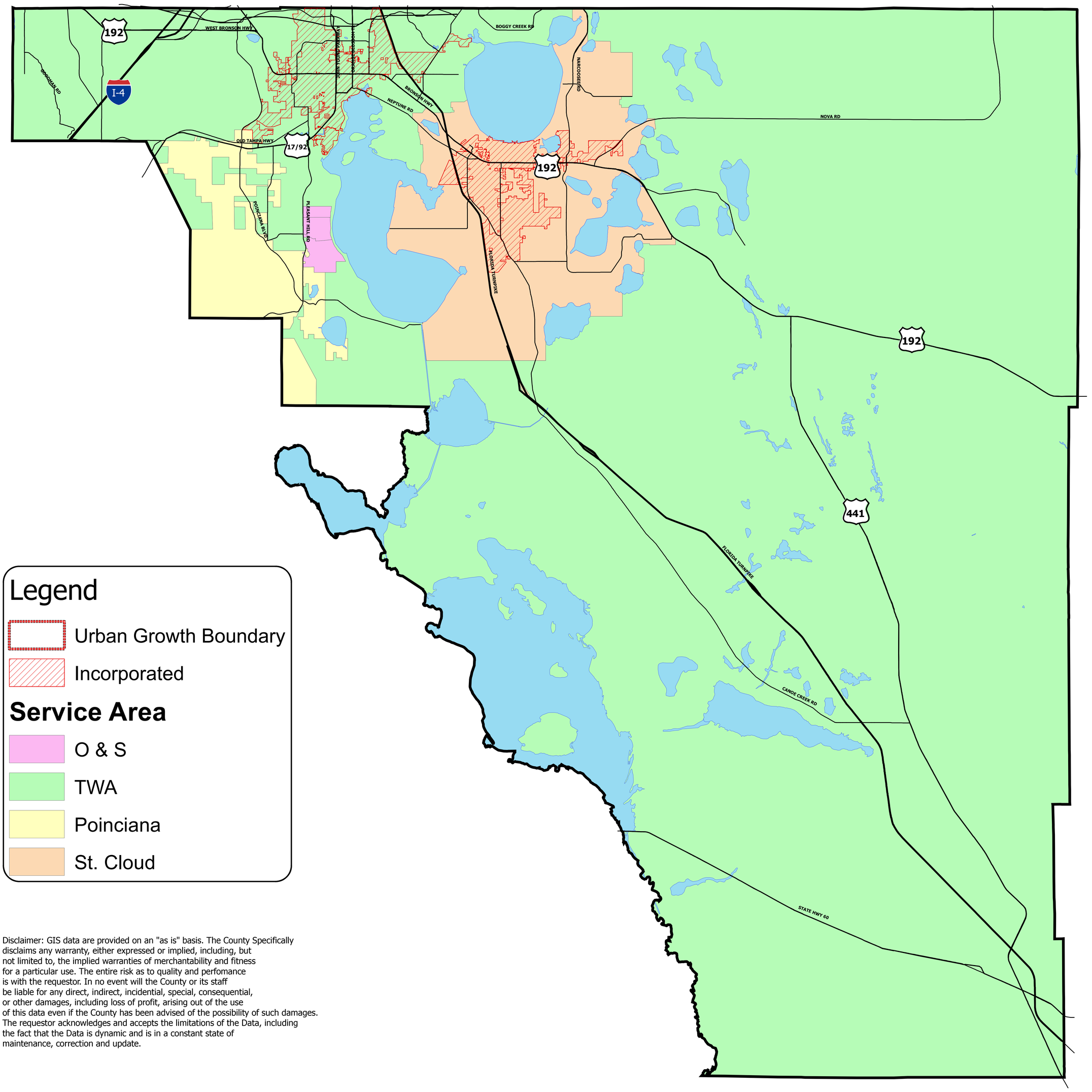
File: I:\CustomerRequests\County\Osceola\Planning\StevenJosephson\Water_Basins.mxd

Map 3: The Kissimmee Upper Basin with the Kissimmee Chain of Lakes



Osceola County Customer Resources
GIS Section 2009

Map 4: Potable Water Service Areas



Legend

- Urban Growth Boundary
- Incorporated

Service Area

- O & S
- TWA
- Poinciana
- St. Cloud

Disclaimer: GIS data are provided on an "as is" basis. The County Specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and perfomance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidential, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

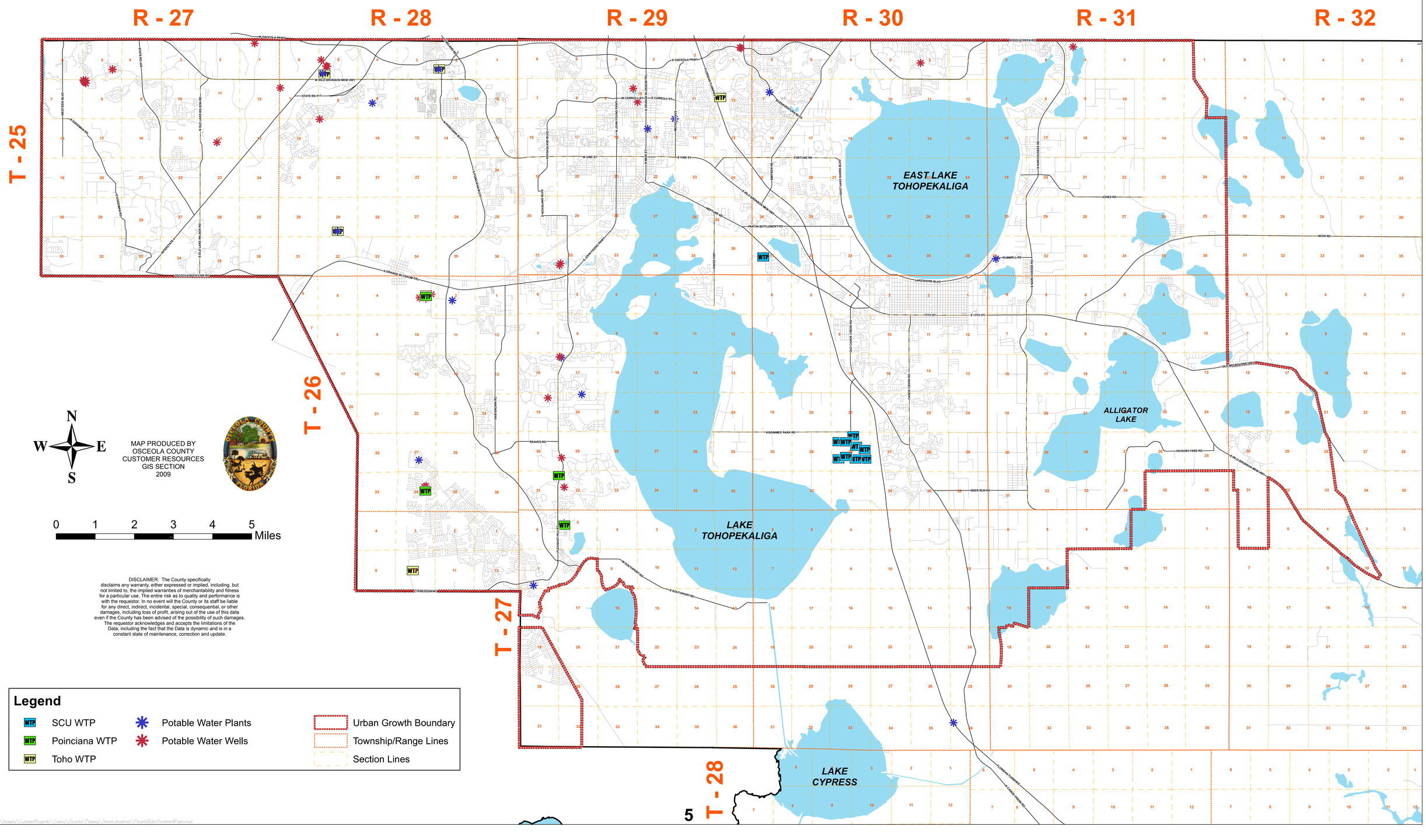
N
W E
S

0 1 2 4 6 8
Miles

Osceola County Customer Resources
GIS Section 2009

File: I:\CustomerRequests\County\Osceola\Planning\PreviousStaff\MaxForgey\PotableWater_SA.mxd

Map 5: Existing Facilities



N
W E
S

MAP PRODUCED BY
OSCEOLA COUNTY
CUSTOMER RESOURCES
GIS SECTION
2009

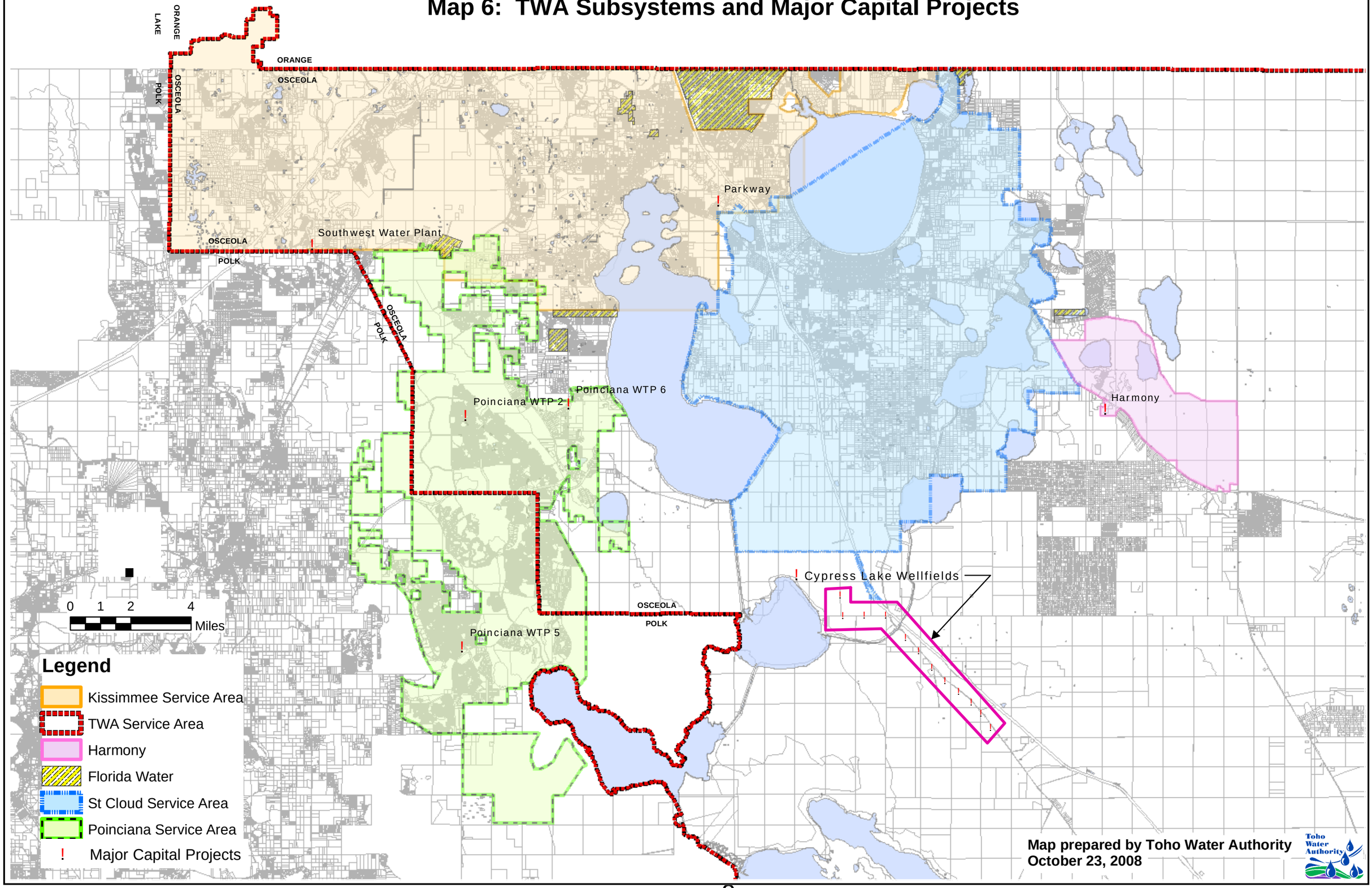
0 1 2 3 4 5 Miles

DISCLAIMER: The County specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and performance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidental, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

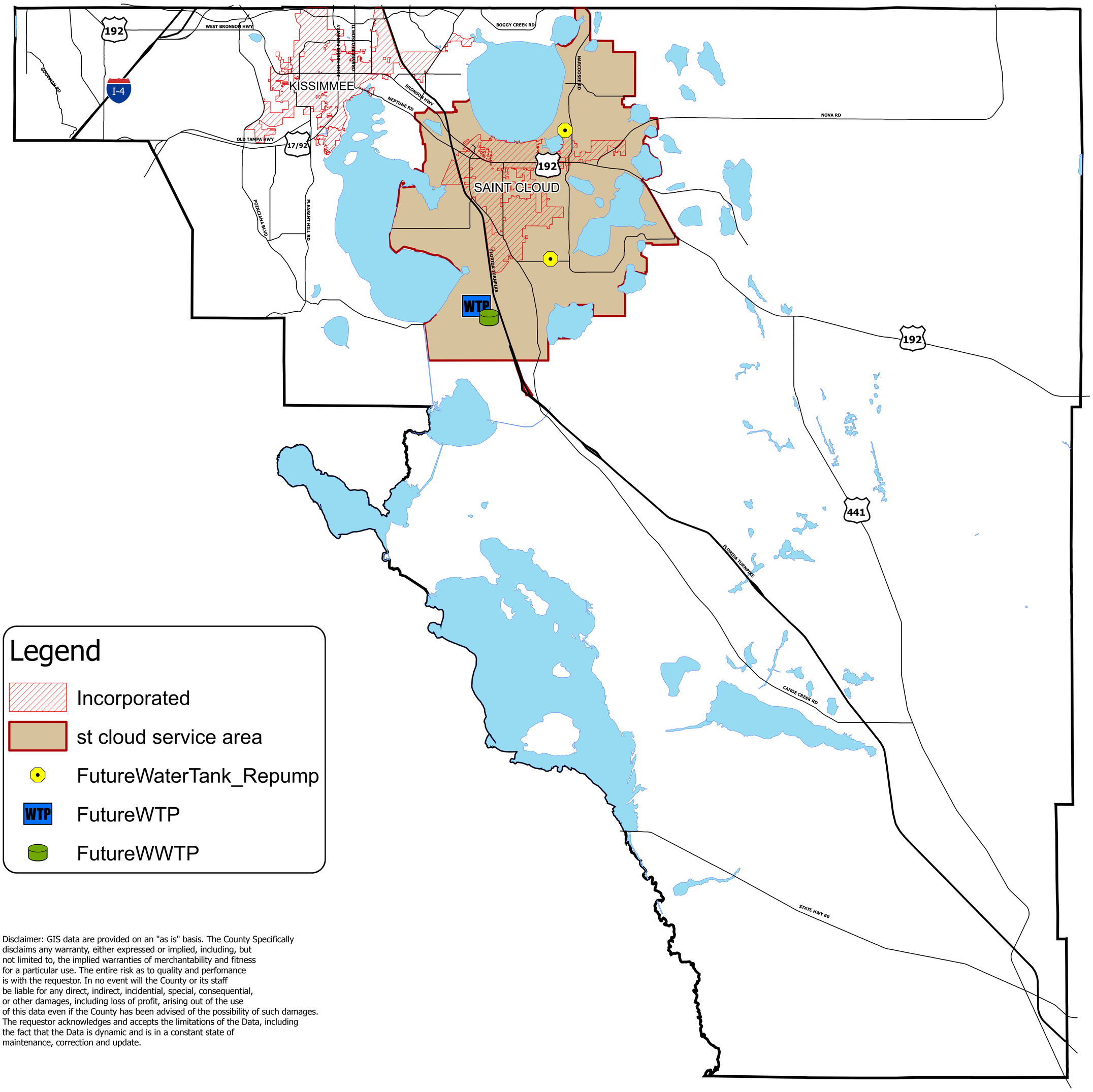
Legend

- WTP SCU WTP
- WTP Poinciana WTP
- WTP Toho WTP
- Potable Water Plants
- Potable Water Wells
- Urban Growth Boundary
- Township/Range Lines
- Section Lines

Map 6: TWA Subsystems and Major Capital Projects



Map 7: Proposed Capital Projects
City of St. Cloud



Legend

- Incorporated
- st cloud service area
- FutureWaterTank_Repump
- FutureWTP
- FutureWWTP

Disclaimer: GIS data are provided on an "as is" basis. The County Specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and perfomance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidential, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

N
W E
S

0 1 2 4 6 8 Miles

Osceola County Customer Resources
GIS Section 2009

File: I:\CustomerRequests\County\Osceola\Planning\StevenJosephson\Prop_CapImp_SC.mxd

ATTACHMENT “A”

NON-RESIDENTIAL WATER GENERATION RATES

ATTACHMENT "A"

NON-RESIDENTIAL WATER GENERATION RATES

Water Demand Calculations	Irrigation Demand Calculations:
SFR Demand = 300 gal/day/SFR MFR Demand = 255 gal/day/MFR **Commercial Demand =** **0.1 gal/day/sf** **School Demand =** **10.0 gal/day/student**	Single-Family Irrigation = 40% of net. Ac. X 1.5"/week Single-Family T/house Irrigation = 40% of Net. Ac. x 1.5"/week Multi-Family Irrigation = 20% of Gross Ac. 1.5"/week Commercial Demand = 20% of Gross Ac. x 1.5"/week School = 20% of Gross Ac. x 1.5"/week

Source: Green Island Development of Regional Impact Application for Development Impact, March, 2006,
RJ Whidden and Associates, Inc. Kissimmee, Florida – page 74

ATTACHMENT "B"

WATER IMPACT PROJECT DESCRIPTIONS

TOHO WATER AUTHORITY 2009-2013

CAPITAL IMPROVEMENTS PROGRAM

SEPTEMBER 2008

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Goodman Road Easements

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 45,000					$ 45,000
Wastewater Impact		$ 135,000					$ 135,000
Total		**$ 180,000**					**$ 180,000**

Project Description

Goodman Road Easements

The county plans future roadway improvements along Goodman Road that will follow the construction of reuse and force mains to serve growth in the area. To avoid the potential relocation of TWA's proposed reuse main and force main, the utilities will be constructed outside the right of way in easements. Additional funding is requested for 20ft permanent utility easements and 20ft temporary construction easements for 19 parcels along Goodman Road for the future installation of a 20"FM and a 24"Reuse main. The probable cost of the easements as obtained by Cowart and Associates is approximately $150,000. An additional 20% of the appraised amount was added for contingency at the recommendation of TWA's property attorney.

FY 2009- $180,000

Prepared by AG

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Reuse Main Extension to New Toho Administration Building

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 100,000					$ 100,000
Wastewater Impact							
Total		**$ 100,000**					**$ 100,000**

Project Description

Extension of approximately 1,400 lineal feet of 12" reuse main to serve the new Toho Water Authority administration building and eventually bring reuse into the downtown area from the west. The reuse main extension will replace irrigation with potable water with non potable supply conserving the Floridan Aquifer supply.

Project Funding Summary

8035 - Water Impact = $100,000
8065 - Wastewater Impact = $100,000

Total Funding Required = $200,000

Prepared by Edwin Matos

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Parkway Ground Storage Tank Aerator Expansion

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 105,000					$ 105,000
Wastewater Impact							
Total		**$ 105,000**					**$ 105,000**

Project Description

By adding trays to the existing aerator which is now the limiting process, the capacity of the aerator can be increased from 6,400 gpm to 8,000 gpm and the capacity of the Parkway WTP can be increased from 8.2 GPD to 9.5 GPD. The Budget amount includes a $70,000 cost estimate from Crom plus 50% for permitting to increase capacity, construction management, and contingency fee.

The additional capacity will increase the Eastern System permitted capacity from 30.564 MGD to 31.864 MGD and support the demand increase from the reduced production and eventual decommissioning of the Spring Lake Village WTP which is non-compliant with TOC violations.

DB

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Martin Street Water Main Extension

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 125,000					$ 125,000
Wastewater Impact							
Total		**$ 125,000**					**$ 125,000**

Project Description

Martin Street Water Main Extension

This project involves the extension of approximately 700LF of 8" water main along Martin Street between Old Dixie Highway and Midway to serve 13 single family residences. The line will tie into the existing 10" tee on the west corner of Martin Street and Old Dixie Highway. Construction costs were based on Rockett & Associates' opinion of probable construction cost for the Nele Rd water main extension project.

FY 2009-
Construction: $125,000

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Parkway WTP Water Main

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 32,000	$ 28,000	$ 76,000	$ 100,000		$ 236,000
Wastewater Impact							
Total		**$ 32,000**	**$ 28,000**	**$ 76,000**	**$ 100,000**		**$ 236,000**

Project Description

Funds were previously budgeted for this project; additional funds are being requested based upon increase in construction costs. This previously budgeted project is necessary to provide water service to the Spring Lake Village WTP service area at build-out and the BVL water service area. The mains will facilitate decommissioning of the Spring Lake Village WTP and the BVL WTP. Additional funding is requested based upon construction cost inflation. The project will be constructed in five segments as follows:

Parkway WTP Water Main – Segment 1 (Simpson Road from Hwy 192 to Turnpike Crossing)
Segment 1 is included in the County roadway project and has been previously budgeted in a separate project.

Parkway WTP Water Main – Segment 2 (Parkway WTP to Shady Lane to Hwy 192)
Segment 2 includes installation of approximately 2,850 LF of 24-inch Water Main from the Parkway WTP to Shady Lane and extending along Shady Lane to Hwy 192. An additional $32,000 (FY 2008-2009) is requested based on a 4% increase in the construction index.

Parkway WTP Water Main – Segment 3 (Hwy 192 from Shady Lane to Simpson Road)
Segment 3 includes installation of approximately 1,900 LF of 24-inch Water Main along Hwy 192 from Shady Lane to Simpson Road. This project includes installation of approximately 120 LF of 24-inch Water Main into a jack and bored 48-inch steel casing pipe under Hwy 192. An increase of $28,000 (FY 2009-2010) is requested based on a 4% increase in construction costs.

Parkway WTP Water Main – Segment 4 (Simpson Road from Turnpike to Boggy Creek Road)
Segment 4 includes installation of approximately 4,800 LF of 30-inch Water Main along Simpson Road from the Turnpike to Boggy Creek Road. This includes a jack and bore crossing under the Turnpike of approximately 300 LF with a 48-inch steel casing and a 30-inch carrier pipe. An increase of $76,000 (FY 2010- 2011) is requested based on a 4% increase in the construction costs.

Parkway WTP Water Main – Segment 5 (Simpson Road from Boggy Creek Road to Hilliard Isle)
Segment 5 includes installation of approximately 8,050 LF of 30-inch Water Main along Simpson Road from Boggy Creek Road to Hilliard Isle. This includes a jack and bore crossing under Boggy Creek Road of approximately 100 LF with a 48-inch steel casing and a 30-inch carrier pipe. An increase of $100,000 (FY 2011 – 2012) is requested based on a 4% increase in the construction costs.

The costs were developed using costs from similar bid projects.

DB

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Private System Acquisition

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 120,000	$ 120,000				$ 240,000
Wastewater Impact							
Total		**$ 120,000**	**$ 120,000**				**$ 240,000**

Project Description

Purchase of the Whispering Pines MAP, Alamo RV Park and the Cypress Cove Private Systems.

The estimated costs to purchase and connect are:

Whispering Pines	$ 600,000
Alamo RV Park	$ 200,000
Cypress Cove	$ 600,000
	$1,400,000

The anticipated allocation is 70% sewer and 30% water:

Wastewater Impact	$ 980,000
Water Impact	$ 420,000
	$1,400,000

This project replaces the connection of private utilities to TWA project.

Data Provided by Mike Johnson
Prepared by Robert F. Pelham

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Reuse Main Extensions

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 412,500
Wastewater Impact		$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 412,500
Total		**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 825,000**

Project Description

Extension of reuse service to private development projects with alternative water supplies and non potable irrigation systems.

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: 16" RM Connection of Livingston Rd to Sand Hill Rd and CR 545

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 8,000		$ 607,000			$ 615,000
Wastewater Impact							
Total		**$ 8,000**		**$ 607,000**			**$ 615,000**

Project Description

This budget item represents the additional funds required to construct this previously approved project. This project has been updated to reflect increases in 16" pipe and 18" directional bore costs from those previously used.

This project provides additional funds for the previous 8035 project "n16 inch RM Livingston and CR545 - Water Impact".

The original project summary, with updated costs, follows:

This project consists of two separate sections. The first section will connect the existing 18" reuse main on Sand Hill Road to the existing 16" reuse main on Livingston Road. The second section of this project will extend the existing 16" reuse main from Livingston Road south to the existing 10" stubout on Old Lake Wilson Road.

Since the existing 16" reuse main on Livingston is currently charged with potable water in order to irrigate Windsor Hills I, Windsor Hills II, and Crestwynd projects, it is important that this section of the project is completed in the immediate future. If budget restraints dictate that both sections of this project cannot be funded at this time, staff requests that the first section is budgeted for FY2008-2009 and the second section is budgeted for a later FY. The first section of reuse main would allow connecting the existing reuse main (which is currently charged with potable) to the reuse main on Sandhill Road, providing reuse instead of potable to Windsor Hills I, Windsor Hills II, & Crestwynd. The second section will provide reuse to future customers on Old Lake Wilson Road.

The cost estimates for this project are broken down as follows:

First Section (Livingston/Sand Hill)	Second Section (Livingston/Old Lake Wilson)
100' of 18" Directional Bore (road crossing) = $51,000	800' of 18" Directional Bore (wetlands & canal) = $472,000
600' of 16" Reuse Main = $129,000	300' of 18" Directional Bore (driveway & road crossings) = $177,000
	5,900' of 16" Reuse Main = $1,469,000
Design, Permitting, etc = $36,000	Design, Permitting, etc = $424,000

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Simpson Road Water Main Extension (from US192 to Turnpike)

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 832,500					$ 832,500
Wastewater Impact							
Total		**$ 832,500**					**$ 832,500**

Project Description

Extension of approximately 2,200 lineal feet of 30" D.I. water main on Simpson Road from US 192 to Turnpike. The water main will connect the Eastern Water System to maintain the current level of service and serve future development along Boggy Creek Road due to the decommissioning of Spring Lake Village WTP. This project also will be part of the infrastructure to eventually eliminate the BVL WTP. The 2001 project is budgeted at $644,000 and the additional budget of $832,500 is needed to update the construction cost estimates. All work will be done in conjunction with County's Simpson Road roadway improvement project.

The funds are estimated based on the 2007 budget prices with appropriate adjustment for the inflation. The scheduling for the requested funds will need to be Coincidence with county's 5-year Capital Improvement Plan.

Prepared by Lan Zhou.

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Line Upgrades

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 1,250,000
Wastewater Impact							
Total		**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 1,250,000**

Project Description

These funds are to be used for increasing water and reuse main diameters beyond what a private development project requires in order to provide service to adjacent areas. TWA often enters into 'upsizing agreements' with private developers where TWA funds the additional design and construction costs for increasing the water and reuse main diameters so that existing or future developments in the adjacent area may be served by the same mains. Since TWA cannot anticipate the developer's schedule which dictates the timing of these 'upsizing agreements', it is important that the funds are available for use as the developer's schedule dictates. These funds are budgeted for use with these 'upsizing agreements'.

Prepared by George Eversole

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: 20" WM Poinciana Blvd. Extension from Pam Road to US192

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 1,791,500					$ 1,791,500
Wastewater Impact							
Total		**$ 1,791,500**					**$ 1,791,500**

Project Description

This project will complete the 20" water main on Poinciana Blvd which will hydraulically connect US 17-92 and US 192. The northern terminus of the Poinciana Blvd 20" water main is currently located at Pam Road.
The completion of the 20" water main between US 17-92 & US 192 will provided for service to the Poinciana Blvd area through build-out conditions and improve the interconnection with the Poinciana System allowing for the eventual decommissioning of WTP #1. Additionally, this water main will provide a hydraulically efficient connection from Poinciana Blvd. south to US 17-92 and north to US 192 thereby increasing pressure on Pleasant Hill Road.

This project will install 2,800' water main between Pam Road and US 192. This water main will consist of 2,600' of 20" DIP WM, 200' of 24' directional bore (DB) WM, 200' of 10" DB services across Poinciana Blvd., 200' of 8" DB services across Poinciana Blvd, and 300' of 2" DB services across Poinciana Blvd..
The existing hydraulic connection consists of 700' of 12" asbestos pipe, 1000' of 12" PVC pipe, 2,300' of 8" PVC pipe, and 200' of 16" pipe. The asbestos pipe will be removed. The remaining pipe status will depend on the design.

Funding for the project is requested to be re-budgeted from FY 10-11 to FY 08-09.

Prepared by Edwin Matos

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☐ New
☒ Replacement

☐ Multi-funded Project

Project Name: 16" WM - Carroll St Loop

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact					$ 1,791,000		$ 1,791,000
Wastewater Impact							
Total					**$ 1,791,000**		**$ 1,791,000**

Project Description

This project will complete the hydraulic connection between John Young Parkway and Vine Street via Carroll Street. This connection is required to provide water service to the Bronson DRI project which is located on the south side of Carroll Street.

The developer will share the cost of this water main. TWA will fund the difference between the 900' of 12" water main required by the developer for the Bronson DRI and the 7,600' of 16" water main required by TWA for capital improvements.

Project costs are summarized below:
7,600' of 16" WM = $1,634,000
Minus 900' of 12" WM [developer's share of the project] = ($58,000)
Design = $315,000
TOTAL = $1,891,000

The construction costs include mobilization, general conditions, valving, fittings, and other appurtenances.

Design costs are assumed to be 20% of the construction costs.

The project has been re-scheduled for FY2008-09 in response to the developer's schedule.
This project has also updated the pipe unit costs to reflect current projections.

This project replaces the 8035 projects "n16 inch WM - Carroll St Loop" and "nWater Main-Carroll St Loop".

Prepared by George Eversole

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Water System Extensions to Developed Areas

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 2,750,000
Wastewater Impact							
Total		**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 2,750,000**

Project Description

Extension of water systems to developed projects within the urban service area currently without potable water service. A budget increase will allow an accelerated schedule.

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Boggy Creek Road (from Hilliard Isle Rd. to Osceola Pkwy.)

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 4,050,000					$ 4,050,000
Wastewater Impact							
Total		**$ 4,050,000**					**$ 4,050,000**

Project Description

Boggy Creek Road (from Hilliard Isle Road to Osceola Parkway)

Replacement of approximately 2,700 lineal feet of existing 12" water main with a 30" water main and construction of approximately 5,100 lineal feet of 24" water main to run parallel to the existing 16" water main along the roadway corridor. These water mains will serve vacant properties along the roadway corridor; provide prescribed level of service to the area now served by the Springlake Village WTP; facilitate the eventual decommissioning of the Springlake Village WTP; and form part of an overall improvement to the Parkway WRF to serve the Springlake Village service area. The proposed 24" water main in conjunction with the existing 16" water main creates hydraulically a 30" water main which is needed to serve the Springlake Village service area. All work to be done in conjunction with the County's roadway improvements.

The scheduling for the requested funds has been adjusted to coincide with the County's 5-year Capital Improvement Plan.

Project Funding Summary
8025-Transmission & Distribution = $57,000
8050-Sewer Collection = $459,000
8035-Water Impact = $4,500,000

Total Funding Requested = $5,016,000

Prepared by Edwin Matos

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Parkway WTP Water Main

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 680,000	$ 1,800,000	$ 2,400,000			$ 4,880,000
Wastewater Impact							
Total		**$ 680,000**	**$ 1,800,000**	**$ 2,400,000**			**$ 4,880,000**

Project Description

This project is necessary to provide water service to the Spring Lake Village WTP service area at build-out and the BVL water service area. The mains will facilitate decommissioning of the Spring Lake Village WTP and the BVL WTP. The project will be constructed in five segments as follows:
Parkway WTP Water Main – Segment 1 (Simpson Road from Hwy 192 to Turnpike Crossing)
Segment 1 is included in the County roadway project and has been previously budgeted.
Parkway WTP Water Main – Segment 2 (Parkway WTP to Shady Lane to Hwy 192)
Segment 2 includes installation of approximately 2,850 LF of 24-inch Water Main from the Parkway WTP to Shady Lane and extending along Shady Lane to Hwy 192. The estimated design and construction cost for this project is approximately $850,000 (FY 2008-2009).
Parkway WTP Water Main – Segment 3 (Hwy 192 from Shady Lane to Simpson Road)
Segment 3 includes installation of approximately 1,900 LF of 24-inch Water Main along Hwy 192 from Shady Lane to Simpson Road. This project includes installation of approximately 120 LF of 24-inch Water Main into a jack and bored 48-inch steel casing pipe under Hwy 192. The estimated design and construction cost for this project is approximately $700,000 (FY 2009-2010).
Parkway WTP Water Main – Segment 4 (Simpson Road from Turnpike to Boggy Creek Road)
Segment 4 includes installation of approximately 4,800 LF of 30-inch Water Main along Simpson Road from the Turnpike to Boggy Creek Road. This includes a jack and bore crossing under the Turnpike of approximately 300 LF with a 48-inch steel casing and a 30-inch carrier pipe. The estimated design and construction cost for this project is approximately $1,900,000 (FY 2010- 2011).
Parkway WTP Water Main – Segment 5 (Simpson Road from Boggy Creek Road to Hilliard Isle)
Segment 5 includes installation of approximately 8,050 LF of 30-inch Water Main along Simpson Road from Boggy Creek Road to Hilliard Isle. This includes a jack and bore crossing under Boggy Creek Road of approximately 100 LF with a 48-inch steel casing and a 30-inch carrier pipe. The estimated design and construction cost for this project is approximately $2,600,000 (FY 2011 – 2012).

The costs were developed using costs from similar bid projects.

DB

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Southwest WTP - Phase 2 Expansion

Department: Engineering

Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact				$ 1,000,000	$ 4,630,000		$ 5,630,000
Wastewater Impact							
Total				**$ 1,000,000**	**$ 4,630,000**		**$ 5,630,000**

Project Description

Due to the proposed regulatory changes with the SFWMD, the pumping capacity from the wells feeding the Northwest WTP may be significantly reduced, thus limiting the amount of treated potable water from the Northwest WTP to serve the customers in that service area. The plan is to reduce the pumping capacity from the Northwest WTP back to 1995 flows, which was approximately 2.56 MGD AADF (annual average daily flow).

Since the Northwest WTP and Southwest WTP are interconnected, additional capacity will be required at the Southwest WTP to supplement the reduction in potable water production at the Northwest WTP. The following components are necessary to expand the Southwest WTP to meet the increased capacity:

For FY2007-08:
• Addition of a 3rd well and raw water main located at the KUA Cane Island site to provide raw water to the Southwest WTP for ozone treatment.

Budget estimate for 3rd well and raw water main is based on bid (January 2007) for Parkway WTP Well Addition project (approx. $1,200,000) + adjustment (i.e. capacity of well and length of raw water main) to reflect scope for Southwest WTP (approx. $500,000) = $1,700,000

• Addition of a 3rd ozone generator for treatment of the raw water at the Southwest WTP to handle the additional capacity.

Budget estimate for 3rd ozone generator is based on GMP costs (November 2005) for addition of the ozone treatment system at the Southwest WTP (approx. $2,400,000) + 5% inflation (approx. $120,000) = $2,520,000

Total Budget for FY2007-08 is $1,700,000 + $2,520,000 = $4,220,000 + $422,000 (approx. 10% for Engineering Design Fee) = $4,642,000 or approx. $4,600,000

For FY2008-09:
• Addition of High Service Pump (HSP) at the Southwest WTP to handle the increased capacity from the 3rd well at KUA Cane Island and 3rd ozone generator.

Budget estimate for HSP is based on GMP costs (May 2006) for addition of HSP for Richard McLaughlin WTP project

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: South East Osceola County AWS Explatory Wells

Department: Engineering

Division: 8035, 8135, 8335

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 7,012,000	$ 4,070,000	$ 1,505,000			$ 12,587,000
Wastewater Impact							
Total		**$ 7,012,000**	**$ 4,070,000**	**$ 1,505,000**			**$ 12,587,000**

Project Description

Problem Statement:

The ability to increase withdrawals from the upper Floridan aquifer will be capped in 2013. The TWA service area growth and demand for potable and non-potable water is projected to increase by approximately 70 mgd between 2007 and 2025. The water demand will predominately be met by non-upper Floridan aquifer water sources.

Alternatives:

Sources for the project water demand increases are:
- 5 mgd from the Taylor Creek Reservoir Project
- an undetermined amount from the Kissimmee River
- an undetermined amount from Bonnett Creek
- 15 mgd (minimum) from the Cypress Lake River Floridan aquifer (AWS) Project
- Lower Floridan AWS south and east of the Cypress Lake AWS Project. The available supply will be determined by construction of 3 test wells that may be converted to production wells if the test well project yields quantities that will validate a production project

- This project includes three (3) groundwater test wells on separate sites within South Osceola County. Each well will be drilled to a depth of 2,600' below land surface (bls), with 300 ft of 20" surface casing, 600' of 16" intermediate casing and 2,000' of 8" open hole. Eight (8) packer tests will be performed during drilling to provide expedited preliminary water quality results as well as three (3) additional packer tests for in-depth water quality sampling in selected intervals after drilling. Well development, step drawdown testing, geophysical logging and video logging are also included to provide a thorough assessment of well feasibility in the area.

[CONTINUED ON NEXT SHEET]

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: City Water Impact Projects

Department: Engineering Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact	$ 753,000	$ 45,000		$ 434,000			$ 1,232,000
Wastewater Impact							
Total	**$ 753,000**	**$ 45,000**		**$ 434,000**			**$ 1,232,000**

Project Description

SUMMARY OF CITY IMPACT ROAD PROJECTS

Please see attached sheets for individual project's justification

City Road Projects	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13
Thacker Ave. Phase 3 - Donegan/Carroll	10,000				
Martin Luther King Blvd Ph 3	65,000				
Bill Beck Boulevard			760,000		
TOTAL	75,000		760,000		
Used for budgeting purposes - 60%	45,000		434,000		

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: County Water Impact Projects

Department: Engineering Division: 8035 - Water Impact

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact	$ 6,353,000	$ 1,600,000					$ 7,953,000
Wastewater Impact							
Total	**$ 6,353,000**	**$ 1,600,000**					**$ 7,953,000**

Project Description

SUMMARY OF COUNTY IMPACT ROAD PROJECTS

Please see attached sheets for individual project's justification

County Road Projects	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13
Bill Beck Boulevard-Osc Pkwy/Charter Sch	14,000				
Boggy Creek Road-Hilliard Isle Rd/Osc Pkwy	180,000				
Bill Beck Boulevard-N Boggy Crk WM Upsizing	400,000				
John Young Parkway - Oak Street	620,000				
Boggy Creek Road-Osc Pkwy/Boggy Crk East	2,290,000				
TOTAL	3,504,000				
Used for budgeting purposes -	1,600,000				

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Harmony WRF Effluent Line

Department: Engineering

Division: 8135 - Water Impact [Toho II]

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact				$ 275,000			$ 275,000
Wastewater Impact							
Total				**$ 275,000**			**$ 275,000**

Project Description

This project was budgeted for FY'08. Staff is requesting the funding be moved to FY'11, as Development has slowed and it is doubtful that the funding will be needed prior to this time.

The Harmony WWTP is in the design phase for expansion and, upon completion, will be capable of producing reuse water for public access use.

A pipeline will be required to connect the Harmony WWTP effluent line to a 12" line previously constructed under the Harmony golf course. This line connects to the reuse storage tank on the north side of the Harmony golf course. Additionally, the Harmony developer installed an 8" line under the golf course to the 2MG lined pond. This pipeline can be utilized for future wet weather storage or concentrate disposal.

Approximately 1200' of 12" reuse main and 1200' of 8" main for concentrate disposal will require construction from the WWTP to the terminus of the previously constructed lines on the south side of the Harmony golf course. The cost of design and construction is based on previous projects.

Cost for design and construction of the 12" reuse main: $300,000.
Cost for design and construction of the 8" concentrate disposal line: $250,000.

Total Budget:
Water Impact $275,000.
Wastewater Impact $275,000.

DB

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Harmony Water Main Upsizing

Department: Engineering

Division: 8135 - Water Impact [Toho II]

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact				$ 700,000	$ 98,000	$ 98,000	$ 896,000
Wastewater Impact							
Total				**$ 700,000**	**$ 98,000**	**$ 98,000**	**$ 896,000**

Project Description

This is a previously budgeted project. Staff is requesting the funding be left in place and funding be added for FY'12-'13.

TThe Harmony Development is planning to install approximately 19,000 LF of 16-inch Water Main from the proposed Harmony West Development near Old Melbourne Hwy along Hwy 192 to the Harmony WTP . TWA is proposing to upsize the main from a 16-inch to a 20-inch main to serve additional properties (approx. 500 acres) along the route. The estimated construction cost for the upsizing for this project is approximately $ 800,000 (FY 2007 - 2008) and is based on similar construction projects. Engineering services are not included, as the developer will be responsible for both the design and construction.

The additional funds for FY'11-FY'12 were previously budgeted for upsizing of water mains for projects outside of the Harmony DRI, but within the service area. Similar funding for FY'13 has been added.

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☒ Multi-funded Project

Project Name: Water Use Permitting - Wetlands Monitoring

Department: Engineering

Division: 8335 - Water Impact [Toho IV]

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 330,000					$ 330,000
Wastewater Impact							
Total		**$ 330,000**					**$ 330,000**

Project Description

TWA is negotiating a 20 year Water Use Permit for Poinciana. Conditions of the permit will require wetlands monitoring of approximately 18 sites. The monitoring will require installation of staff gages, wells, data loggers, surveying and photostations. Six sites should require the establishment of photostations only.

The estimated cost of the 12 sites requiring the staff gages, well, data logger, surveying and photostation is $25,000 per site. The photostation installation at the 6 Polk County sites is estimated at $5,000 per site.

The total capital cost is estimated at $330,000.

Prepared by Scott Fick

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: 16" WM on Ham Brown Rd between Lizzia Brown Rd and Cresto

Department: Engineering Division: 8335

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact			$ 335,000				$ 335,000
Wastewater Impact							
Total			**$ 335,000**				**$ 335,000**

Project Description

1,300" of 16" water main paralleling an existing 8" main connecting an existing 16" main north of Lizzia Brown Road on south of Creston. This improves connectivity between WTP #1 and the rest of the Poinciana system. As lines between the TWA main system and the northern Poinciana system are connected, more flow will potentially come from TWA into the Poinciana system and therefore increased connectivity will be very beneficial.

Cost Estimate 1,300" of 16" water main at $215/ft equals $279,000.
Design $ 56,000
TOTAL $335,000

Prepared by: Robert Pelham

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Poinciana 20 WUP Mitigation

Department: Engineering Division: 8335

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 400,000	$ 400,000				$ 800,000
Wastewater Impact							
Total		**$ 400,000**	**$ 400,000**				**$ 800,000**

Project Description

In connection with the Poinciana Water Use Permit Renewal, TWA is required to provide financial support for environmental restoration and enhancement projects intended to restore and enhance wetlands harmed by past agricultural practices. This funding of the restoration and enhancement projects is sufficient to offset potential future harm associated with the consumptive uses of water authorized by the permit.

Prepared by: Scott Fick

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: New Water Main across Reedy Creek from Marigold to Poinciana Blvd

Department: Engineering Division: 8335

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact		$ 2,307,000					$ 2,307,000
Wastewater Impact							
Total		**$ 2,307,000**					**$ 2,307,000**

Project Description

New 16" water main 7,950' in length. This project provides a second water main crossing Reedy Creek to improve reliability and connectivity among the Poinciana WTPs #2, #6 and #5. Currently one 18" pipe crosses Reedy Creek along Poinciana Blvd. This project will parallel the existing reuse main crossing the creek at this location. The improved connectivity will benefit in reliability of service.

Cost Estimate

7,000' of 16" WM	= $1,505,000
950' of Direction Bore under wetlands creek	= $ 418,000
Design	= $ 384,000
Total	= $2,307,000

Prepared by: Robert Pelham

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Water Main Ext from Lake Marion Drive to Lake Hatchineha Road

Department: Engineering Division: 8335

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact				$ 500,000	$ 2,750,000		$ 3,250,000
Wastewater Impact							
Total				**$ 500,000**	**$ 2,750,000**		**$ 3,250,000**

Project Description

Extension of 15,700' of 16" water main from the WTP #5 service area on Lake Marion Creek Road beginning at Pacific Road, then south along Cedar Road, Bayberry Road and Poinciana Parkway to Hatchineha Road.

The project is defined in the FGUA 2006 Master Plan as necessary to serve growth. The project is subject to modification pending the completion of the TWA Master Plan.

Prepared by: Robert Pelham

Tohopekaliga Water Authority
Osceola County, Florida

FY2009-13 Capital Improvements Plan Project

☒ New
☐ Replacement

☐ Multi-funded Project

Project Name: Poinciana WTP #5 Expansion

Department: Engineering

Division: 8335 - Water Impact [Toho IV]

Funding Source	Prior Year(s)	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Total Project
Operation							
Water Impact						$ 9,275,000	$ 9,275,000
Wastewater Impact							
Total						**$ 9,275,000**	**$ 9,275,000**

Project Description

The 2013 projected demand in Poinciana is estimated at 10.1 MGD average daily flow (17.2 MGD max. day). To meet this demand, expansion of WTP #5 from 3.78 MGD (max. day) to 11.7 MGD (max. day) is required. WTP #5 is currently permitted to operate at 3.78 MGD (max. day). The plant is served by three wells; Well 5-1 is 1,000 gpm (1.44 MGD), Well 5-2 is 1,000 gpm (1.44 MGD) and Well 5-5 is 2,100 gpm (3.02 MGD). The firm capacity (i.e. one pump out of service) of the existing high service pump station is 3,650 gpm (5.26 MGD). There are six existing high service pumps - (2) 425 gpm (0.61 MGD), (2) 800 gpm (1.15 MGD) and (2) 1,200 gpm (1.73 MGD). There is an existing 3.5 MG ground storage tank on site.

An evaluation for upgrading the existing two 1,000 gpm wells will be performed to determine if additional capacity can be obtained. Two new wells are proposed for the expansion of WTP #5. With the addition of the two new wells, additional high service pumping will also be required with the expansion. This can be obtained by replacing the existing high service pumps (i.e. 425 gpm and 800 gpm) with larger capacity pumps. This option will require modifications to the suction and discharge header piping. An additional ground storage tank will be needed to accommodate the proposed expansion. All sizing and capacity will be confirmed through an Engineering Preliminary Design Report.

Total budget estimate to expand WTP #5 to 11.7 MGD is approximately $8,500,000 + $1,275,000 (Engineering Design Fee 15%) = $9,775,000

Prepared by Quyen Newell.

ATTACHMENT "C"

WATER AND NON-POTABLE WATER PROJECT DESCRIPTIONS

CITY OF ST. CLOUD
2008 MASTER PLAN UPDATE
TECHNICAL MEMORANDUM

OCTOBER 31, 2008

TABLE 3. CITY OF ST. CLOUD WATER CAPITAL IMPROVEMENT PROGRAM - FY08

Project #	Type	Project Name	Funding Source, %					Funding Source, $					Funding Year										Project Description
			Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid	Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid (Grant, etc.)	5 Year CIP										
													FY08	FY09	FY10	FY11	FY12	FY13	FY14	>FY14	To Date	TOTAL	Check	
WA##01	Gen	Water Meter Installs			50%		50%	$0	$0	$823,757	$0	$823,757	$200,000	$132,000	$217,570	$226,925	$236,683	$246,860	$257,475	$0		$1,647,514	$1,647,514	Routine Annual Water Meter Installs
WA##02	WL	Misc Line Extensions / Incl ROW	50%				50%	$852,869	$0	$0	$0	$852,869	$190,000	$199,500	$206,691	$215,579	$224,849	$234,517	$244,602	$0		$1,705,738	$1,705,738	Annual allowance for miscellaneous non-programmed line extensions.
WA##03	Gen	Misc Water Engineering			100%			$0	$0	$1,432,366	$0	$0	$157,500	$165,375	$173,644	$182,326	$191,442	$201,014	$211,065	$0		$1,432,366	$1,432,366	Miscellaneous Engineering services not otherwise specified.
WA##04	WL	Misc Line Repairs			100%			$0	$0	$1,431,411	$0	$0	$160,000	$168,000	$174,056	$181,540	$189,346	$197,488	$205,980	$0		$1,431,411	$1,431,411	Annual allowance for miscellaneous non-programmed line repairs or replacements.
WA##17	GEN	Treatment Equipment			100%			$0	$0	$1,048,519	$0	$0	$194,500	$24,500	$206,345	$25,235	$212,535	$25,992	$218,911	$0		$1,048,519	$1,048,519	Annual equipment allowance for the water treatment, and maintenance divisions.
WA##18	GEN	Lines Equipment			100%			$0	$0	$1,660,040	$0	$0	$188,850	$50,000	$200,351	$206,361	$212,552	$218,929	$225,497	$0		$1,660,040	$1,660,040	Annual equipment allowance for the water lines divisions.
WA0806	WP	AWS/Cypress Lake Wellfield	100%					$26,750,000	$0	$0	$0	$0	$250,000	$500,000	$500,000	$500,000	$12,500,000	$12,500,000	$0	$0		$26,750,000	$26,750,000	Well field evaluation for joint project with TWA to address water supply for 2013 and beyond.
WA0308 WA0309	WP	Water Plant #4			10%	90%		$0	$0	$2,257,624	$20,318,618	$0	$0	$0	$0	$0	$0	$0	$0	$0		$22,576,242	$22,576,242	Design and construct new WTP and wellfield w/design flow = 9 MGD and 3 wells at 2,200 gpm each.
WA0528	Gen	Operations Management			100%			$0	$0	$617,000	$0	$0	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$0	$207,000	$617,000	$617,000	Data management and GIS system to enhance record keeping and support maintenance programs.
WA0605	WP	NE Booster Pump Station (Narcoosee)	100%					$4,848,409	$0	$0	$0	$0	$4,000,000	$848,409	$0	$0	$0	$0	$0	$0		$4,848,409	$4,848,409	Design and construction of a ground storage tank and booster station to support water delivery at adequate pressures to the Narcoossee corridor.
WA0910	WL	New Nolte Road Extension - Narcoossee Extension to Old Hickory Subdivision	70%				30%	$430,920	$0	$0	$0	$184,680	$0	$150,000	$465,600	$0	$0	$0	$0	$0		$615,600	$615,600	Watermain extension along New Nolte Road from Michigan Road to the Narcoossee Extension-upsizing of developer mains.
WA09hh	WL	New Nolte Road Extension - Old Hickory Subdivision to Michigan		33%			67%	$0	$111,440	$0	$0	$226,256	$0	$168,848	$168,848	$0	$0	$0	$0	$0		$337,696	$337,696	Watermain extension along New Nolte Road from Michigan Road to the Narcoossee Extension-upsizing of developer mains.
WA0911	WL	Pine Tree/Cord/Lakeshore Water Line Loop		20%			80%	$0	$92,862	$0	$0	$371,448	$0	$46,431	$417,879	$0	$0	$0	$0	$0		$464,310	$464,310	3,200 LF of 16" and 6,000 LF of 12" water line on Pine Tree, Cord and Lakeshore to create service loop in southern service area.
WA0819	WP	Water Plant #1 & #2 Refurbishment			25%	75%		$0	$0	$4,625,000	$13,875,000	$0	$200,000	$1,300,000	$0	$8,000,000	$9,000,000	$0	$0	$0		$18,500,000	$18,500,000	Stage 1 - Mechanical and reliability improvements to enable the plant to be maintained without being removed from service. Stage 2 - Treatment technology upgrades to address THM formation potential.
WA0808	WP	Wetland Mitigation			100%			$0	$0	$525,900	$0	$0	$300,000	$168,733	$45,712	$11,455	$0	$0	$0	$0		$525,900	$525,900	Mitigation required by SFWMD WUP
WA0809	WL	Budinger Ave Water Main	100%					$124,000	$0	$0	$0	$0	$124,000	$0	$0	$0	$0	$0	$0	$0		$124,000	$124,000	2700 LF of water main extension along budinger ave to suopport system looping
WA0905	WL	New Nolte Road Extension - Michigan to Canoe Creek	65%				35%	$302,640	$0	$0	$0	$162,960	$0	$0	$50,000	$415,600	$0	$0	$0	$0		$465,600	$465,600	Watermain extension along New Nolte Road from Canoe Creek Road to Michigan Road
WA0820	WL	Old Hickory Tree - New Nolte to Hickory Tree Elementary	100%					$251,600	$0	$0	$0	$0	$0	$0	$75,000	$176,600	$0	$0	$0	$0		$251,600	$251,600	Line extension to provide service to growing area and provide system looping.
WA0906	WL	East 192 Line Extension Nora Tyson to Nova Road	70%				30%	$263,340	$0	$0	$0	$112,860	$0	$376,200	$0	$0	$0	$0	$0	$0		$376,200	$376,200	Extension of Water Main (16-inch Min) along US 192 from the Nora Tyson Rd to Nova Road
WA0907	WL	Backflow Preventor Repair and Installation			74%		26%	$0	$0	$343,516	$0	$121,947	$0	$67,750	$71,022	$74,623	$78,892	$83,838	$89,338	$0		$465,463	$465,463	Backflow Preventor Repair and Installation
WA13dd	WP	Water Plant #2 Decommissioning			100%			$0	$0	$400,000	$0	$0	$0	$0	$0	$0	$0	$400,000	$0	$0		$400,000	$400,000	Future decommissioning of plant #1 to avoid rehabilitation costs associated with providing necessary reliability and treatment levels.
WA11oo	WL	Water Plant #1 Update Transmission Mains			100%			$0	$0	$835,000	$0	$0	$0	$0	$0	$435,000	$400,000	$0	$0	$0		$835,000	$835,000	Future transmission mains along 10th Street from WTP#1 to Crawford Ave, along Illinois Ave from 10th Street to 5th Street and along 5th Street from Illinois Ave to Eastern Ave.
WA10pp	WL	Canoe Creek to WTP #4 Interconnect	100%					$1,700,000	$0	$0	$0	$0	$0	$0	$200,000	$1,500,000	$0	$0	$0	$0		$1,700,000	$1,700,000	Future intercoonect from Canoe Creek Rd to WTP #4
WA0811	WL	Canoe Creek to New Nolte Interconnecter	100%					$1,026,000	$0	$0	$0	$0	$0	$0	$230,000	$796,000	$0	$0	$0	$0		$1,026,000	$1,026,000	9,000 LF of 16-inch water main in stormwater easement and Canoe Creek Rd from Old Canoe Creek Rd to New Nolte Rd
WA0812	WL	Canoe Creek Christian Church Line Upgrade					100%	$0	$0	$0	$0	$18,907	$18,907	$0	$0	$0	$0	$0	$0	$0		$18,907	$18,907	Upgrade water main along Canoe Creek Rd to Canoe Creek Christian Church
WA12aa	WP	WTP #4 High Service Pump				100%							$0	$0	$0	$0	$150,000	$0	$0	$0		$150,000	$150,000	New high service pump at WTP #4
Impact Fees								$36,549,778					$4,469,000	$1,816,499	$1,466,766	$3,350,530	$12,612,424	$12,617,259	$122,301		$36,549,778	$36,549,778		
Impact Fee Credits									$204,302				$0	$65,006	$139,296	$0	$0	$0	$0		$204,302	$204,302		
R&R										$16,000,135			$1,175,850	$1,042,608	$986,308	$3,235,453	$3,657,441	$1,253,727	$1,081,124		$15,793,135	$16,000,135		
Loans											$34,193,618		$150,000	$975,000	$0	$6,000,000	$6,900,000	$0	$0		$34,343,618	$34,343,618		
Other Non-Repaid (Grant, Developer, etc.)												$2,875,684	$213,907	$491,633	$835,349	$386,263	$251,435	$262,654	$274,444		$2,875,684	$2,875,684		
Total													$6,008,757	$4,390,746	$3,427,718	$12,972,245	$23,421,300	$14,133,640	$1,477,869		$65,832,275	$89,973,517		

Project Types: Gen => General Operations, WL => Water Lines , WP => Water Plant Work

TABLE 4. CITY OF ST. CLOUD SEWER CAPITAL IMPROVEMENT PROGRAM - FY08

Project #	Type	Project Name	Funding Source, %					Funding Source, $					Funding Year								Project Description
													5 Year CIP								
			Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid (Grant, etc.)	Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid (Grant, etc.)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	>FY14	
WW##03	Gen	Misc Engineering Services			100%			$0	$0	$814,201	$0	$0	$100,000	$105,000	$110,250	$115,763	$121,551	$127,628	$134,010	$0	Misc. Engineering Services Allowance including planning.
WW##01	SL	Misc Line Extensions	100%					$1,520,562	$0	$0	$0	$0	$180,000	$159,000	$198,450	$208,373	$218,791	$229,731	$241,217	$0	Miscellaneous extensions of sewer lines not otherwise budgeted in a capital project.
WW##02	LS	Lift Station Repair/Maintenance/Minor Rehab			100%			$0	$0	$754,701	$0	$0	$50,000	$52,500	$110,250	$115,763	$121,551	$127,628	$134,010	$0	General Lift Station Rehabilitation and/or replacement.
WW##06	LS	Lift Station Replacement/Major Rehab			100%			$0	$0	$3,626,004	$0	$0	$250,000	$180,000	$551,250	$578,813	$607,753	$638,141	$670,048	$0	General Lift Station Rehabilitation and/or replacement.
WW##04	SL	Misc Laterals	100%					$104,804	$0	$0	$0	$0	$12,000	$10,000	$13,230	$13,892	$14,586	$15,315	$16,081	$0	Miscellaneous extensions of sewer laterals not otherwise budgeted in a capital project.
WW##05	SL	Replacement/Rehab			100%			$0	$0	$3,803,504	$0	$0	$250,000	$302,500	$551,250	$578,813	$607,753	$638,141	$670,048	$0	Miscellaneous rehabilitation of sewer lines/manholes not otherwise budgeted in a capital project.
WW##10	LS	Telemetry Install			100%			$0	$0	$200,000	$0	$0	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$0	Installation of telemetry systems coupled with control panel replacement at various older stations.
WW##17	Gen	Treatment/Maintenance Equipment			100%			$0	$0	$1,484,214	$0	$0	$194,500	$53,700	$206,345	$212,535	$218,911	$225,479	$232,243	$0	Annual equipment allowance for the sewer treatment, and maintenance divisions.
WW##18	Gen	Lines Equipment			100%			$0	$0	$1,643,040	$0	$0	$188,850	$33,000	$200,351	$206,361	$212,552	$218,929	$225,497	$0	Annual equipment allowance for the sewer lines divisions.
WW0520	SP	Southside WWTF Phase 2 Expansion	23%			76%	2%	$8,080,093	$0	$0	$27,000,126	$600,138	$20,580,000	$0	$0	$0	$0	$0	$0	$0	Expansion of SSWWTF to 6MGD to support growth and decommissioning of LSWWTF.
WW0611	LS	East Side/192 Regional PS and FM	80%	20%				$2,800,000	$700,000	$0	$0	$0	$1,100,000	$1,200,000	$0	$300,000	$0	$0	$0	$0	Regional Lift Station intended to provide centralized gravity collection area. Includes 13,300 LF of 20" FM from Station to 24" FM Tie-In Point. Also Includes rerouting of Narcoossee Road FM for repumping.
WW09bb	LS	East Central (Gramercy Farms) Regional PS and FM		56%			44%	$0	$1,081,623	$0	$0	$849,847	$0	$1,931,470	$0	$0	$0	$0	$0	$0	Lift Station intended to provide centralized gravity collection area for New Nolte Extension. Includes FM along New Nolte from CR15 to Delaware.
WW09cc	LS	East Side (Turtle Creek) Master Repump PS and FM		100%				$0	$457,300	$0	$0	$0	$0	$457,300	$0	$0	$0	$0	$0	$0	Regional Lift Station intended to provide centralized gravity collection area as well as repumping for satellite lift stations in the Northeast area. Includes 8,100 LF of 12" FM . Also Includes rerouting of Narcoossee Road FM for repumping.
WW10gg	LS	Hickory Tree Rd. FM		30%			70%	$0	$641,460	$0	$0	$1,496,740	$0	$0	$300,000	$1,000,000	$684,200	$0	$0	$0	2,600 LF of 16", 19400 LF of 12" FM on Hickory Tree Rd to Lake Gentry Rd
WW0807	Gen	Lines Offices			100%			$0	$0	$1,360,000	$0	$0	$20,000	$200,000	$1,140,000	$0	$0	$0	$0	$0	Expansion or construction of new lines for growth.
WW0909	LS	SE (Alligator Lake) Regional LS and FM		70%			30%	$0	$630,000	$0	$0	$270,000	0	$0	$90,000	$810,000	$0	$0	$0	$0	Regional pump station in Alligator Lake area and 3900 LF of 16" force main on Hickory Tree Rd from Alligator Lake Rd to New Nolte Rd
WW0911	LS	Irlo Bronson Memorial Hwy(Rt. 192) and Pine Grove Rd. FM	70%				30%	$665,700	$0	$0	$0	$285,300	$0	$0	$100,000	$851,000	$0	$0	$0	$0	4,000 LF of 12", 13,400 LF of 6" FM on US 192 from Narcoosee Rd to Lake Lizzie RD and on Pinge Grove Rd from US 192 to Bass Woods Rd
WW0912	LS	Nova Rd. (Rt. 532) FM		70%			30%	$0	$437,150	$0	$0	$187,350	$0	$0	$62,400	$562,100	$0	$0	$0	$0	3,700 LF of 12", 3,200 LF of 8", 2,600 LF of 6" FM on Nova Rd from US 192 to Pine Grove Rd
WW0908	SP	LSWWTF Decommissioning			100%			$0	$0	$900,000	$0	$0	$0	$600,000	$300,000	$0	$0	$0	$0	$0	Decommissioning of the LSWWTF to potentially support other beneficial uses.
WW13ii	SP	Southside WWTF Ph. 3 Expansion	40%			60%		$4,700,000	$0	$0	$7,050,000	$0	$0	$0	$0	$0	$0	$0	$750,000	$11,000,000	Expansion of SSWWTF to 9MGD to support growth.
WW0907	LS	Lift Station #76, #63, #55, #67 Upgrade			100%			$0	$0	$125,000	$0	$0	$0	$125,000	$0	$0	$0	$0	$0	$0	Design and construct Lift Station #76, #63, #55, #67 upgrade to pump to Southside WWTF.
WW0808	LS	Sawgrass Regional LS and FM		68%	32%			$0	$1,199,996	$564,004	$0	$0	$200,000	$0	$1,564,000	$0	$0	$0	$0	$0	Regional Lift Station intended to provide centralized gravity collection area. Includes 9200 LF of 24" FM into SSWWTF along Cord Ave.
WW0823	LS	Lift Station #11 Replacement Design			34%		66%	$0	$0	$120,001	$0	$229,999	$20,000	$330,000	$0	$0	$0	$0	$0	$0	Design and replacement for Lift Station #11
WW0824	SL	Turtle Creek FM Easement	100%					$120,000	$0	$0	$0	$0	$0	$120,000	$0	$0	$0	$0	$0	$0	Easement acquisition
Impact Fees								$17,991,158					$5,732,547	$1,249,000	$281,680	$1,057,964	$233,377	$245,046	$557,298		
Impact Fee Credits									$5,147,529				$356,054	$1,778,923	$1,260,622	$1,320,470	$205,260	$0	$0		
R&R										$15,394,669			$1,149,153	$1,789,844	$3,694,754	$1,833,047	$1,915,071	$2,000,946	$2,090,855		
Loans											$34,050,126		$15,573,503	$0	$0	$0	$0	$0	$450,000		
Other Non-Repaid (Grant, Developer, etc.)												$3,919,373	$359,298	$1,066,703	$285,720	$1,366,930	$478,940	$0	$0		
Total													$23,170,556	$5,884,470	$5,522,776	$5,578,411	$2,832,649	$2,245,992	$3,098,153		

Project Types: LS => Lift Station and Associated, Required Mains, SL => Sewer Lines, RU => Reclaim Lines and Distribution, SP => Sewer Plant Work, Gen => General Operations

TABLE 5. CITY OF ST. CLOUD NON-POTABLE WATER CAPITAL IMPROVEMENT PROGRAM - FY08

Project #	Type	Project Name	Funding Source, %					Funding Source, $					Funding Year								Project Description
			Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid (Grant, etc.)	Impact Fees	Impact Fee Credits	R&R	Loans	Other Non-Repaid (Grant, etc.)	5 Year CIP								
													FY08	FY09	FY10	FY11	FY12	FY13	FY14	>FY14	
RW##01	RU	Reuse Meters	100%					$852,516	$0	$0	$0	$0	$100,000	$30,000	$110,250	$115,763	$121,551	$127,628	$134,010	$0	Cost for New Meter Installs
RW##02	RU	Misc Line Extensions (Incl. ROW)	100%					$758,787	$0	$0	$0	$0	$83,000	$87,150	$91,508	$96,083	$100,887	$105,931	$111,228	$0	Misc. extension of new reuse lines not in CIP.
RW##03	RU	Miscellaneous Engineering			100%			$0	$0	$407,100	$0	$0	$50,000	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$0	
RW##05	RU	Misc Reuse Replacement/Rehab			100%			$0	$0	$91,200	$0	$0	$0	$0	$10,000	$15,000	$20,000	$22,000	$24,200	$0	Misc. repair and replacement of reuse lines, meters, pumps, etc.
RW0904	RU	West New Nolte (Mich. To Canoe Creek) Reuse Main	65%				35%	$305,370	$0	$0	$0	$164,430	$0	$164,430	$305,370	$0	$0	$0	$0	$0	Extension of new reuse main (12") along New Nolte Road from Canoe Creek Rd to Michigan Ave.
RW0604	RU	Lakeshore Stormwater/Surface Water Augmentation	100%				0%	$6,306,706	$0	$0	$0	$0	$0	$1,500,000	$0	$0	$2,678,776	$0	$0	$0	Surface Water Augmentation project to provide additional water to help meet supply shortfalls in reclaim availability
RW07##	RU	Elementary School I Upsizing	100%					$123,456	$0	$0	$0	$0	$0	$123,456	$0	$0	$0	$0	$0	$0	Upsizing and extension of reclaim mains between Elementary I and Neptune
RW0809	RU	Budinger Ave Reclaim Main	100%					$198,000	$0	$0	$0	$0	$57,000	$0	$0	$0	$0	$0	$0	$0	Approximately 3,000 ft of 8-inch reclaim main for looping on Budinger Ave.
RW0810	RU	SSWWTF Reclaim Pond Expansion	100%					$2,000,000	$0	$0	$0	$0	$100,000	$1,900,000	$0	$0	$0	$0	$0	$0	Expansion of the SSWWTF reclaim pond to provide additional storage and reliability to meet increased supply demands.
RW10hh	RU	Canoe Creek Road-North Reuse Main		40%			60%	$0	$134,640	$0	$0	$201,960	$0	$0	$295,800	$0	$0	$0	$0	$0	5,100 LF of 8" reuse main on Canoe Creek Rd from just north of New Nolte Rd north to Julianna Ct. Couple with Stevens North. City reimbursement for portion north of Stevens North.
RW09##	RU	Master Plan/Model Updates			100%			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Master Plan and Modeling updates necessary to reflect actual growth patterns and project priorities.
RW0905	RU	Hickory Tree North Reuse Main	80%				20%	$2,906,640	$0	$0	$0	$726,660	$0	$0	$400,000	$1,000,000	$1,500,000	$544,700	$0	$0	1,400 LF of 30", 11,500 LF of 24", 7,500 LF of 16", 3,900 LF of 12" reuse main on Hickory Tree Rd/Narcoosee Rd from 36" tie in north of Alligator Lk Rd north to Harkley Runyan Rd
RW0906	RU	Hickory Tree South Reuse Main		60%			40%	$0	$2,040,000	$0	$0	$1,360,000	$0	$0	$340,000	$1,000,000	$1,500,000	$560,000	$0	$0	20,000 LF of 24" reuse main on Hickory Tree Rd/Narcoosee Rd from 36" tie in north of Alligator Lake Rd south to Hickory Tree Ln. Developer Upsizing.
RW0907	RU	East 192 Reuse Main Hickory Tree to Nova Road		30%			70%	$0	$239,580	$0	$0	$559,020	$0	$75,000	$300,000	$375,000	$0	$0	$0	$0	6600 LF of 16" reuse main on US 192 from Hickory Tree to Nova Road to be coordinated with corridor water main project.
RW0808	RU	Sawgrass/Cord Ave Reuse Main	51%	0%			49%	$997,866	$0	$0	$0	$958,734	$120,000	$120,000	$1,716,600	$0	$0	$0	$0	$0	4,600 LF of 30", 5,800 LF of 24" reuse main extension from SSWWTF along Cord Ave and Pine Tree Road to provide looping for reclaim system in the South and West.
RW15cc	RU	Phase 2 Surface Water Augmentation				80%	20%	$0	$0	$0	$3,000,000	$750,000	$0	$0	$0	$0	$0	$0	$0	$3,750,000	Phase 2 Surface Water Augmentation project to treat surface water for augmentation of the public access reuse system.
RW09jj	RU	New Nolte Reuse Mains	100%					$2,220,000	$0	$0	$0	$0	$0	$120,000	$1,100,000	$1,000,000	$0	$0	$0	$0	5400' of 20" and 3,900' of 16" reuse main on New Nolte Rd and 5400' of 24" reuse main connecting existing 24" main south
Impact Fees								$16,669,341					$401,200	$3,928,686	$2,695,714	$2,011,845	$4,101,214	$669,320	$245,238		
Impact Fee Credits									$2,414,220				$0	$22,500	$412,320	$712,500	$900,000	$336,000	$0		
R&R										$498,300			$50,000	$52,500	$65,125	$72,881	$80,775	$85,814	$91,205		
Loans											$3,000,000		$0	$0	$0	$0	$0	$0	$0		
Other Non-Repaid (Grant, Developer, etc.)												$4,720,804	$58,800	$168,851	$1,551,494	$862,500	$900,000	$332,940	$0		
Total													$510,000	$4,172,536	$4,724,653	$3,659,727	$5,981,989	$1,424,074	$336,442		

Project Types: RU => Reclaim Lines and Distribution

ATTACHMENT "D"

IDENTIFICATION AND ASSESSMENT OF GOALS, OBJECTIVES AND POLICIES IN THE OSCEOLA COUNTY COMPREHENSIVE PLAN ADDRESSING WATER SUPPLY SOURCES AND FACILITIES, CONSERVATION AND REUSE PROGRAMS

IDENTIFICATION AND ASSESSMENT OF GOALS, OBJECTIVES AND POLICIES IN THE OSCEOLA COUNTY COMPREHENSIVE PLAN ADDRESSING WATER SUPPLY SOURCES AND FACILITIES, CONSERVATION AND REUSE PROGRAMS

As part of the development of a local government's Ten-Year Water Supply Facilities Work Plan (Work Plan), the Florida Department of Community Affairs (DCA) requests the local government identify, review and assess the effectiveness of its adopted comprehensive plans goals, objectives and policies (GOPs) addressing water supply sources and facilities, as well as conservation and reuse programs. The DCA also recommends the Work Plan include an assessment of those adopted GOPS addressing water supply sources and facilities as well as conservation and reuse programs. The DCA further recommends the use of nine issues areas, based upon comprehensive plan requirements in Chapter 9J-5, Florida Administrative Code, to help determine if new or revised GOPs are required to implement the Work Plan.

Osceola County's Board of County Commissioners, in accordance with a settlement agreement with the DCA, adopted revisions to its Comprehensive Plan on December 10, 2007. The Comprehensive Plan became effective on July 14, 2008. During the preparation of the Comprehensive Plan, staff addressed the requirements in Chapter 163, Florida Statutes requiring the link between local comprehensive planning and the availability of water supplies and public facilities by creating new goals, objectives and policies. A major policy direction related to water supply sources and facilities is the creation of the Urban Growth Boundary (UGB), which serves as a designated area within which growth will be concentrated over the next twenty years, shall be established. Urban land uses with urban service densities and intensities will be concentrated within the UGB. Densities within the UGB fall into these categories:

- *Urban Infill Area*-3 to 18 dwelling units per acre; and
- *Urban Expansion Area*-5 to 25 dwelling units per acre.

Adequate public services and facilities, including potable water services and facilities, shall be provided to support urban level densities and intensities while discouraging urban sprawl.

Additionally, Osceola County approved several water supply-related policies addressing the following issues areas identified in their September 2007 publication "A Guide for Local Governments in Preparing Water Supply Comprehensive Plan Amendments and Water Supply Facilities Work Plans":

(1) Coordination of land uses and future land use changes with the availability of water supplies and water supply facilities;
(2) Revision of potable water level-of-service standards for residential and nonresidential users;
(3) Provision for the protection of water quality in the traditional and new alternative water supply sources;

(4) Revision of priorities for the replacement of facilities, correction of existing water supply and facility deficiencies and provision for future water supply and facility needs;
(5) Provision for conserving potable water resources, including the implementation of reuse programs and potable water conservation strategies and techniques;
(6) Provisions for improved or additional coordination between a water supply provider and the recipient local government concerning the sharing and updating of information to meet ongoing water supply needs;
(7) Coordination between local governments and the water supply provider in the implementation of alternative water supply projects, establishment of level-of-service standards and resource allocations, changes in service areas, and potential for annexation;
(8) Coordination of land uses with available and projected fiscal resources and a financially feasible schedule of capital improvements for water supply and facility projects; and
(9) The need for additional revenue sources to fund water supply and facility projects.

All of the goals, objectives and policies in the Osceola Comprehensive Plan were found by the State Department of Community Affairs to be in compliance with the State's growth management legislation. Osceola County anticipates transmitting the Work Plan to DCA and the Water Management Districts by September 22, 2008. This does not provide an adequate amount of time to evaluate the effectiveness of Comprehensive Plan GOPs in time for a transmittal to DCA. Evaluation of the water supply related GOPs will occur either when the Work Plan is updated within five years of adoption or within 18 months following adoption of the applicable Water Management Districts' Regional Water Supply Plan updates. An evaluation of all Comprehensive Plan GOPs, including the water supply-related ones, will be submitted as part of the County's Evaluation and Appraisal Report in 2013.

POLICY AREA #1: COORDINATION OF LAND USES AND FUTURE LAND USE CHANGES WITH THE AVAILABILITY OF WATER SUPPLIES AND WATER SUPPLY FACILITIES.

The Comprehensive Plan has been amended to strengthen the coordination between land uses and future land use changes with the availability of water supplies and water supply facilities. The establishment of an Urban Growth Boundary UGB, as addressed in Objective 1.1 of the Future Land Use Element, is meant to concentrate growth in an area where water and sewer services are already available.

FUTURE LAND USE ELEMENT

Objective 1.1: Urban Growth Boundary
Osceola County establishes an Urban Growth Boundary (UGB) to provide a spatial framework within which urban scale development can occur and the location, capacity, and financing for the roads, schools, utilities, transit and other public facilities necessary

to support development can be planned for and provided.

Implementation of policies 1.1.1 and 1.1.5., which are related to the provision of services, will help Osceola County meet this objective. As Objective 1.1. became effective in mid-July, 2008, Osceola County will measure the effectiveness of Objective 1.1. during the update of the Water Supply Work Plan and during the next EAR.

Policy 1.1.1:
The UGB is fundamental to the County's long-term growth strategy for achieving a compact urban area where a quality of life superior to that provided by a conventional suburban development pattern can be achieved. To that end, the County will use the UGB as the primary planning and management tool for identifying 20 year capital facility needs and the funding commitments required to support its future urban growth.

Osceola County does not construct or maintain capital facilities for potable water and wastewater services; however, the County does provide information to both the Toho Water Authority (TWA) and the City of St. Cloud to assist them with their capital facilities needs.

Policy 1.1.5:
All new development within the UGB shall connect to a regional service provider of central potable water and sanitary sewer systems, except in situations where the development of fewer than 4 adjacent single-family residential lots is proposed and these services do not exist within 200 feet. Those areas served with private potable water wells and on-site treatment and disposal systems may remain until central services are available to serve these areas. Furthermore, the extension of central potable water and sanitary sewer systems outside of the UGB shall be prohibited, unless the Board of County Commissioners determines that these services are needed for one of the following reasons:

- *A. A public health hazard exists for existing development, and extension will not serve as the basis for new development; or*
- *B. When the facilities are extended to protect environmentally sensitive areas from the impacts resulting from existing development;*
- *C. Enhancement of services in the Rural Settlements;*
- *D. Development of receiving properties through a Rural Land Stewardship program.*

Expansion of these services shall not be considered justification for expanding urban development outside the UGB or for extension of the UGB.

The intent of this policy is to limit potable water and sanitary sewer services to the UGB and to restrict the use of potable water wells and septic tanks within the UGB. The effectiveness of this policy will be evaluated during the update of the Water Supply Facilities Plan and the next Osceola County Evaluation and Appraisal Report. (EAR).

Objective 1.3: Future Land Uses
The adopted Future Land Use Map and any amendments to this map shall promote responsible growth management practices. More specifically, Future Land Use Map designations and Land Development Code regulations shall be based upon appropriate topography and soil conditions, coordinated with the availability of facilities and services; provide for adequate drainage, stormwater management, open space, safe on-site traffic flow and needed vehicular parking; encourage the elimination or reduction of incompatible land uses; and discourage the proliferation of urban sprawl development patterns.

In accordance with Section 163.3177(6) (a), Florida Statutes, the availability of water supplies and water supply facilities is a major consideration when reviewing and acting upon proposed Future Land Use Map amendments. Additionally, the recently amended Osceola County Comprehensive Plan, which became effective in mid-July, 2008, contains several policies addressing the link between the availability of water supplies and public facilities and development in Osceola County. The effectiveness of Objective 1.3. will be evaluated during the update of the Water Supply Facilities Work Plan and the next EAR.

Policy 1.3.37:
The County shall study and, if deemed feasible, implement land use policies through which the identification, preservation, conservation, and management of raw water resources can be accomplished consistent with the procedures and authority established in the Florida Statutes for the water management districts, the Florida Department of Environmental Protection (FDEP), and the land use and growth management responsibilities assigned to the local jurisdiction, as further established by the Florida Statutes. These land use policies shall include, but not be limited to the following:
(1) The study and, if necessary, modification of the existing County water districts;
(2) The review and consideration of the long-term potable water resources available for utilization by the citizens of Osceola County along with the expected demand in the near and long-term future as demonstrated by the individual district water supply plans, data and studies undertaken by the FDEP, and other applicable resource studies;
(3) The implementation of innovative land use regulation and incentives mechanisms to preserve water resources through the establishment of local regulatory land use decision mechanisms consistent with the requirements of the applicable Florida Statutes;
(4) The recognition that the regulation of the consumptive use of water is specifically reserved to the water management districts, pursuant to Chapter 373, F.S.;
(5) In furtherance to the local sources first policy, embodied in Section 373.223, F.S., Osceola County expressly intends that the land use policies and determinations made pursuant to this Comprehensive Plan be considered by the appropriate water management district as part of the consumptive use permitting decision making process, pursuant to Chapter 373, F.S.; and
(6) Provisions establishing that when a consumptive use permit under section 373.2295 (interdistrict transfer of groundwater), F.S., is granted for water use beyond the boundaries of a local government from which, or through which, the groundwater is withdrawn or transferred, and a local government denies a permit required under

Chapter 125 or 153, F.S., for a facility or any infrastructure which produces, treats, transmits, or distributes such groundwater, the person or unit of government applying for the permit under Chapter 125 or 153, F.S., may appeal the denial to the land and Water Adjudicatory Commission.

As this policy did not take effect until mid-July, 2008, the effectiveness of this policy will be evaluated during the Water Supply Facilities Work Plan update and during the next EAR. It is anticipated the study referenced in this policy will be completed prior to the Work Plan update and the next EAR.

Policy 1.8.1:
The County shall create a protection area of a 500 foot radius of existing and planned wellheads of public potable water supply wells for the protection of the contributing recharge areas. Within that radius, prohibited or restricted activities will be defined. Such activities include that that have been established to be significant threats and can degrade or contaminate the water resources of the County, such as but not limited to: new and expanding sanitary landfills, industrial land use designations, concentrated animal feeding operations, dairy farm storage and treatment facilities, interim wastewater treatment plants, stormwater discharges to the Floridian aquifer, land application of sludge and septage, and underground storage tanks. Additionally, the County shall identify certain substances as regulated and shall require that the handling of such substances be in accordance with state and federal mandates. These substances shall be listed in the Land Development Code by December 2008~~7~~.

It is anticipated the Board of County Commissioners will amend the Land Development Code by December 2008.

POTABLE WATER ELEMENT

Objection 1.2: Coordination of Potable Water Facilities
Osceola County shall coordinate with the Tohopekaliga Water Authority, the City of St. Cloud, and other utility providers servicing the unincorporated areas to ensure that the adopted potable water level of service standards will be met.

Osceola County has entered into interlocal agreements for potable water services with both TWA and the City of St. Cloud. Coordination between the County and the potable water suppliers is ongoing.

Policy 1.2.5:
New potable water treatment plants, as well as expansions of existing plants, shall be consistent with the Future Land Use Element.

Prior to development of a new potable water treatment plant or the expansion of an existing plan to a capacity of greater than 250,000 gallons per day, the Future Land Use Map category of the subject property must be amended to the Natural Resources Utilization Category if the property is located within the Urban Infill Area. This will

require public hearings before the Osceola County Planning Commission and the Osceola County Board of County Commissioners as well as transmittal to the State Department of Community Affairs.

Policy 1.2.6:
Consistent with Future Land Use Element Policy 1.1.5, the extension of central potable water systems outside of the Urban Growth Boundary shall be prohibited, unless the Board of County Commissioners determines that this service is needed for one of the following reasons:

A. A public health hazard exists for existing development, and extension will not serve as the basis for new development; or

B. When the facilities are extended to protect environmentally sensitive areas from impacts resulting from existing development.

C. Enhancement of services in the Rural Settlement Developments of receiving Properties thru the Rural Land Stewardship Program.

The provision of central water system for the above reason shall not be used to justify the expansion of urban development outside the UGB.

The intent of this policy, which also appears in the Future Land Use Element as Policy 1.1.5., is to limit potable water and sanitary sewer services to the UGB and to restrict the use of potable water wells and septic tanks within the UGB. The effectiveness of this policy will be evaluated during the update of the Water Supply Facilities Plan and the next Osceola County Evaluation and Appraisal Report (EAR).

Policy 1.2.7:
The development of private and non-central public potable water systems will not inherently encourage urban sprawl.

The intent of this policy is to prevent the development of subdivisions with each house on separate potable water well. This policy became effective in mid-July, 2008. Its effectiveness will be evaluated during the update of the Water Supply Facilities Work Plan and the next EAR.

Objective 1.5: Regional Coordination of Water Resources
The County shall be proactive in the regional water resources planning efforts, through enhanced coordination with adjacent jurisdictions, water providers and regional water management districts.

Among Osceola County's ongoing planning efforts are its representation on the TWA board, the development of a unified ten-year water supply work plan, and the Kissimmee Chain of Lakes Long Term Management Plan.

Policy 1.5.3:
The Tohopekaliga Water Authority, in coordination with Osceola County, FDEP, the South Florida and St. Johns River Water Management Districts shall ensure that potable water demands caused by development does not exceed the consumptive use permit (CUP) of the utility providers.

The Tohopekaliga Water Authority (TWA) monitors potable water demand to ensure that potable water demand does not exceed the limitations of consumptive use permits.

POLICY AREA #2: REVISION OF POTABLE WATER LEVEL-OF-SERVICE STANDARDS FOR RESIDENTIAL AND NON-RESIDENTIAL USERS

POTABLE WATER ELEMENT

Policy 1.2.1:
Unincorporated areas of the County served by central potable water facilities shall meet the following levels of service standards:

a) Tohopekaliga Water Authority (TWA) –Level of Service for each system served by the TWA shall be as follows: 98% of the maximum permitted capacity; and Minimum 20 PSI pressure will be maintained during fire flow conditions.
b) City of St. Cloud – 120 gallons per day per capita.
c) Florida Governmental Utility Authority (FGUA) - 122 gallons per day per capita.

The adopted level of service standards reflect level of service standards provided by the potable water supply utilities. As Policy 1.2.1. became effective in mid-July, 2008, the adopted level of service standards will be evaluated as part of the Ten Year Water Supply Work Plan Update as well as in the next EAR. Also, as both the Cities if Kissimmee and St. Cloud will be performing their own EARs within the next year, the County will need to coordinate with those local governments to ensure the cities do not proposed revised potable water level of service standards that conflict with those in Osceola Comprehensive Plan.

Policy 1.5.9:
In order to adequately serve the existing and future population, the County shall proactively work with the potable water utility providers and the water management districts to ensure that adopted level of standards are met and that identified facility deficiencies are corrected.

This is an ongoing effort. Development and adoption of the Ten Year Water Supply Facilities Element would help to implement this policy.

CAPITAL IMPROVEMENTS ELEMENT

Policy 1.1.2:

Osceola County shall coordinate with the applicable utility providers to ensure that all new development and redevelopment projects meet the following adopted level of service standards for potable water and sanitary sewer facilities:

Utility Provider	*Level of Service Standard for Potable Water*	*Level of Service Standard for Sanitary Sewer*
Toho Water Authority (TWA)	*98% of the maximum permitted capacity; and Minimum 20 PSI pressure will be maintained during fire flow conditions and 40 PSI at property lines.*	*98% of permitted average daily flow per day per capita.*
City of St. Cloud	*120 gallons per day per capita*	*106 gallons per day per capita*
Florida Government Utility Authority	*122 gallons per day per capita*	*87 gallons per day per capita*

Policy 1.1.2. became effective in mid-July of 2008. As part of the development of the Water Supply Facilities Work Plan, Osceola County will review the effectiveness of the level-of-service standard for the Toho Water Authority. Additionally, the County will evaluate whether to adopt separate level of service standards for non-residential uses.

POLICY AREA #3: PROVISION FOR THE PROTECTION OF WATER QUALITY IN THE TRADITIONAL AND NEW ALTERNATIVE WATER SUPPLY SOURCES:

PORTABLE WATER ELEMENT

GOAL 1: PROTECTION OF THE POTABLE WATER SUPPLY.
Osceola County shall ensure the protection of the potable water supply and delivery of safe and adequate potable water service. This service shall be managed in a cost effective manner to accommodate existing and future development.

This should be accomplished through the use of wellhead protection zones and cooperation with both TWA and the City of St. Cloud.

Objective 1.1: Water Quality.
Osceola County shall cooperate with the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) to ensure that water quality standards are met.

Current standards are set by the Federal Clean Water Act. Both TWA and the City of St. Cloud are responsible for monitoring the potable water supply to ensure the Federal water quality standards are being met.

Policy 1.1.1:
The County shall establish a 500-foot wellhead protection area around all public potable waterwells, and shall adopt wellhead protection regulations in the Land Development Code for existing and future major public wellheads by December 2007 The County shall revise this wellhead protection area, if the Tohopekaliga Water Authority establishes its own standards.

As the Comprehensive Plan became effective in mid-July of 2008, Osceola County is seeking a text amendment to change the effective date of the policy from December 2007 to July 2009. Osceola County will work with TWA to determine if they establish their own wellhead protection standards.

Policy 1.1.2:
The County shall prohibit the Industrial and Intensive Commercial Future Land Use Map designations, as well as hazardous waste storage sites, solid waste disposal sites, and single-lined petroleum storage tanks, within the 500-foot wellhead protection area. The County shall revise this wellhead protection area, if the Tohopekaliga Water Authority establishes its own standards.

As this policy became effective in mid-July, 2008, Osceola County will evaluate the effectiveness of this policy as part of the next update to Ten-Year Water Supply Facilities Work Plan and during the next EAR.

Policy 1.1.3:
The County shall assist FDEP in its role in the review of drinking water treatment plants. No new drinking water treatment plants shall be allowed unless all applicable sections of the Florida Administrative Code (F.A.C.) governing such plants are met. No connections to existing drinking water treatment plants shall be allowed if enforcement action by FDEP would preclude such. Such systems shall also comply with the pertinent rules and regulations of any Osceola water district, which may have jurisdiction. Land use impacts arising from the permitting of new drinking water treatment plants, as well as expansions of existing plants, shall be consistent with the applicable provisions of this Plan in order for any local development permits to be issued.

Any proposed new drinking treatment plants would need to be consistent with the goals, objectives and policies of the Osceola County Comprehensive Plan. If the site of the proposed plant does not have a Future Land Use Map designation of Natural Resource

Utilization, a plan amendment would be required. A rezoning to the Public Institution District and a conditional use for a water treatment plant would also be required. Osceola County will work with the water supplier during the plan amendment and rezoning/conditional use process. As part of the amendment process, the County will contact FDEP to determine if any existing enforcement actions have been taken against the water supplier. Additionally, all rezoning and conditional use applications are reviewed for consistency with the Comprehensive Plan.

Policy 1.1.4:
Osceola County shall review and analyze the purpose and tasks of each water district at least every five-years to determine whether revisions in the enabling legislation need to be made to assist in the conservation, protection, and management of the County's natural resources. Additionally, not later than the end of 2007 the County shall investigate and enact, if deemed necessary, any additional procedures or mechanisms for the provision of potable water service, consistent with the requirements of the Florida Statutes, to preserve, protect, and manage the long-term natural resources of the County.

As the Comprehensive Plan became effective on July 14, 2008, Osceola County is seeking a text amendment to change the effective date to July 2009.

Policy 1.2.11:
The County will coordinate with and support utility providers and the water management districts in developing alternative water supplies, by providing incentives and permitting assistance.

Osceola County staff is investigating incentives and permitting assistance. Among those measures are incentives for Water Star compliance and the use of Xeriscaping. The effectiveness of this policy will be evaluated during the Water Supply Facilities Work Plan update and during the next EAR.

Policy 1.5.2:
Consistent with applicable State law and rules, any land use posing a threat to the County's long-term natural resource base through the diminution, contamination, or depletion of essential water resources shall not be permitted. "Diminution" and "depletion" shall not include the diminution or depletion of water resources due to the consumptive use of water.

Osceola County staff routinely reviews the soils and wetlands for all applicable permit applications.

FUTURE LAND USE ELEMENT

Objective 1.8: Natural Resources Protection
Prior to the approval of site plans by Osceola County, areas of unsuitable soils, wetlands, or wellhead protection areas must be identified. Provision to ensure that these factors are addressed in a manner that is consistent with the Goals, Objectives and

Policies of this Plan shall be included in the Land Development Code.

Policies 1.8.1. and 1.8.2., when implemented, will help Osceola County meet this objective. As Objective 1.8. became effective in mid-July, 2008, Osceola County will measure the effectiveness of Objective 1.8. during the update of the Water Supply Work Plan and during the next EAR.

Policy 1.8.1:
The County shall create a protection area of a 500 foot radius of existing and planned wellheads of public potable water supply wells for the protection of the contributing recharge areas. Within that radius, prohibited or restricted activities will be defined. Such activities include that that have been established to be significant threats and can degrade or contaminate the water resources of the County, such as but not limited to: new and expanding sanitary landfills, industrial land use designations, concentrated animal feeding operations, dairy farm storage and treatment facilities, interim wastewater treatment plants, stormwater discharges to the Floridian aquifer, land application of sludge and septage, and underground storage tanks. Additionally, the County shall identify certain substances as regulated and shall require that the handling of such substances be in accordance with state and federal mandates. These substances shall be listed in the Land Development Code by December 2008.

It is anticipated that once Policy 1.8.1. becomes effective in mid-July, 2008, Land Development Code amendments creating wellhead protection zones will go to the BOCC by December 2008.

Policy 1.8.2:
Osceola County has developed a Natural Resource Inventory that identifies areas critical to protection and conservation. The inventory includes, but is not limited to, the following resources: aquifer recharge areas, wellhead protection areas, wetlands, mineral resources, raw water extraction and production resources areas, wilderness resource areas, rare and endangered animal species, areas deemed suitable for waste water disposal, re-use, recycling or land filling areas and areas characterized by fire ecology. The Natural Resource Inventory will be used to guide the decisions related to the long-term preservation and protection of natural resources throughout the County.

Osceola County will continue to revise the Natural Resources Inventory as needed.

CONSERVATION ELEMENT:

Objective 1.2: Surface Waters
Osceola County shall conserve, restore, and protect surface waters from all known and identifiable pollution sources by using all available, current water quality and quantity data to monitor the health of lakes and rivers, in order to meet State of Florida surface water classification and respective surface water quality standards.

Water quality is currently monitored by the Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission. All new developments are reviewed to help minimize impacts to environmentally sensitive systems and are required to utilize Best Management Practices as defined by the National Pollutant Discharge Elimination Program rules.

Policy 1.2.1:
Osceola County shall revise the LDC by March, 2008 to restrict developments known to affect adversely the quality and quantity of surface waters, including natural groundwater recharge areas, wellhead protection zones and surface waters used as a source of public water supply. The County shall periodically update its restrictions list based on the best available current data.

The Osceola County Comprehensive Plan became effective in mid-July, 2008. As a result, Osceola County is submitting a text amendment to DCA that would change the implementation date from March 2008 to December 2009.

Policy 1.2.2:
Osceola County shall identify and create upland buffer zones accordance with the regulations set forth by federal and state regulatory agencies by March, 2008. These buffer zones shall be between development and surface water, environmentally sensitive areas, and wetlands in order to protect these natural resources from the activities and impacts of development. In the event that the County's regulations result in a larger buffer than that required by State or Federal agencies, the additional buffer shall be offset by density transfer internal to the development. These buffer areas shall not conflict with the requirements and activities permitted by federal and state regulatory agencies (for example 12.2.7 (a) of SJRWMD Applicants Handbook and 4.2.7(a) of SFWMD Basis of Review).

Upland buffer zones referenced in this policy are required by the South Florida Water Management District for all permitted projects. The Board of County Commissioners often approve additional buffers to protect larger, more environmentally sensitive lands. However, as the Osceola County Comprehensive Plan became effective in mid-July, 2008, the County is submitting a text amendment to DCA that would change the policy implementation date from March 2008 to December 2009.

Objective1.3: Groundwater Resources.
Osceola County shall conserve and protect groundwater resources for potable water usage, in a sustainable manner, to ensure future water availability.

The policies associated with Objective 1.3., when implemented, will help Osceola County meet this objective. As Objective 1.3. became effective in mid-July, 2008, Osceola County will measure the effectiveness of Objective 1.3. during the update of the Water Supply Work Plan and during the next EAR.

Policy 1.3.1:
Osceola County shall, in cooperation with federal and state regulatory agencies, monitor groundwater quality and levels through regular review of the Florida Department of Environmental Protection's Site Investigation Section list. The County shall use these data to identify areas needing increased protection and to coordinate with the FDEP and other appropriate agencies to identify additional protective measures appropriate for the County to undertake, which shall then be reflected in amendments to the County's Comprehensive Plan and the LDC.

Osceola County has yet to implement this policy. As the policy became effective in mid-July, 2008, the effectiveness of this policy will be evaluated during the update of the Water Supply Facilities Work Plan and during the next EAR.

Policy 1.3.2:
Osceola County shall work with the State, as required by the Safe Drinking Water Act, to map wellhead protection zones and develop land use controls that will provide protection from contamination for these areas, and will maintain its existing Geographical Information Systems (GIS) mapping database of the highest water recharge areas to aid developers and reviewers in determining the impacts of development on the natural recharge characteristics of the land.

As this policy became effective in mid-July of 2008, implementation of this policy and its effectiveness will be analyzed during the Water Supply Facilities Work Plan update and during the next EAR.

Policy 1.3.3:
The County shall enforce the guidelines specified by the Florida Department of Health and the Florida Department of Environmental Protection. These are:

Rule Installation Setback

*Permitting and Construction Onsite Sewage Treatment *200ft*
*Public Water Systems Rule Disposal Systems (OSTDS) *100ft*
64E-8.002(2)(b)2.,F.A.C.

Public Water System DEP Sanitary Hazard as defined 100ft
Rule 62.55.312(4), F.A.C in DEP 62-550 for drinking
water supply wells.

Domestic Wastewater Domestic Wastewater 500ft
Residual Rule Residuals Land Application
62-640.700(4)b., F.A.C. Areas

Private Wells and Multi-family

Drinking Water Systems OSTDS 75FT
Rule 64E-8.003(1) F.A.C.

**Existing and planned water well and cones of influence have yet to be delineated. As discussed in the Public Facilities Elements, the County is cooperating with the SJFWMD, SFWMD, the Toho Water Authority, the Cities of St. Cloud and Kissimmee on well field protection and modeling programs. Until these protection areas may be delineated, interim wellhead protection zones will be implemented. These zones as described in the Public Facilities Element, are 500 feet in diameter; their location are identified on the map.*

Enforcement of these guidelines shall be performed by the County's Environmental Services Division. The effectiveness of this policy shall be analyzed during the Water Supply Work Plan update and during the next EAR.

Policy 1.3.4:
Osceola County shall, on its own projects implement the use of one or more of the BMPs specific to groundwater conservation and/or quality shown on the FDEP's list of BMP's, by December 2007~~6~~. BMPs shall include, but are not limited to: landscape design with water-efficient irrigation that promotes conservation and/or the appropriate use of reclaimed water. Landscape irrigation standards shall be consistent with the landscape and model guidelines established by the water management districts pursuant to section 373.228(4), FS.

Implementation of this policy will occur during the site development process. The effectiveness of this policy shall be analyzed during the Water Supply Work Plan update and during the next EAR. As the Comprehensive Plan became effective after the December 2007 deadline, Osceola County is seeking a text amendment to revise the effective date to December 2009.

Policy 1.3.5:
Osceola County shall, in cooperation with the regulating Water Management District, assist in enforcing the current and future landscape watering restrictions for commercial and residential areas.

Osceola County shall provide assistance to the regulating water management district regarding current and future landscape water restrictions. Possible County measures could include, but not be limited to, providing public information through the County's web page and through County extension courses to considering amendment to the County's regulations including the Land Development Code.

Policy 1.3.6:
Recognizing that aquifer recharge areas, groundwater resources, wellhead protection zones, and that lakes, rivers, and wetlands within the County are interconnected systems that are vital to the protection of water resources, aquifer recharge protection measures

shall be consistent with the Future Land Use, Stormwater Management, and Potable Water Elements of the Comprehensive Plan.

The effectiveness of this policy will be analyzed during the Water Supply Work Plan update and the next EAR.

Policy 1.3.7:
Osceola County shall implement emergency water conservation in accordance with the Water Management District's Water Supply Plans.

Osceola County shall practice emergency water conservation restrictions called for by water management districts. Additionally, Osceola County shall review its existing ordinances and consider measures that will help implement the water management districts' emergency water conservation measures. As the Osceola County Plan became effective in mid-July of 2008, the County will evaluate the effectiveness of this policy during the next Work Plan update and during the next EAR.

Policy 1.3.8:
Osceola County shall revise the LDC by March 2008 to incorporate BMPs that minimize development impacts in areas where the potential for adversely affecting potable water supplies is significant, including natural groundwater recharge areas, wellhead protection zones and surface waters used as a source of public water supply. The County shall periodically review BMPs and revise the LDC accordingly.

As the Comprehensive Plan was not be effective until mid-July, 2008, Osceola County is seeking a text amendment to change the effective date to December 2009.

Policy 1.3.9:
By March 2008, the County shall incorporate aquifer recharge protection regulations into its Land Development Code for areas identified in Map 8-1 of the Natural Groundwater Aquifer Recharge Element Data and Analysis as "high" and "prime" aquifer recharge areas. At a minimum, the regulations shall stipulate that:

1. *Natural grades and topography be maintained unless alteration is needed to meet health and safety standards.*
2. *Borrow Pits be prohibited.*
3. *Landscaping be predominately comprised of native vegetation.*
4. *Best Management Practices be required to minimize the affects of herbicide and pesticide application for all non-residential landscaped areas, including golf courses.*
5. *Documentation be provided from each new project demonstrating the measures that will be taken to ensure the projects will not negatively impact the quantity and quality of the recharge to the aquifer.*
6. *Best Management practices be used for closed drainage basins and stormwater pond maintenance to ensure that the quality and quantity of recharge is maintained.*

7. *Stormwater pond maintenance procedures be put into effect.*
8. *No net loss of recharge occur on a development site.*

As the Comprehensive Plan became effective as of mid-July of 2008, Osceola County is seeking a text amendment to change the effective date to December 2009.

NATURAL GROUNDWATER AQUIFER RECHARGE ELEMENT

Objective 1.1: Planning for the Protection of Aquifer Recharge Areas
To meet current and future demands for potable water resources and to protect natural resources, Osceola County will cooperate with other governmental agencies, especially the South Florida Water Management District (SFWMD) and the St. Johns River Water Management District (SJRWMD).

The policies associated with Objective 1.1, when implemented, will help Osceola County meet this objective. As Objective 1.1. became effective in mid-July, 2008, Osceola County will measure the effectiveness of Objective 1.1. during the update of the Water Supply Work Plan and during the next EAR.

Policy 1.1.1:
All new development and redevelopment within the "prime" and "high" aquifer recharge areas, as defined in the Data and Analysis, Shall ensure that the water quality and quantity in the aquifer is not degraded by requiring that drainage facilities maximize rainfall percolation through the use of retention systems.

This policy will be implemented through the County's site review process.

Policy 1.1.2:
By December 2009 the County shall incorporate aquifer recharge protection regulations into its Land Development Code, for areas identified in Natural Groundwater Aquifer Recharge Element Data and Analysis as Map 8-1 as "high" and "prime" aquifer recharge areas. At a minimum, the regulations shall stipulate that:

1. *Natural grades and topography be maintained unless alteration is needed to meet health and safety standards.*
2. *Borrow Pits be prohibited.*
3. *Landscaping be predominately comprised of native vegetation.*
4. *Best Management Practices be required to minimize the affects of herbicide and pesticide application for all non-residential and multi-family residential landscaped areas, including golf courses.*
5. *Documentation be provided from each new project demonstrating the measures that will be taken to ensure the projects will not negatively impact the quantity and quality of the recharge to the aquifer.*
6. *Best management practices be used for closed drainage basins and stormwater pond maintenance to ensure that the quality and quantity of recharge is maintained.*

7. Stormwater pond maintenance procedures be put into effect.
8. No net loss of recharge occur on a development site.

It is anticipated the Land Development Code amendment required to implement this policy will go to the Board of County Commissioners prior to December 2009.

Policy 1.1.3:
Recognizing that aquifer recharge areas, groundwater resources, wellhead protection areas, and that lakes, rivers, and wetlands within the County are interconnected systems that are vital to the protection of water resources, aquifer recharge protection measures for "high" and "prime" recharge areas shall be consistent with the Conservation, Future Land Use, Stormwater Management, and Potable Water Elements of the Comprehensive Plan.

The purpose of this policy is to ensure internal consistency between the Conservation, Future Land Use, Stormwater Management and Potable Water Elements. Whatever aquifer recharge measures the County undertakes shall be reflected in the goals, objectives and policies of those four elements. It is recommended this policy be amended to reflect the need for internal consistency.

Policy 1.1.4:
The County shall regulate the location of hazardous waste storage facilities, petroleum storage tanks, mining activities, solid waste water disposal sites, or any other adverse land use within prime and high aquifer recharge areas through the Land Development Code.

As the Comprehensive Plan became effective in mid-July, 2008, it is anticipated the Land Development Code amendments will go to the Board of County Commissioners within a year of the Plan's effective date.

Policy 1.1.5:
The County may use open space designations, greenbelt designations, land acquisition strategies, planned development zoning districts, conservation easements, or cooperative management agreements to protect aquifer recharge areas.

The strategies described in Policy 1.1.5. to protect aquifer recharge areas are routinely utilized by Osceola County government.

Policy 1.1.6:
To acquire aquifer recharge areas for protection as conservation or open space areas, the County may investigate the future use of bonds, leasing agreements for private and public properties, donations of private property, private or public trust and partnerships, Education Facilities Benefit and Community Development Districts, or tourism taxes.

Osceola County government has utilized these financing and acquisition tools, as well as Save Osceola funds, to acquire aquifer recharge areas for conservation or open space areas.

Policy 1.1.7:
In the purchasing of property to protect aquifer recharge areas, the County shall place a higher priority on purchasing properties that may afford parks and recreation opportunities, or that may be used to improve stormwater management systems.

This is standard procedure for evaluating the purchase of vacant land for passion recreation uses or conservation areas.

POLICY AREA #4: REVISION OF PRIORITIES FOR THE REPLACEMENT OF FACILITIES, CORRECTION OF EXISTING WATER SUPPLY AND FACILITY DEFICIENCIES, AND PROVISION OF FUTURE WATER SUPPLY AND FACILITY NEEDS

POTABLE WATER ELEMENT:

Policy 1.2.5:
New potable water treatment plants, as well as expansions of existing plants, shall be consistent with the Future Land Use Element.

Prior to development of a new potable water treatment plant or the expansion of an existing plan to a capacity of greater than 250,000 gallons per day, the Future Land Use Map category of the subject property must be amended to the Natural Resources Utilization Category if the property is located within the Urban Infill Area. This will require public hearings before the Osceola County Planning Commission and the Osceola County Board of County Commissioners as well as transmittal to the State Department of Community Affairs.

Policy 1.2.10:
County will continue to investigate the feasibility of use of stormwater management as a nonpotable water source when new stormwater management systems are permitted, and the County will coordinate with the utility providers in implementing feasible projects.

Osceola County does require a number of developments to use stormwater for irrigation

Policy 1.2.11:
The County will coordinate with and support utility providers and the water management districts in developing alternative water supplies, by providing incentives and permitting assistance.

Osceola County staff is investigating incentives and permitting assistance. Among the measures being considered are incentives for Water Star compliance and the use of

xeriscaping. The effectiveness of this policy will be evaluated during the Water Supply Facilities Work Plan update and during the next EAR.

Policy 1.5.6:
Osceola County shall coordinate with South Florida and St. Johns River Management Districts to find new sources of potable water.

The intent of this policy is that the County shall actively participant in the water management districts' effort to find new sources of portable water and to input as necessary. This policy should be amended to more accurately reflect its intent.

Policy 1.5.9:
In order to adequately serve the existing and future population, the County shall proactively work with the potable water utility providers and the water management districts to ensure that adopted level of standards are met and that identified facility deficiencies are corrected.

Osceola County, the Cities of Kissimmee and St.Cloud, and the TWA are presently developing a unified Ten Year Water Supply Facilities Work Plan that will address the meeting of adopted level of service standards and the correction of any facility deficiencies identified by the TWA and the City of St. Cloud.

FUTURE LAND USE ELEMENT

Policy 1.3.17:
The DCI's (Development of County Impact) Community Plan must be developed in sufficient detail to allow evaluation of the interrelationship of its parts, establish consistency with the Mixed Use policies and demonstrate the availability and adequacy of public facilities and services, to include transportation, central water and sewer, community parks and schools. At a minimum the following information shall be included in the Community Plan:

a. Background Analysis

1. Identification of extent and location of natural features in the project area.
2. Identification of the environmental opportunities and constraints to development within the area.
3. Identification of net usable land.
4. Identification of existing and proposed development within the project area.
5. Identification of public facilities servicing the area; available capacity; and, any deficiencies.

b. Planning Requirements

1. Statement of the community goals and objectives to be accomplished by the project.
2. A preliminary sketch of the roadway network – arterials, collectors and local streets – that would internally serve the development and its connections to the area's roadway network.

3. Land use plan indicating the amount and location of residential, commercial, office, employment and public uses including the proposed locations for transportation facilities (auto, transit, bike, pedestrian), major community services (water and wastewater plants, solid waste transfer stations, fire and police substations, government buildings), neighborhood school(s), parks, and any conservation areas.

4. Transportation plan showing the location of all arterial and collector roadways necessary to serve the project. It should also address the proposed location of transit routes and the manner in which they can be integrated into the regional transportation system. The location of all bikeways and pedestrian paths should be provided demonstrating the impact on transportation facilities and documenting the timing and estimated cost for required transportation. Prior to initiation of any transportation plan, the project should consult with the Florida Department of Transportation (FDOT) and the Florida's Turnpike Enterprise regarding the methodology for transportation analysis if impacts to state facilities are anticipated. The project shall analyze the cumulative traffic impact of all previously approved development on the area road network, including state roads. Prior to approval of any plan, the FDOT and Florida's Turnpike Enterprise shall have the opportunity to comment on the traffic analysis in regards to impacts to any State roads.

5. Location and size of the water and wastewater systems necessary to serve the project. This includes an analysis of demand, the location and size of plants, major distribution and collection systems. This analysis shall be coordinated with the opportunity to comment on the analysis with regards to impact to their system.

6. Location and size of schools necessary to serve the project. The School Board will be contacted and their participation solicited in performing this analysis. School Board representative shall have the opportunity to comment on the analysis.

7. Illustrate the relationship and connection of existing and future development to the proposed development. If a Conceptual Master Plan has been prepared and adopted for the Mixed Use District within which the development is proposed, there must be a showing of consistency with that Plan.

c. Community Involvement

Hold an informational workshop open to the public to present the Community Plan. Each property owner within 1,000 feet of the boundary of the proposed development must be notified of the workshop as well as state, regional and local agencies and special interest groups, and it must also be advertised in a newspaper of general circulation in the area. Comments from the public must be documented and included in a report submitted to the Osceola County Planning Department prior to or at the time of submittal of the Community Plan for final staff review.

The Development of County Impact (DCI) is a development option which will became available when the Comprehensive Plan became effective in mid-July of 2008. The DCI Community Plan, when submitted by the potential developer, must address the location and size of water and wastewater systems necessary to serve the new development. As the DCI has yet to be implemented in Osceola County, the effectiveness of this policy, in particular those portions relating to water and wastewater service requirements, will be

evaluated during the Water Supply Facilities Work Plan update and during the next EAR update.

POLICY AREA #5: PROVISION FOR CONSERVING POTABLE WATER RESOURCES, INCLUDING THE IMPLEMENTATION OF REUSE PROGRAMS AND POTABLE WATER CONSERVATION STRATEGIES AND TECHNIQUES

POTABLE WATER ELEMENT:

Policy 1.2.8:
The County will continue to coordinate with and support utility providers in requiring all new development to connect non-potable water uses such as irrigation systems to available non-potable water systems, such as reuse systems.

This is an ongoing activity.

Policy 1.2.9:
The County will continue to coordinate with and support utility providers in requiring new developments to install dual transmission and distribution lines to serve those developments where non-potable water is available or expected to be available soon, when the utility provider finds it feasible.

Osceola County has included this provision in the recently approved development order for the DRIs located on the eastern shore of Lake Toho. This policy would be further implemented through amendments to the Land Development Code.

Policy 1.2.10:
County will continue to investigate the feasibility of use of stormwater management as a nonpotable water source when new stormwater management systems are permitted, and the County will coordinate with the utility providers in implementing feasible projects.

Osceola County does require a number of developments to use stormwater for irrigation

Policy 1.2.11:
The County will coordinate with and support utility providers and the water management districts in developing alternative water supplies, by providing incentives and permitting assistance.

Osceola County's Comprehensive Plan became effective in mid-July of 2008. As part the Plan's implementation, the County will explore possible incentives and permitting assistance to implement this policy. The effectiveness of this policy will be evaluated during the Work Plan update and during the next EAR.

Objective 1:3: Water Conservation
Osceola County shall annually review its Comprehensive Plan policies and Land Development Code regulations to address the conservation of water supplies and aim to

reduce water demands by 5% proportionately in relation to growth by the year 2010.

As the Comprehensive Plan became effective in mid-July, a review has not yet occurred. An annual review of Comprehensive Plan policies will be presented to the Osceola County Board of County Commissioners in January.

Policy 1.3.1:
The County's water supply shall be conserved through the implementation of water conservation techniques and programs. Such techniques and programs should include, but are not limited to the following:
The County shall require the installation of water conserving plumbing fixtures in new or renovated construction.

a) The County shall continue to promote the efficient use of potable water in irrigation and landscaping practices through regulations in the Land Development Code.
b) The County will coordinate with the Osceola County Soil and Water Conservation District, the County Extension Office and the South Florida and St. Johns River Water Management District to educate the public on the importance of water conservation and strategies for conserving water.
c) The County shall coordinate with the Water Service Providers to promote the use of water conserving techniques.
d) The County shall cooperate with emergency water conservation measures of the South Florida and St. Johns River Water Management Districts, and the Water Service Providers.

Regarding the promotion of efficient use of potable water in irrigation and landscaping practices, the County is presently amending its Land Development Code to implement these changes. The Land Development Code amendments should be completed within the next year. Regarding coordination with other agencies and water suppliers regarding water conservation measures and public education, these efforts are ongoing.

<u>POLICY AREA #6:</u> PROVISIONS FOR IMPROVED OR ADDITIONAL COORDINATION BETWEEN A WATER SUPPLY PROVIDER AND THE RECIPIENT LOCAL GOVERNMENT CONCERNING THE SHARING AND UPDATING OF INFORMATION TO MEET ONGOING WATER SUPPLY NEEDS.

POTABLE WATER ELEMENT:

Objective 1.5: Regional Coordination of Water Resources
The County shall be proactive in the regional water resources planning efforts, through enhanced coordination with adjacent jurisdictions, water providers and regional water management districts.

This is an ongoing effect. The County is working with water providers and regional

water management districts on a Ten-Year Water Supply Facilities Work Plan, on the Kissimmee Chain of Lakes Water Management Plan,

Policy 1.5.7:
The County shall encourage the Board of Supervisors of the Tohopekaliga Water Authority to adopt a master plan by December 2006.

Osceola County staff have discussed the adoption of a master plan with Tohopekaliga Water Authority (TWA) staff. As of this time, the TWA Board of Supervisors has yet to adopt a master plan.

Policy 1.5.8:
Osceola County shall review the Tohopekaliga Water Authority master plan every two years, and suggest recommendations to the plan, as needed.

Once a master plan is adopted, Osceola County shall coordinate with TWA to ensure the County reviews the TWA master plan as required. The effectiveness of this policy will be evaluated during the update of the Water Supply Facilities Work Plan and the EAR.

Policy 1.5.9:
In order to adequately serve the existing and future population, the County shall proactively work with the potable water utility providers and the water management districts to ensure that adopted level of standards are met and that identified facility deficiencies are corrected.

Osceola County, the Cities of Kissimmee and St.Cloud, and the TWA have discussed development of a unified Ten Year Water Supply Facilities Work Plan that will address the meeting of adopted level of service standards and the correction of any facility deficiencies identified by the TWA and the City of St. Cloud.

POLICY AREA #7: COORDINATION BETWEEN LOCAL GOVERNMENTS AND THE WATER SUPPLY PROVIDER IN THE IMPLEMENTATION OF ALTERNATIVE WATER SUPPLY PROJECTS, ESTABLISHMENT OF LEVEL-OF-SERVICE STANDARDS AND RESOURCE ALLOCATIONS, CHANGES IN SERVICE AREAS, AND POTENTIAL FOR ANNEXATION

POTABLE WATER ELEMENT:

Policy 1.2.10:
County will continue to investigate the feasibility of use of stormwater management as a nonpotable water source when new stormwater management systems are permitted, and the County will coordinate with the utility providers in implementing feasible projects.

Osceola County has recently approved development orders for developments of regional impact in the Lake Toho area prohibiting the use of potable water for irrigation in new developments while requiring the use of reclaimed water, stormwater and other sources

of non-potable water. Specifically, recently approved development orders direct developers to work towards locating and designing stormwater detention facilities that can serve as water resources for landscape irrigation. Osceola County will consider changes to its regulations to require all new developers to meet this requirement.

Policy 1.2.11:
The County will coordinate with and support utility providers and the water management districts in developing alternative water supplies, by providing incentives and permitting assistance.

Osceola County's Comprehensive Plan became effective in mid-July of 2008. As part the Plan's implementation, the County will explore possible incentives and permitting assistance to implement this policy. The effectiveness of this policy will be evaluated during the Work Plan update and during the next EAR.

Policy 1.5.3:
The Tohopekaliga Water Authority, in coordination with Osceola County, FDEP, the South Florida and St. Johns River Water Management Districts shall ensure that potable water demands caused by development does not exceed the consumptive use permit (CUP) of the utility providers.

This policy actually directs TWA to ensure that potable water demands caused by development do not exceed the consumptive use permit of utility providers. It may be more appropriate to amend the policy to read that the County recognizes that Toho Water Authority is responsible for ensuring that potable water demands caused by development does not exceed the consumptive use permit. This policy should also be amended to recognize that the City of St. Cloud has the same responsibility.

Policy 1.5.6:
Osceola County shall coordinate with South Florida and St. Johns River Management Districts to find new sources of potable water.

This policy recognizes the County's role in the development of the water management districts' development of water supply plans and their subsequent updates.

INTERGOVERNMENTAL COORDINATION ELEMENT:

Policy 1.1.8:
The County shall maintain interlocal agreements, or meet as needed, with adjacent counties, independent special districts, and other governmental agencies providing facilities and services but not having regulatory authority over the use of land, on population projections and the extension of public facilities subjects to concurrency.

Osceola County has interlocal agreements with TWA and the City of St. Cloud regarding the provision of potable water and sanitary sewer services.

Objective 1.3: Coordination of Public Facilities, Services, and Infrastructure.
The County shall coordinate with state, regional, and local governments; private utility providers; private entities; and not-for-profit agencies to ensure that level of service standards for public facilities are improved and maintained.

Policy 1.3.1:
The County will negotiate Joint Planning Agreements (JPAs) with the municipalities of Kissimmee and St. Cloud. The JPAs will, at a minimum, designate joint planning areas, and will address items of mutual interest including the protocols for annexation of land into the municipalities, and for the joint review of comprehensive plan amendments, rezonings, and other changes to land uses that may affect both jurisdictions.

The County has entered into a Joint Planning Agreement with the City of St. Cloud. The County has had discussions with the City of Kissimmee regarding a joint planning agreement.

Policy 1.3.2:
To assure a smooth transition, the JPAs with the municipalities will address the manner in which infrastructure will be located, developed, staffed, and funded in unincorporated Osceola County prior to annexation into the municipality. The scope of the JPA may address emergency facilities and services, potable water, sanitary sewer facilities, solid waste facilities, and parks and recreational facilities.

Articles 8 of the JPA between the City of St. Cloud and the County require the City of establish a zone in which all new development is required to connect to City utilities. The City has established a potable water service area which includes portions of the unincorporated County. Article 12 commits the City and County to work with the Florida Department of Environmental Protection, SFWMD, and other appropriate agencies to assure the protection and enhancement of groundwater quality.

Policy 1.3.3:
The County shall coordinate with utility providers within the County to determine the future location and service area of central potable water, sanitary sewer facilities, and solid waste facilities and services.

Osceola County shall work with the water suppliers to determine whether proposed potable water facilities are consistent with the adopted Future Land Use Map and existing zoning districts. If a future land use map amendment and a zoning map amendment are required, the County shall assist the water utilities any required comprehensive plan and/or zoning map amendments.

<u>POLICY AREA #8:</u> COORDINATION OF LAND USES WITH AVAILABLE AND PROJECTED FISCAL RESOURCES AND A FINANCIALLY FEASIBLE SCHEDULE OF CAPITAL IMPROVEMENTS FOR WATER SUPPLY AND FACILITY PROJECTS

CAPITAL IMPROVEMENTS ELEMENT:

Objectives 1.2: Accommodating Future Growth and Addressing Facility Improvements Pursuant to the Urban Growth Strategy outlined in the Future Land Use Element, the County shall direct new development inside the Urban Growth Boundary , providing the necessary capital facilities to meet existing infrastructure deficiencies, accommodate future growth, and replace outdated infrastructure.

As the Urban Growth Boundary will become effective in mid-July of 2008, the effectiveness of this objective and the associated policies will be evaluated during the Water Supply Facilities Work Plan update and during the next EAR.

Policy 1.2.7:
The County shall ensure that the Five-Year Schedule of Capital Improvements furthers the goals, objectives, and policies of the Future Land Use Element and the Urban Growth Strategy of the Comprehensive Plan by directing new capital improvements to areas within the Urban Growth Boundary unless it can be demonstrated that such an improvement addresses an existing public safety issue.

While Osceola County does not fund water supply facilities capital improvements, a list of capital projects needed to address existing facilities and future needs as well as identified funding sources will be included in the Capital Improvements Element's Five-Year Schedule of Capital Improvement.

CONSERVATION ELEMENT

Policy 1.2.6:
The county shall coordinate with the South Florida Water Management District (SFWMD) in implementing the "Kissimmee Basin Water Supply Plan Update", scheduled for adoption December 2006. The County shall continue to coordinate with the St Johns River Water Management District's (SJRWMD) in the implementation of the District Water Supply Plan 2005" water plan.

Development of the Water Supply Facilities Work Plan will assist in the implementation of the Kissimmee Basin Water Supply Plan Update.

<u>POLICY AREA #9:</u> THE NEED FOR ADDITIONAL REVENUE SOURCES TO FUND WATER SUPPLY AND FACILITY PROJECTS

CAPITAL IMPROVEMENTS ELEMENT:

Policy 1.3.5:
Capital Costs to create new capacity for the processing of potable water, including water plants and water mains, shall be funded through rates, fees, and charges assessed by the County's potable water utilities including Toho Water Authority (TWA), City of St. Cloud

Utilities, and Florida Government Utility Authority.

Osceola County is not responsible funding facilities to create new capacity for the processing of potable water. This policy recognizes that TWA and the City of St. Cloud have the responsibility for funding such improvements.

WORK PLAN REQUIREMENT: COORDINATION WITH THE RESPECTIVE REGIONAL WATER SUPPLY PLAN

POTABLE WATER ELEMENT:

Objective 1.5: Regional Coordination of Water Resources
The County shall be proactive in the regional water resources planning efforts, through enhanced coordination with adjacent jurisdictions, water providers and regional water management districts.

(No specific policies existing in the Potable Water Element addressing coordination with respective regional water supply plan).
NATURAL GROUNDWATER AQUIFER RECHARGE ELEMENT:

Objective 1.1: Planning for the Protection of Aquifer Recharge Areas
To meet current and future demands for potable water resources and to protect natural resources, Osceola County will cooperate with other governmental agencies, especially the South Florida Water Management District (SFWMD) and the St. Johns River Water Management District (SJRWMD).

County cooperation with the water management districts and the local water suppliers to meet current and future demands for potable water resources and to protect natural resources is an ongoing effort.

Objective 1.2: Coordination Efforts to Protect Aquifer Recharge Areas
The County shall assess its cooperative efforts with the St. Johns River and South Florida Water Management Districts on an annual basis to determine if new protection programs or additional coordination mechanisms are needed to achieve regional aquifer recharge protection objectives.

Policy 1.2.3:
To ensure the health and longevity of the Floridan, Intermediate, and Surficial aquifers, the County shall cooperate with the St. Johns River and South Florida Water Management District in the development of the District 2030 Water Plans.

Cooperation between the County and the water management districts is an ongoing effort.

WORK PLAN REQUIREMENT: NEED TO UPDATE THE WORK PLAN WITHIN 18 MONTHS FOLLOWING THE APPROVAL OF THE REGIONAL WATER SUPPLY PLAN

Osceola County proposes to amend its Comprehensive Plan to include the following objective and policies:

Objective 1.6 Ten Year Water Supply Facilities Work Plan
Osceola County shall develop and maintain a Water Supply Facilities Work Plan (Work Plan) for at least a 10-year planning period addressing traditional and alternative water supply sources, facilities, and issues necessary to serve existing and future development within unincorporated Osceola County.

Policy 1.6.1
The Work Plan shall be incorporated into the Potable Water Element.

Policy 1.6.2
Developing, maintaining and amending the Work Plan shall be a cooperative effort between the County, the Toho Water Authority, the City of St. Cloud, other water supply systems providing service to the unincorporated County, the South Florida Water Management District, and St. Johns River Water Management District.

Policy 1.6.3
The Work Plan shall be consistent with the most current Regional Water Supply Plans of both the South Florida Water Management District and the St. Johns River Water Management District.

Policy 1.6.4
The Work Plan shall be consistent with the most current water supply plans of the Toho Water Authority, the City of St. Cloud, and any other major providers of water to unincorporated Osceola County.

Policy 1.6.5
The Work Plan shall be consistent with the potable water levels of service (LOS) standards established in the Potable Water Element and the Capital Improvements Element.

Policy 1.6.6
The Work Plan shall identify feasible traditional and alternative water supply sources, including water conservation and reuse that are being utilized to meet existing and projected water demands.

Policy 1.6.7
The Work Plan shall be used to prioritize and coordinate the expansion and improvement of facilities used to withdraw, transmit, treat, store and distribute potable water to meet current and future needs within the unincorporated County.

Policy 1.6.8
The Work Plan shall be updated at least every five year, but no later than 18 months following adoption of the applicable Water Management Districts' Regional Water Supply Plan updates.

Policy 1.6.9
Capital projects scheduled in the first five years of the Work Plan shall be included in the Capital Improvements Element. This schedule shall be updated annually as necessary to maintain consistency with the capital projects listed in the Work Plan.

WORK PLAN REQUIREMENT: CONCURRENCY REQUIRING WATER SUPPLY AT BUILDING PERMIT STAGE

CAPITAL IMPROVEMENTS ELEMENT:

GOAL 2: CONCURRENCY MANAGEMENT SYSTEM.
The County shall monitor its public facilities and services on an ongoing basis to ensure that public facilities and services needed to support existing and future development are available concurrent with the impacts associated with such development.

Objective 2.1: Concurrency Management System
The County shall review and update its Concurrency Management System on an annual basis.

The Land Development Code requires an annual evaluation and report to the Board of County Commissioners regarding the Concurrency Management System.

Policy 2.1.1:
The Concurrency Management System shall apply to the following classes of infrastructure:

- *Roadways;*
- *Potable water facilities;*
- *Sanitary sewer facilities;*
- *Solid waste facilities;*
- *Drainage/stormwater management ;*
- *Parks and recreation ;*
- *Public schools.*

This is an ongoing activity.

Policy 2.1.2:
All Concurrency Management System applications shall undergo both a Preliminary and Final Concurrency Review as defined in the County's Land Development Code.

This is required under the County's Concurrency Management Ordinance.

Policy 2.1.4:
Osceola County will not issue a certificate of occupancy until a determination has been made that all classes of infrastructure identified in Policy 2.1.1 are in place and available to serve the new development. This policy shall not apply to parks and recreational facilities, transportation, or schools.

An applicant must submit information from the water supplier that adequate capacity and facilities are available to support new or expanded development.

Objective 2.3: Certificate of Concurrency
Prior to the issuance of a final development order, Osceola County will ensure that adequate public facilities are available or planned to be available in accordance with the Concurrency Management System.

Prior to approving Concurrency for any Final Development Order; such as an Engineering Improvement Plan (EIP), Final Subdivision (FS) or Conditional Use for a business or other activity in an existing building, Osceola County requests a letter of service intent from the potable water and sanitary sewer providers. Approval is granted if the project meets the standards for positive concurrency evaluation as outlined in the Concurrency Management System chapter of the Osceola County Land Development Code.

Policy 2.3.1:
Osceola County shall not issue a Certificate of Concurrency unless all public facilities are adequate and available to comply with the adopted LOS standards in this Comprehensive Plan.

Osceola County will not issue a Concurrency Reservation Certificate for any Preliminary Development Order unless the County receives a letter of service intent from the water and sewer utilities that capacity is available for potable water and sanitary sewer services.