

**CONSERVATION ELEMENT
DATA, INVENTORY, AND ANALYSIS REPORT**

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CONSERVATION ELEMENT DATA, INVENTORY, AND ANALYSIS

The purpose of the Conservation Element is to promote the conservation, use and protection of natural resources within the City of Sanford. The objective of the Conservation Element Data Inventory and Analysis (DIA) Report is to document the existing conditions for various natural resources found within the City and identify key community priorities for conservation strategies. The DIA Report also examines the current and projected water needs for the community over the 10-year planning horizon to ensure adequate water supply is available to support future demands. Together this information serves as the foundation for the goals, objectives, and policies prepared to guide future development within the City of Sanford.

IDENTIFICATION & ANALYSIS OF NATURAL RESOURCES [Rule 9J-5.013]

Rule 9J-5.013(1)(a) of the Florida Administrative Code requires a local government to identify and analyze all natural resources found within its jurisdiction. Natural resources may include air, water, wetlands, uplands, groundwater, floodplains, minerals, soil erosion, wildlife, and vegetative resources.

Surface Water Quality. Lake Monroe is a major water body located partially within the City of Sanford, on the City's north side. The Lake is approximately 17.1 square miles and is part of the St. Johns River system. Lake Monroe is listed on the minimum flow and levels Priority Water Body List and Schedule, meaning minimum water levels must be established for the Lake, pursuant to section 373.042(2), F.S. The Lake is identified as a priority water body due to its importance to the region and relevance to the conditions of water resources and the ecology of the surrounding areas. According to Technical Publication SJ2007-2 from the SJRWMD, the following factors are used to determine the priority water body list:

- Whether the existing or projected demand for water in the area is sufficient to meaningfully affect flows and/or levels of the surface water or groundwater.
- Whether any water supply development is planned in the area that may adversely affect regionally significant environmental resources.
- Whether the system includes regionally significant environmental resources.
- Whether historic hydrologic records (flows and/or levels) are available to allow statistical analysis and calibration of computer models when selecting particular water bodies in areas with many water bodies.

There is one water quality monitoring site located in Lake Monroe (Station LMAC), and three water quality monitoring sites on Lake Jesup (Stations OW-2, 4 and 6), which is a few miles to the south of the City of Sanford. As of 2004, the water quality rating for Lake Monroe was fair, with no discernable trend in terms of improvement or degradation. The water quality at all three of the monitoring stations on Lake Jesup was rated as poor. Water quality ratings are based on the Florida Water Quality Index (WQI), correlated with the Environmental Protection Agency (EPA) National Profiles Index (NPI). The rating combines dissolved oxygen, pH, bacteria, nutrients, turbidity, and inorganic and organic toxics into a single index, ranging between 0 and 100. For lakes, values less than 60 represent good water quality; values between 60 and 70 represent fair quality; and greater than 60 represents poor quality. For lakes, a poor water quality value means the lake water is considered to have an unhealthy concentration of

nutrients, chlorophyll a, or both. Data for the evaluation of Lakes Monroe and Jesup were collected between 2000 and 2004. [Rule 9J-5.013(1)(a-1)]

Groundwater and Reuse. The City's Water Facilities Work Plan was adopted in July 2007 and identifies needed water supply facilities for at least a 10-year planning period. The intent of the plan is to outline strategies and methods of meeting potable and non-potable water demands within the City over the next 20 years. The plan places an emphasis on environmentally beneficial and economically sound solutions. The major themes for water supply maintenance identified in the plan include development and optimization of groundwater supplies, expansion of reclaimed water systems, water conservation programs including conservation rate structures, utilization of permitted surface water augmentation system to meet irrigation demands, and development of aquifer storage and recovery to reduce impacts of groundwater withdrawals.

In order to enhance the use of reuse water and conserve potable water resources, the City participates in the North Seminole Regional Reclaimed Water and Surface Water Optimization System Expansion and Optimization Project. This multi-jurisdictional project, including Sanford, Lake Mary, and Seminole County, includes a surface water augmentation system capable of withdrawing and treating up to 7.3 million gallons per day (MGD) of St. Johns River water for use in the reclaimed water system. Additional projects include water system improvements, added water storage, reclaimed water main transmission lines, and interconnections with the cities of Altamonte Springs, Oviedo, Winter Springs, and Volusia County.

Groundwater is the principal source of potable water for the City of Sanford. The source of water for this area is the Floridan aquifer system, one of the world's most productive aquifers. Surface water is not a substantial source of potable water within the City, and because the aquifer is the source for potable water, it is vital that the City continue to work with the SJRWMD and other agencies to ensure pollution is minimized and drinking water standards are maintained. [Rule 9J-5.013(1)(a-1)]

Floodplains. National Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA) are available for the City of Sanford. The majority of the land in the City is classified by FEMA as Flood Zone X, which is the zone least likely to experience flooding. Smaller portions of the City are classified with the Zone A, Zone AE, and Zone AH flood zone categories, particularly in areas surrounding Lake Monroe, smaller area lakes, wetland areas and along drainage areas including the Mill Creek and Cloud Branch systems. National Flood Insurance Program definitions for the flood zones located within the City include:

- Zone A - An area inundated by 100-year flooding, for which Base Flood Elevations (BFEs) have not been determined.
- Zone AE - An area inundated by 100-year flooding, for which BFEs have been determined.
- Zone AH – An area inundated by 100-year flooding, for which BFEs have been determined; Flood depths of 1 to 3 feet (usually areas of ponding).
- Zone X – An area outside the 100-year floodplains; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; or areas protected by levees from the 100-year flood.

The areas outside of Zone X are mainly located around small lakes within the City. Overall, flooding is not a major concern for the City of Sanford. [Rule 9J-5.013(1)(a-2)]

Soil Erosion and Mineral Resources. There are numerous soil types found within the City of Sanford. The following soil types are found within the City:

- Adamsville- Sparr Fine Sanes
- Arents 0-5% Slopes
- Astatula-Apopka Fine Sands 5-8% and 8-12% Slopes
- Basinger-Delray Fine Sands
- Basinger-Smyrna Fine Sands- Depressional
- Basinger Samsula Hontoon Soils- Depressional
- Brighton-Samsula Sanibel Mucks
- Canova Terra Ceia Mucks
- Canova Terra Ceia Mucks
- Eaugallie Immokalee Fine Sands
- Felda Manatee Mucky Fine Sands- Depressional
- Immokalee Sand
- Malabar Fine Sand
- Manatee-Floridiana Holopaw Soils- Frequently Flooded
- Myakka and Eau Gallie Fine Sands
- Nittaw Mucky Fine Sand- Depressional
- Paola-St. Lucie Sands 0-5% Slopes
- Pineda Fine Sand
- Pomello Fine Sand 0-5% Slopes
- Pompano Fine Sand- Occasionally Flooded
- Seffner Fine Sand
- St. Johns Eaugallie Fine Sands
- Tavares-Millhopper Fine Sands 0-5% and 5-8% Slopes
- Udorthents- Excavated
- Urban Land 0-12% Slope
- Wabasso Fine Sand

The most common of the above listing in the City is Urban Land 0-12 percent slope. This classification is particularly concentrated in the north central portion of the City, near Lake Monroe. Myakka and Eaugallie Fine Sands and Tavares-Millhopper Fine Sands 0-5% are also fairly prevalent throughout the City. The remainder of each of the soil types are fairly scattered throughout the City and not prevalent. The Millhopper soils series are characterized by being deep, moderately well drained, and moderately permeable. This soil type is found in central and southern Florida with slopes ranging from 0 to 8 percent. Myakka and Eau Gallie sands tend to be deep and poorly drained. No mining operations are currently occurring in the City of Sanford.

Soil erosion is not a significant problem in the City. Due to its relatively flat terrain, adequate drainageways including bank re-enforcement and the monitoring of construction activities to minimize erosion, the City has adequately mitigated against erosion issues. Areas the City will

need to continue to focus on are areas of steeper slopes, as these areas tend to have more significant soil erosion. [Rule 9J-5.013(1)(a-3)]

Hazardous Waste Management and Brownfields Areas. The Solid Waste Department of Seminole County accommodates household hazardous waste for residents of Sanford. The disposal of hazardous waste is free of charge for common household substances including anti-freeze, automobile batteries, compact fluorescent light tubes, gasoline and cans, glues, insecticides, lawn chemicals, mercury-containing devices, paints, poisons, pool chemicals, propane tanks, rechargeable batteries, solvents, televisions, thermostats, thermometers, and used oil. These wastes are accepted the Central Transfer Station located in the City of Longwood.

There are no brownfield sites with executed Brownfield Site Rehabilitation Agreements (BSRA) located within the City. The nearest brownfield with a BSRA is the former Microvia Facility, located in Casselberry. The City does have an area identified as a brownfield area, the Sanford Economic Enhancement District. This District, designated as such in 2007, is generally oriented north to south along French Avenue/Orlando Drive (US 17/92) through the central portion of the City. A brownfield area is defined as an area containing abandoned, idle, or underused industrial and commercial facilities where expansion or redevelopment is complicated by environmental contamination. Sanford designated this area as a brownfield area to facilitate environmental remediation, rehabilitation, and economic redevelopment in the US 17/92 Corridor. [Rule 9J-5.013(1)(a-1)]

Ecological Communities. The majority of land within the City is currently developed. The Florida Land Use Cover Classification System (FLUCCS) is used to identify the uses of land and types of vegetative communities present. The system contains four levels of categorization with each level increasing in specificity. Currently, the most prevalent classifications in the City include residential medium density and airports. Another common classification is commercial and services.

A small percentage of the land is classified with environmental features. The dominant vegetative land covers throughout the City include mixed wetland hardwoods, cypress, and hardwood conifer mixed. The southwestern portion of the City contains a fairly significant acreage of wetlands. According to information from the U.S. Fish and Wildlife Services, two types of wetlands scattered throughout the City are freshwater emergent wetlands and freshwater forested/shrub wetlands. The latter type is concentrated along Lake Monroe, except in the downtown region of the City. Areas of wetlands are highly limited in the downtown core.

Table 5-1 provides a list of the threatened and endangered species in the State of Florida. New development within the City must adhere to state legislation regarding these species and minimizing impacts to their habitats. [Rule 9J-5.013(a)(a-5)]

**Table 5-1
Listed Species in the State of Florida**

Scientific Name	Common Name	State Status
FISH		
Acipenser oxyrinchus (Acipenser oxyrinchus desotoi)	Atlantic sturgeon (Gulf sturgeon)	SSC
Acipenser brevirostrum	shortnose sturgeon	E

Scientific Name	Common Name	State Status
<i>Micropterus cataractae</i>	shoal bass	SSC
<i>Micropterus notius</i>	Suwannee bass	SSC
<i>Rivulus marmoratus</i>	Rivulus (mangrove rivulus)	SSC
<i>Cyprinodon variegatus hubbsi</i>	Lake Eustis pupfish	SSC
<i>Notropis melanostomus</i>	blackmouth shiner	E
<i>Pteronotropis welaka</i>	bluenose shiner	SSC
<i>Fundulus jenkinsi</i>	saltmarsh topminnow	SSC
<i>Menidia conchorum</i>	key silverside	T
<i>Crystallaria asprella</i>	crystal darter	T
<i>Etheostoma histrio</i>	harlequin darter	SSC
<i>Etheostoma okaloosae</i>	okaloosa darter	E
<i>Etheostoma olmstedii maculaticeps</i>	Southern tessellated darter (tessellated johnny darter)	SSC
<i>Starksia starcki</i>	key blenny	SSC
AMPHIBIANS		
<i>Ambystoma cingulatum</i>	flatwoods salamander	SSC
<i>Haideotriton wallacei</i>	Georgia blind salamander	SSC
<i>Hyla andersonii</i>	pine barrens treefrog	SSC
<i>Rana okaloosae</i>	Florida bog frog	SSC
<i>Rana capito</i>	gopher frog	SSC
REPTILES		
<i>Alligator mississippiensis</i>	American alligator	SSC
<i>Crocodylus acutus</i>	American crocodile	E
<i>Diadophis punctatus acricus</i>	key ringneck snake	T
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T
<i>Elaphe guttata</i>	red rat snake	SSC
<i>Nerodia clarkii taeniata</i>	Atlantic salt marsh water snake (Atlantic salt marsh snake)	T
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	SSC
<i>Stilosoma extenuatum</i>	short-tailed snake	T
<i>Storeria dekayi victa</i>	Florida brown snake	T
<i>Tantilla oolitica</i>	rim rock crowned snake	T
<i>Thamnophis sauritus sackeni</i>	Florida ribbon snake	T
<i>Eumeces egregius lividus</i>	bluetail mole skink	T
<i>Eumeces egregius egregius</i>	Florida Key mole skink	SSC
<i>Neoseps reynoldsi</i>	sand skink	T
<i>Gopherus polyphemus</i>	gopher tortoise	T
<i>Graptemys barbouri</i>	Barbour's map turtle	SSC
<i>Macrochelys temminckii</i>	alligator snapping turtle	SSC
<i>Kinosternon baurii</i>	striped mud turtle	E
<i>Pseudemys concinna suwanniensis</i>	Suwannee cooter	SSC
<i>Caretta caretta</i>	loggerhead sea turtle (loggerhead sea turtle)	T
<i>Chelonia mydas</i>	green sea turtle (green sea turtle)	E
<i>Dermochelys coriacea</i>	leatherback sea turtle (leatherback sea turtle)	E
<i>Eretmochelys imbricata</i>	hawksbill sea turtle (hawksbill sea turtle)	E
<i>Lepidochelys kempii</i>	Kemp's ridley sea turtle (Kemp's ridley sea turtle)	E
BIRDS		
<i>Charadrius melodus</i>	pipin plover	T
<i>Charadrius alexandrinus</i>	snowy plover (Cuban snowy plover)	T
<i>Haematopus palliatus</i>	American oystercatcher	SSC
<i>Pelecanus occidentalis</i>	brown pelican	SSC
<i>Rynchops niger</i>	black skimmer	SSC
<i>Sterna antillarum</i>	least tern	T
<i>Sterna dougalli</i> (<i>Sterna dougallii</i>)	roseate tern	T

Scientific Name	Common Name	State Status
dougallii)		
<i>Aramus guarauna</i>	limpkin	SSC
<i>Egretta rufescens</i>	reddish egret	SSC
<i>Egretta thula</i>	snowy egret	SSC
<i>Egretta caerulea</i>	little blue heron	SSC
<i>Egretta tricolor</i>	tricolored heron	SSC
<i>Eudocimus albus</i>	white ibis	SSC
<i>Grus canadensis pratensis</i>	Florida sandhill crane	T
<i>Grus americana</i>	whooping crane	SSC
<i>Mycteria americana</i>	wood stork	E
<i>Platalea ajaja</i>	roseate spoonbill	SSC
<i>Athene cunicularia (Athene cunicularia floridana)</i>	burrowing owl (Florida burrowing owl)	SSC
<i>Caracara cheriway (Polyborus plancus audubonii)</i>	crested caracara (Audubon's crested caracara)	T
<i>Falco peregrinus</i>	peregrine falcon	E
<i>Falco sparverius paulus</i>	Southeastern American kestrel	T
<i>Haliaeetus leucocephalus</i>	bald eagle	T
<i>Rostrhamus sociabilis plumbeus</i>	snail kite (Everglades snail kite)	E
<i>Aphelocoma coerulescens</i>	Florida scrub jay	T
<i>Ammodramus maritimus mirabilis</i>	Cape Sable seaside sparrow	E
<i>Ammodramus savannarum floridanus</i>	Florida grasshopper sparrow	E
<i>Ammodramus maritimus peninsulae</i>	Scott's seaside sparrow	SSC
<i>Ammodramus maritimus juncicolus</i>	Wakulla seaside sparrow	SSC
<i>Columba leucocephala</i>	white-crowned pigeon	T
<i>Dendroica kirtlandii</i>	Kirtland's warbler	E
<i>Vermivora bachmanii</i>	Bachman's warbler	E
<i>Campephilus principalis</i>	ivory-billed woodpecker	E
<i>Picoides borealis</i>	red-cockaded woodpecker	SSC
<i>Cistothorus palustris marianae</i>	Marian's marsh wren	SSC
<i>Cistothorus palustris griseus</i>	Worthington's marsh wren	SSC
MAMMALS		
<i>Puma concolor coryi (Puma [=Felis] concolor coryi)</i>	Florida panther	E
<i>Ursus americanus floridanus</i>	Florida black bear	T
<i>Mustela vison evergladensis</i>	Everglades mink	T
<i>Odocoileus virginianus clavium</i>	key deer	E
<i>Sylvilagus palustris hefneri</i>	Lower Keys marsh rabbit	E
<i>Sciurus niger avicennia</i>	Big Cypress fox squirrel	T
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	SSC
<i>Tamias striatus</i>	Eastern chipmunk	SSC
<i>Oryzomys palustris sanibeli</i>	Sanibel Island rice rat	SSC
<i>Oryzomys argentatus (Oryzomys palustris natator)</i>	silver rice rat (rice rat, lower FL Keys)	E
<i>Peromyscus polionotus allophrys</i>	Choctawhatchee beach mouse	E
<i>Neotoma floridana smalli</i>	Key Largo woodrat	E
<i>Peromyscus gossypinus allapaticola</i>	Key Largo Cotton Mouse	E
<i>Peromyscus polionotus niveiventris</i>	Southeastern beach mouse	T
<i>Peromyscus polionotus phasma</i>	Anastasia Island beach mouse	E
<i>Peromyscus polionotus peninsularis</i>	St. Andrews beach mouse	E
<i>Peromyscus polionotus trissyllepsis</i>	Perdido Key beach mouse	E
<i>Podomys floridanus</i>	Florida mouse	SSC
<i>Eumops glaucinus floridanus</i>	Florida mastiff bat	E
<i>Myotis grisescens</i>	gray bat	E
<i>Myotis sodalis</i>	Indiana bat	E

Scientific Name	Common Name	State Status
<i>Microtus pennsylvanicus dukecampbelli</i>	Florida saltmarsh vole (Florida salt marsh vole)	E
<i>Blarina carolonensis</i> [=brevicauda] <i>shermani</i>	Sherman's short-tailed shrew	SSC
<i>Sorex longirostris eionis</i>	Homosassa shrew	SSC
<i>Balaenoptera borealis</i>	sei whale	E
<i>Balaenoptera physalus</i>	fin whale (finback whale)	E
<i>Eubalaena glacialis</i> (<i>Balaena glacialis</i> [incl. <i>australis</i>])	North Atlantic right whale (right whale)	E
<i>Megaptera novaeangliae</i>	humpback whale	E
<i>Physeter macrocephalus</i>	sperm whale	E
<i>Trichechus manatus latirostris</i> (<i>Trichechus manatus</i>)	Florida manatee (West Indian manatee)	E
INVERTEBRATES		
CRUSTACEANS		
<i>Procambarus econfinae</i>	Panama City crayfish (econfina crayfish)	SSC
<i>Procambarus erythropus</i>	sims sink crayfish (Santa Fe cave crayfish)	SSC
<i>Procambarus pictus</i>	black creek crayfish	SSC
INSECTS		
<i>Cyclargus</i> [=Hermiargus] <i>thomasi bethunebakeri</i>	Miami blue butterfly	E
<i>Heracles aristodemus ponceanus</i>	Schaus' swallowtail butterfly	E
MOLLUSKS		
<i>Liguus fasciatus</i>	Florida tree snail	SSC
<i>Orthalicus reses</i> <i>Orthalicus reses</i> [not incl. <i>nesodryas</i>]	Stock Island tree snail	E

Source: Florida Fish and Wildlife Conservation Commission

Table Key

FWC = Florida Fish and Wildlife Conservation Commission

E = Endangered

T = Threatened

SSC = Species of Special Concern

Air Quality. An air quality monitoring site is located in the southern portion of the City at the Seminole Community College. This site began monitoring ozone levels in 1980. As of 2008, the year-to-date three year running average for ozone is 72 parts per billion (ppb). The non-attainment threshold for ozone levels is 75 ppb, indicating that the air quality within the City is at an acceptable level, and in attainment of existing standards. The City, as well as the entirety of the State, is in attainment of Particulate (<2.5 micrometers and <10 micrometers) standards set forth by the EPA. [Rule 9J-5.013(1)(a-1)]

EXISTING AND POTENTIAL CONSERVATION AND USE OF NATURAL RESOURCES [Rule 9J-5.013(1)(b)]

Rule 9J-5.013(1)(b) of the Florida Administrative Code requires that a local government identify commercial uses, recreational uses, conservation uses, and pollution problems within its natural resources.

The majority of the City is already developed, and those areas currently identified as environmentally sensitive through the Conservation Future Land Use designation are not proposed for development. The City coordinates with the SJRWMD regarding environmental issues to promote conservation and minimize pollution. Air quality standards are being met. There are no large-scale mining operations located within the City.

The City is located south of Lake Monroe and north of Lake Jesup, two important water bodies within the St. Johns River watershed. In order to protect these resources and improve water quality, the City will continue working with the SJRWMD and FDEP to ensure steps are being taken to minimize pollution from runoff into these water bodies. Additionally, drinking water is mainly received from the Floridan Aquifer, and measures to reduce the potential for groundwater contamination will continue to be enforced.

Protection of Quality and Quantity of Surface Water. Stormwater runoff is the primary contributor to surface water pollution. The City continues to coordinate with the County, SJRWMD and FDEP to monitor water quality levels in area lakes, specifically Lake Monroe and Lake Jesup. Due to Lake Jesup being located outside of the City limits, coordination efforts with regard to this waterbody are performed with the County. Lake Monroe, as part of the St. Johns River system which ultimately flows into the Atlantic Ocean, is a riverain aquatic wetland that serves as a habitat for various vegetative and wildlife communities. Given Lake Monroe's importance to the ecological community, environmental conditions need to be heavily monitored and pollution controls in place to protect the variety of species. The City has budgeted funding for various stormwater related projects to improve stormwater conditions throughout the City. Some of the stormwater projects identified in the Capital Improvements Plan are Cloud Branch Railroad Corridor Stormwater Improvements, Southwest Road Drainage Improvements, Southeast Outfall- final phase of the stormwater master plan, and Driftwood Lane Drainage Project.

Protection of Quality and Quantity of Groundwater. The Floridan aquifer is located beneath the City and is the main source of water for this region. Groundwater recharge is critical in this area, particularly because of its role in supplying potable water. The following tools are in place to regulate the protection of area groundwater supplies:

- Through the Comprehensive Plan
- Land Development Regulations
- State and Federal regulations
- Allowable land uses and open space requirements

Protection of Vegetative Communities and Wildlife Habitats. Despite being an urbanized area, there are areas of vegetative communities and wildlife communities. These areas are concentrated in the southwestern portion of the City and near Lake Monroe, specifically outside of the downtown area abutting the lake. The City will continue to protect existing natural areas surrounding the lake, which will aid in the water quality protection efforts in Lake Monroe. Natural vegetative communities help to absorb potential pollutants from stormwater runoff prior to entering a body of water. These natural areas also provide habitats for wildlife.

Protection of Air Quality. As discussed in the previous section, the City of Sanford is currently in attainment of air quality standards. Areas of the Orlando Metropolitan Area, including Sanford, do have days each year in non-attainment and the City will continue to coordinate with

the EPA and the FDEP to develop policies and projects to maintain current air quality levels that are in compliance with adopted air quality standards.

CURRENT AND PROJECTED POTABLE WATER NEEDS [Rule 9J-5.013(1)(c)]

This section provides an inventory of the current and projected water needs and potential sources of potable water for the planning period. The projections are based on current water consumption demand and projected population figures.

Existing Potable Water Sources. The City's major source of potable water is groundwater retrieved from the Floridan Aquifer. The City is currently permitted to withdraw 9.02 million gallons per day (MGD). In 2009, the permitted use increases to 9.30 MGD and between 2010 and 2017 the permitted use is 9.58 MGD.

Existing and Projected Potable Water Available - Capacity and Demand. Based on the consumptive use permit (CUP) with the SJRWMD, the City of Sanford is permitted to withdraw 9.02 MGD. By 2017, the City is projected to have a demand for 9.49 MGD while being permitted to withdraw 9.58 MGD. Based on projected growth in the City, after 2017 the demand for water is expected to exceed the amount permitted for withdrawal. The City and surrounding areas are proactively addressing water demand issues. The Cities of Sanford and Lake Mary have entered into the Tri-Party Agreement with Seminole County to expand reuse water to aid in the reduction of groundwater withdrawal from the Floridan Aquifer. The City is also actively involved with the St. Johns River Water Management District (SJRWMD) to plan for future water needs and efforts to reduce per capita use.

Due to the projected steady increase in demand, the City must continue to partner with the County, surrounding municipalities, the SJRWMD and FDEP to ensure adequate water supplies in the future. The City continues to participate in the Tri-Party Agreement with the City of Lake Mary and Seminole County. This agreement was created to enhance the use of reclaimed water and surface water augmentation from the St. Johns River. Continuing to develop and increase the use of reclaimed water systems will aid in reducing the demand for potable water. As a result of this agreement, per-capita use of water has decreased.

The City is also entered into the North Seminole Regional Reclaimed Water and Surface Water Optimization System Expansion and Optimization Project. This alternative water supply project is a multi-jurisdictional project between the cities of Sanford and Lake Mary, and Seminole County, and is supported by the SJRWMD. The project includes a surface water augmentation system capable of withdrawing and treating up to 7.3 MGD of water from the St. Johns River for use in the reclaimed water system.

Table 5-2 identifies the projected demand in the City for a 10 year period as well as the CUP permitted withdrawal. Through the time period, water demand in the City is projected to be within permitted withdrawal rates. However, beyond this period the City is expected to surpass the CUP permitted level. To proactively address this increase, the City has and will continue to partner with surrounding jurisdictions and related agencies to develop water supply projects.

**Table 5-2
City of Sanford Projected Water Demand**

Year	Projected Demand (MGD)	CUP Permitted (MGD)
2008	7.783	9.02
2009	7.994	9.30
2010	8.211	9.58
2011	8.414	9.58
2012	8.622	9.58
2013	8.835	9.58
2014	9.053	9.58
2015	9.277	9.58
2016	9.383	9.58
2017	9.490	9.58

Source: City of Sanford Water Supply Facilities Work Plan, 2007

Summary

Overall, environmental conditions and conservation efforts in the City are being successfully implemented and the City is meeting adopted environmental standards. Lake Monroe is currently at acceptable water quality levels and the City continues to coordinate with the County and environmental agencies to monitor and improve conditions on both Lake Monroe and Lake Jesup, despite its location south of the City. Potable water supplies are adequately meeting the demand and the City is in an interlocal agreement to enhance the supply of reuse water. Ozone level and particulate matter standards set forth by the EPA are being met. As growth continues, the City will need to continue current efforts and adjust to changing conditions to continue to be in attainment of environmental regulations.