CITY OF SANFORD
WATER FACILITIES WORK PLAN

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Engineers
Planners
Landscape Architects
Surveyors
Construction Management
Design/Build
www.cphengineers.com

CPH Engineers, Inc
500 West Fulton Street
Sanford, Florida 32771
(407) 322-6841

CPH Project No. S06172

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EXECUTIVE SUMMARY

The purpose of this Water Facilities Work Plan is to analyze the capabilities of the existing water system, compare those capabilities to current and future needs and to project a minimum 20-year program for further development of the City's total water system. The annual average daily water demand is projected to increase from 6.963 MGD in 2018 to 10.273 MGD in 2040. The Plan includes evaluations of the capacities, preliminary plans of future additions, and a description of technologies which may be appropriate for implementation of the system described by the Plan. The plan also includes recommendations for improvements (capital projects) and projections for handling the increased growth within the service area.

The Work Plan incorporates and continues the progressive plan that the City has been implementing since 1998 when the City prepared a Water Facilities Plan which was adopted by the City Commission under Resolution 1798. The City's ongoing planning efforts have been based on seeking economical and environmentally sound solutions for water supply and utilizing available alternative water sources. The main components of the Work Plan revolve around the following basic areas:

- Development and optimization of groundwater supplies
- Expansion of reclaimed water systems
- Water conservation program including conservation rate structures
- Utilization of the St. Johns River 7.3 MGD Augmentation System to meet irrigation demands
- Development of a recharge program to reduce impacts due to groundwater withdrawals

The City proposes the following strategy to meet water demands:

1. Maximize the use of groundwater supplies to meet potable demands.
2. Utilize to the maximum extent economically feasible, reclaimed/surface water augmentation from the St. Johns River to meet irrigation demands.
3. Continue the groundwater recharge program in conjunction with Seminole County and City of Lake Mary to offset any impacts caused by groundwater withdrawals.
4. Continue testing the aquifer storage and recovery (ASR) system at the Aux Plant.
5. Continue the implementation of water conservation initiatives. Evaluate effectiveness of measures and adjust if necessary.
6. Review and modify land development regulations to affect reduction in potable water use patterns.
7. Continue to require future development to provide utilities for lower quality water for irrigation.
8. Continue to optimize the reclaimed water reuse and disposal within the Tri-Party (City of Sanford, Seminole County, and City of Lake Mary) service area.
9. Cooperate with the District and Seminole County to work on reclaimed water and alternative water supply programs, including Yankee Lake Regional Surface Water Facility, Surface Water Treatment Plant in Site 10, Lake Monroe Surface Water Augmentation System, in order to reduce burden on customer base.

10. Continue to seek partnership with Seminole County and Volusia County and other Cities such as Cities of Lake Mary, Altamonte Springs, Winter Springs and Oviedo to optimize the reclaimed water reuse and disposal.
11. If based on all of the above, the water supplies are not adequate to meet potable water demands; the City will consider utilization of brackish water supplies using reverse osmosis process in the vicinity of the Orlando/Sanford Airport.

The Work Plan, as well as the related Elements in the Comprehensive Plan will be updated every five years. The City has an active and ongoing plan to meet water demands in the City Service Area and to assist regionally in meeting water needs. The City has successfully worked with the City of Lake Mary and Seminole County through the Tri-Party agreement. The reuse/surface water system also has capacity for further expansion regionally to Winter Springs, Altamonte Springs, Oviedo, and Volusia County with the goal of maximizing the use of reclaimed water of all parties. The City will also cooperate with the District to deal with the upcoming issues of Total Maximum Daily Loads (TMDL) and the Waste Load Allocations (WLA) to the St. Johns River.

CHAPTER 1.0
BACKGROUND

1.1 Background of the Work Plan

In 2002, the legislature expanded the local government comprehensive plan (Plan) requirements to strengthen coordination of water supply planning and local land use planning. This was done in response to concerns that the use of groundwater may have reached the potential limits in many areas of the State and that alternative water supplies must be identified, quantified and developed. In addition, implementation of local water conservation strategies and optimization of reclaimed water reuse programs are necessary to reduce the reliance of ground water for potable and irrigation uses.

The most significant requirement is completion of a 10-year Water Supply Facilities Work Plan (Work Plan) by all counties and cities within a “priority water resource caution area”. These are areas where existing and reasonably anticipated sources of water and conservation efforts may not be adequate to 1) supply water for all existing legal uses and reasonably anticipated future needs and 2) sustain the water resources and related natural systems.

The local government’s Work Plan must project water demand for at least a 10-year period. The Work Plan will demonstrate that the current and planned water supply facilities and source(s) of water will meet the projected demand. The Work Plan must be adopted as part of the Potable Water Element. The Capital Improvement Element must also be amended to include projects listed in the first five years of the ten-year Work Plan as well as the text of other Plan Elements as appropriate. The Work Plan must be approved by the Department of Community Affairs (DCA) and St. Johns River Water Management District (SJRWMD). Sanford has prepared the original Work Plan in 2007 to meet the criteria set forth by the Legislature.

The Legislature also requires that the local governments update the Work Plan within 18 months of the District adopting or updating a Regional Water Supply Plan. The Central Florida Water Initiative (CFWI) – Regional Water Supply Plan was approved in November 2015.

This updated Work Plan was prepared to coordinate with the adopted CFWI Regional Water Supply Plan. The Work Plan addresses supply and demand for City service area and includes an evaluation of the unincorporated service area around Sanford through the year 2040, which is a 20-year planning period.

1.2 Overview of Regional Water Supply Plans

Per Chapter 373, *Florida Statutes* regional water management districts are responsible to address the need to allocate water to meet all reasonable-beneficial uses and protect water resources. It is particularly encouraged for counties and municipalities to create regional water supply authorities to coordinate activities for local water resources. In anticipation of the rapid population growth and increasing water demands facing the state and the potential threats to both the economy and natural resources, the Legislature amended the Florida Water Resources Act

(Chapter 373, F.S.) in 1997. The amendments required the five Water Management Districts to initiate regional water supply planning in all areas of the state where reasonable anticipated sources of water were deemed inadequate. Four of the Districts were required to complete regional water supply plans (RWSP): Northwest Florida, Southwest Florida, St. Johns River, and South Florida. In November 2015, the South Florida Water Management District (SFWMD), St. John's River Water Management District (SJRWMD), Southwest Florida Water Management District (SWFWMD) created the Central Florida Water Initiative.

A RWSP includes a projection of water demands and an identification of potential sources of water to meet these demands. The RWSP looks forward in time for 20 years and is intended to provide the framework for future water supply decisions in the areas where it has been determined that traditional sources of water are not adequate to provide for future needs while sustaining the water resources and related natural systems. Within these areas existing and reasonably anticipated sources of water and conservation efforts may not be adequate to (1) supply water for all existing legal users and reasonably anticipated future needs and (2) to sustain the water resources and related natural systems.

The RWSP identifies potential water supply source options for water supply development, including traditional and alternative sources that will exceed the needs projected by the district. The RWSP also estimates the associated costs for developing these sources. Sources include (1) new ground water wellfields, (2) increased use of reclaimed water, (3) storage reservoirs, (4) surface water withdrawals, (5) aquifer storage and recovery, (6) reverse osmosis/desalination and (7) conservation. The water source options identified in the RWSP represent a "menu" of possible options for water supply development from which local governments, government-owned and privately owned utilities, self-suppliers and others may choose. The options are provided as reasonable concepts that water users in the region can pursue in their water supply planning. Water users may want to select a water supply option as presented in the plan or combine elements of different options that better suit their water supply needs. Additionally, the plan provides information to assist water users in developing funding strategies for construction of water supply development projects.

The goal of the RWSP is to identify sufficient sources of water within the planning region to meet projected water demands. Prior to developing any water supply option, it will be necessary to obtain all applicable permits from various governmental agencies. Following a decision to pursue any option identified in the RWSP, it will be necessary for the interested party(ies) to conduct more detailed engineering, hydrologic, economic and biological assessments to provide the necessary technical support for developing the option. Each RWSP is updated every five years The 2015 Regional Water Supply Plan was reviewed and referenced in the development of the report.

1.3 Consideration of District Water Supply Plan

The 2005 District Regional Water Supply Plan was a main reference in the City's 2007 Water Plan. The 2007 Work Plan has been implemented by the City since. This report is an updated version to the 2007 City of Sanford's Water Supply Facilities Work Plan.

A guide for local governments in preparing water supply comprehensive plan amendments and water supply facilities work plans, revised July 2012, Florida Department of Community Affairs

(Division of Community Planning) was referenced in the updated version of the 2007 Work Plan.

The City has communicated with the SJRWMD with regards to the relevant aspects of the DWSP. The District has adopted the Tri-Party Optimization Study as part of the DWSP and the City has participated in ASR feasibility study jointly with the District. In addition, the District's RWSP was a main consideration in compiling the Work Plan. Relevant items of discussion were demand projections, appropriate water sources to meet projected water demand, reuse strategies, and use of water conservation strategies. These will be discussed in detail in this Work Plan.

1.4 Economic Impact Statement

Table 1-1 contains an Economic Impact Statement.

TABLE 1- 1
ECONOMIC IMPACT STATEMENT

Describe Project/Proposal
The purpose of this amendment is to comply with Year 2002 legislation to amend the local comprehensive plans to include a ten-year water supply plan as part of the Potable Water Element and make other amendments as required/needed. The goal is to ensure that long-term planning for needed water supplies and facilities match current planning activities and development approvals.

Describe the Direct Economic Impact of the Project/Proposal upon the Operation of the City
There is no direct economic impact as a result of this amendment beyond normal facility planning for future growth. These amendments simply extend the City's normal five-year planning period for water facilities to a ten-year period.

Describe the Direct Economic Impact of the Project/Proposal upon the Property Owners/Tax Payers/Citizens who are Expected to be Affected
Use of alternative water supplies will result in an increase in the cost of water and/or wastewater services. The City increased the rate on Nov 1st, 2006 by 5% for water and 11% for wastewater services, plus an annual adjustment based on the Consumer Price Index (CPI).

Identify Any Potential Indirect Economic Impacts, Positive or Negative, Which Might Occur as a Result of the Adoption of the Ordinance
The extended planning horizon and potential for coordination with local and regional water supplies and users is expected to have a neutral-to-positive economic impact.

Citation
None.

1.5 Evaluation and Appraisal Report Review

The City has addressed the corollary requirements for the Conservation and Intergovernmental Elements within the Support Document to the Water Plan by including an assessment of "current, as well as projected water needs and sources for at least a 10-year period, considering the appropriate regional water supply plan". Additionally, the City will consider the need to revise the Work Plan during the preparation of the next Evaluation and Appraisal Report.

1.6 Comprehensive Plan Amendments

This Work Plan is excerpted from the Water Supply Facilities Work Plan Support Document to the Potable Water Element of the City's Comprehensive Plan. The Support Document contains the Work Plan as the Executive Summary plus supporting data and analysis. The Support Document will be updated with new or revised city data following the updated Work Facilities Plan. The Potable Water Element and Capital Improvements Element will be amended to include any changes made to the Work Plan every five years.

Additionally, the Capital Improvements, Conservation, Intergovernmental and Potable Water Elements have been amended to include policies required by the 2002 Legislation to insure the annual update of the ten-year Work Plan as necessary, the update of the Capital Improvements Element to maintain the internal consistency of the Comprehensive Plan and to insure that the District's Regional Plan is considered with each revision.

Listed below is a summary of the new Plan amendment and Evaluation and Appraisal Report (EAR) requirements. Each summary describes the reason for the proposed amendments to the Plan.

1. Coordinate all aspects of their comprehensive plan with the appropriate Water Management District's regional water supply plan (see s.163.3177(4)(a), F.S.).

2. Revise the potable Water sub-element considering the appropriate Water Management District's regional water supply plan (s.163.3177(6)(c),F.S.).

3. Revise the Potable Water sub-element to include a Water Supply Facilities Work Plan for at least a 10-year planning period addressing facilities for which the local government is responsible (s.163.3177(6)(c)F.S.).

4. Revise the Conservation Element to ensure that projected water needs and sources are for at least a 10-year planning period and that full consideration is given to the appropriate regional water supply plan or, in the absence of an approved regional water supply plan, the district water management plan (s.163.3177(6)(d)F.S).

5. Revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the applicable regional water supply plan (s.163.3177(6)(h)1.,F.S).

6. Consider, during preparation of the Evaluation and Appraisal Report, the appropriate regional water supply plan (s.163.3191(2)(l), F.S.).

7. Consider, during preparation of the Evaluation and Appraisal Report, the need to revise the Potable Water Sub-element to include the Water Supply Facilities Work Plan (s.163.3191(2)(l), F.S.).

CHAPTER 2.0

HISTORY OF WATER SYSTEM IMPROVEMENTS IN SANFORD

2.1 1964 Water System Improvements

The Main Treatment Plant, Auxiliary Water Treatment Plant, and distribution system improvements were constructed in 1964. The main components of the water treatment plants and the distribution system improvements are listed below:

Main Treatment Plant

Four (4) 12-inch diameter wells, each with 700 gpm capacity (Wellfield No. 2).

One (1) 750,000 gallon treatment retention storage tank of prestressed concrete construction with a 2,800 gpm cascade aerator.

Two (2) high service pumps, one constant speed with a capacity of 4,200 gpm and one variable speed pump with an average capacity of 3,000 gpm.

An operation building with a laboratory, generator for standby power, chlorination and fluoridation facilities.

Auxiliary Treatment Plant

One (1) 500,000 gallon treatment retention storage tank of prestressed concrete construction with a 1,900 gpm cascade aerator.

One (1) 1,000,000 gallon prestressed concrete ground storage tank

Two (2) high service pumps with capacities of 1,700 gpm and 1,000 gpm.

An operation building with a laboratory, generator for standby power, chlorination and fluoridation facilities.

Distribution System Improvements

Installation of a 24-inch ductile iron water transmission line from the Main Treatment Plant to the existing distribution system along with numerous other major transmission and distribution system mains.

2.2 1964-1994 Water System Improvements

Water system improvements constructed between 1964 and 1994 that included wellfield, treatment, storage, pumping and distribution system improvements are listed below:

Wellfield Improvements

Three (3) additional 12-inch wells were constructed in Wellfield No. 2 during the period of 1964 to 1983. In 1983, it was discovered that certain layers of the aquifer supplying water to Wellfield No. 2 had become contaminated by the pesticide ethylene dibromide (EDB). Six (6) wells were reconstructed and one well was abandoned in an effort to case out the contaminated layers of the limestone aquifer. Of the six wells, four came back online after testing and the other two came back 15 years later.

Four (4) new 12-inch wells were constructed in Wellfield No. 1. Wellfield No. 3 was acquired and five (5) 12-inch wells were constructed in this wellfield. Wellfield No. 4 was acquired and one (1) 12-inch well and one (1) 26-inch well constructed. Wellfield No. 4 can be expanded with construction of two additional wells.

Treatment, Pumping, and Storage Improvements

A 2,500 gpm aerator and chlorination facilities with ton chlorine cylinders were added to the Auxiliary Treatment plant. One 750,000 gallon prestressed concrete storage tank with a 2,800 gpm aerator was added at the Main Treatment Plant. Two additional high service pumps, a building addition, miscellaneous site work, and a new control system were added to the Main Treatment Plant. A new standby generator was installed at the Main Treatment Plant and the existing standby generator was relocated from the Main Treatment Plant to the Auxiliary Treatment Plant.

2.3 1994 to Present Water System Improvements

Water system improvements constructed between 1994 and the present include pumping, standby power, controls, chemical addition and distribution system improvements as listed below:

13th Street Booster Plant

A 100 HP high service pump was replaced with a 125 HP high service pump. A new motor control center and associated wiring were installed.
The booster plant station has increased their high service pumping capacity to 300 HP by installing two (2) 150 HP motors in 1995. The plant has a 350 kW diesel generator which runs once per week for one hour.

Auxiliary Treatment Plant

In March 2014, WTP No.2 was issued permit No. 0080856-369-WC two replace their high service pumps with two pumps rated at 2,430 GPM each. The existing 2,500 gpm was removed from service but is available as a spare pump on site.
Granular activated carbon (GAC) filters were installed in 2014. The filters have been cleared for service May 2014. Five (5) high service variable frequency drives were

installed the same year as GAC booster pumps.
One (1) 24-inch well was drilled in Wellfield No. 1 in 2013 to replace well #7 in accordance to permit No. 0080856-372-WC The well was cleared for service November 2014. An additional 24-inch well was drilled in 2014 to replace well #8. Well #8R has been cleared for service December 2015.
An ozone system was installed and cleared for service June 2014. The capacity of the contact chambers are rated at 3,200 gpm.

Chemical Addition

A Corrosion Control Desktop Evaluation was performed for the Sanford Water System in 1994. A city-wide sampling and monitoring program was implemented to determine if the Sanford water system complied with the 1986 amendments to the Safe Drinking Water Act (SDWA) regarding lead and copper contaminants.

It was determined that lead and copper levels at the point of entry (POE) are low and that the Sanford water supply source complies with the SDWA standards for lead and copper contaminants. Sampling programs at the customers tap indicated that a lead problem does not currently exist in the Sanford Public Water System (PWS). However the action level for copper contaminants (90th percentile value) was exceeded at some of the customers taps during the first and the third sampling period.

Improvements consisting of chemical feeders to add polyphosphate and fluorite to the water system were constructed. The polyphosphate coats the inside of the distribution system and the individual residential piping protecting the piping from corrosion and reducing leaching of copper or lead contaminates from the piping system.

The City has implemented a monitoring program to collect the lead and copper data and has submitted this information to FDEP in accordance to the rule requirements.

Distribution System Improvements

There were numerous improvements undertaken since 2007 to allow for growth and reduce maintenance to the City's potable water distribution system, including:

- An 18 inch diameter pipeline was installed from State Road 417 overpass to C.R. 46A on Airport Blvd.
- 4,600 feet of 24- inch pipe were installed from C.R. 46A/Country Club Road to Old Lake Mary Road on Country Club Road.
- An existing 10-inch main from Sanford Ave. to Airport Entrance Road on East Lake Mary Blvd was replaced with 7,920 feet of 16-inch pipe.
- An extension of 17,500 feet of 12-inch main from Airport Entrance Road to S.R. 46 on East Lake Mary Blvd was completed.
- The project to upgrade the existing distribution system of CR 46A is complete from Oregon Avenue to Old Lake Mary Road.
- 14,000 length feet of 12-inch water main was installed north of SR 46. The St. John's Parkway Extension of their 12-inch water main was completed.

- A 16-inch water main on SR 46 was expanded from Airport Boulevard to Mangoustine Avenue.
- 3,200 feet of pipe was installed along SR 46 from Mangoustine Avenue to US 17-92.
- A 12-inch diameter was installed from SR 46 to East Lake Mary Boulevard.
- 6,800 feet of 8-inch pipe was installed alongside SR 46 north along White Cedar Road to Church Street, West on Church Street to Upsala Road.
- An extension project to install 9,000 feet of 18 inch pipe from CR46A north along Airport Boulevard was completed.

Figure 2-1 displays the locations of recent water distribution improvements for the City of Sanford.

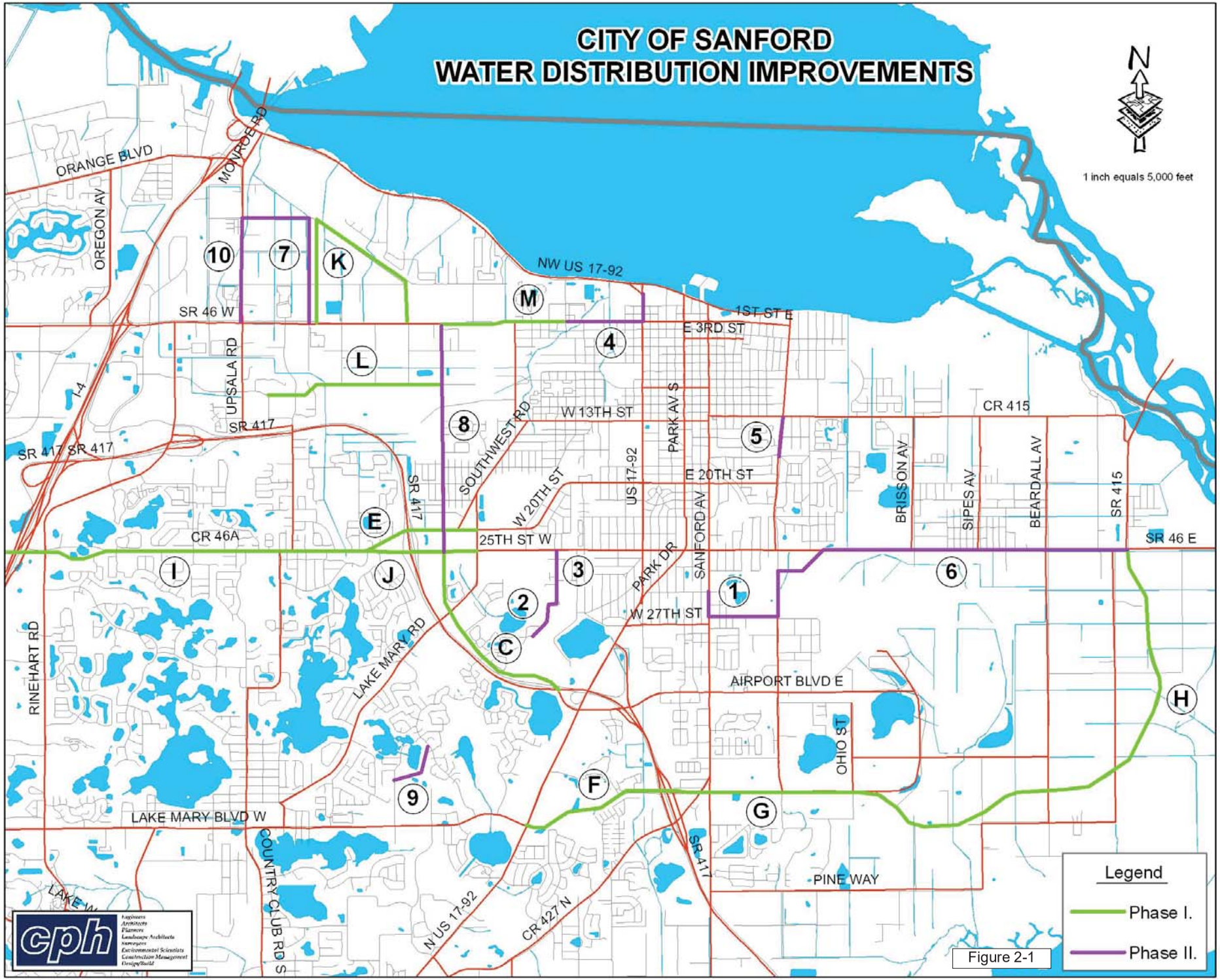
CITY OF SANFORD
WATER DISTRIBUTION IMPROVEMENTS
N
1 inch equals 5,000 feet
ORANGE BLVD
MONROE RD
OREGON AV
NW US 17-92
SR 46 W
1ST ST E
E 3RD ST
UPSALA RD
I-4
SR 417
SR 417 SR 417
SOUTHWEST RD
W 13TH ST
PARK AV S
CR 415
US 17-92
E 20TH ST
W 20TH ST
SANFORD AV
BRISSON AV
SIPES AV
BEARDALL AV
SR 415
SR 46 E
CR 46A
25TH ST W
PARK DR
W 27TH ST
RINEHART RD
LAKE MARY RD
AIRPORT BLVD E
OHIO ST
LAKE MARY BLVD W
COUNTRY CLUB RD S
N US 17-92
CR 427 N
PINE WAY
1
2
3
4
5
6
7
8
9
10
C
E
F
G
H
I
J
K
L
M
Legend
Phase I.
Phase II.
cph
Engineers
Architects
Planners
Landscape Architects
Surveyors
Environmental Scientists
Construction Management
Design/Build

Figure 2-1

CHAPTER 3.0
REGULATORY AGENCY REQUIREMENTS

3.1 Water Facilities Regulatory Agencies

A number of regulatory agencies have jurisdiction over the operation and improvements of public water systems such as the Sanford Public Water System.

3.1.1 Florida Department of Environmental Protection

The Florida Administrative Code (FAC) lists the requirements for public water supplies such as the Sanford Water System. Partial listings of the FAC sections that apply to the Sanford Water System are listed below:

Chapter 62-520	Ground Water Classes, Standards and Exemptions
Chapter 62-522	Ground Water Permitting and Monitoring Requirements
Chapter 62-550	Drinking Water Standards, Monitoring, and Reporting
Chapter 62-555	Permitting and Construction of Public Water Systems
Chapter 62-699	Treatment Plant Classification and Staffing

The Florida Department of Environmental Protection (FDEP) has the responsibility to review and monitor Monthly Operational Reports (MORs). FDEP also has the responsibility to review engineering reports and plans and specifications of the proposed water system improvements and to issue construction permits. Certificates of completion are to be prepared and submitted to FDEP after the proposed water system improvements have been completed. Approval of FDEP must be obtained before the proposed improvements can be placed in service.

3.1.2 St. Johns River Water Management District

St. Johns River Water Management District (SJRWMD) has jurisdiction of permitting and regulating the withdrawal of water from aquifer and surface water. The owner and operator of a public water system such as the Sanford water system must prepare and submit a Consumptive Use Permit (CUP) to SJRWMD to withdraw water from an underground aquifer. The maximum period for a CUP is currently 20 years. The City's previous CUP expired on February 8, 2006. From 2006 to 2012, the City operated under Temporary Consumptive Use Permits. Currently it is operating under a 10-year CUP (CUP # 162-11) which was issued by the SJRWMD on December 15, 2016. The permit expires February 8, 2026. A copy of the current Sanford CUP is included in Appendix A.

3.1.3 U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency Surface Water Treatment Rule (SWTR) requires compliance of utilities with filtration systems that treat surface water or ground water under the direct influence of surface water. Ground water withdrawn for the Sanford Public Water System is not influenced by surface water and does not fall under EPA SWTR.

3.1.4 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers has jurisdiction of construction of pipelines that cross navigable streams or are constructed in wetland areas. A Submerged Lands and Environmental Resources permit or sign-off must be obtained from the U.S. Army Corps of Engineers for construction in these areas.

3.1.5 Seminole County

Pipe lines installed within the Seminole County street right-of-way must comply with the Seminole County requirements. A right-of-way utilization permit must be obtained from Seminole County for the installation.

3.1.6 Florida Department of Transportation

Pipe lines installed within the Florida Department of Transportation (FDOT) road right-of-way must comply with the FDOT requirements. A right-of-way utilization permit must be obtained from FDOT for the installation.

3.2 Compliance with Air Quality-Clean Air Act Amendments

The EPA developed a set of regulations that would prevent the accidental release of hazardous chemicals to the air and would mitigate the potential impacts to the public and environment. This rule was finalized in 1996 by EPA and is published in 40 CFR part 68 - Accidental Release Prevention Requirements: Risk Management.

Each Utility is responsible to determine if they must comply with these regulations and develop their own risk management program. Threshold quantities of chemicals that determine if a facility is regulated are tabulated in Table 3-1. The City of Sanford complies with the Clean Air Act amendments by switching from Chlorine disinfection to liquid sodium hypochlorite for disinfection.

Table 3-1
Chemical Storage Threshold Quantities

Compound	Threshold Quantity (lbs)
Chlorine	2,500
Fluorine	1,000
Ammonia (anhydrous)	10,000
Ammonia (liquid >20% conc)	20,000

Table 3-1 Chemical Storage Threshold Quantities	
Compound	**Threshold Quantity (lbs)**
Sulfur Dioxide (anhydrous)	5,000
Methane	10,000
Propane	10,000

3.3 Compliance with Clean Water Act

The Clean Water Act, which was first amended in 1977, requires that all discharges receive the "best conventional pollution control technology". The Clean Water Act was adopted to protect ambient water quality of the receiving waters. The U.S. standards for wastewater effluent and stream quality, as prescribed by the Clean Water Act for secondary treatment, are listed in Table 3-2.

Table 3-2 Wastewater Effluent and Stream Quality Requirements		
Parameter	Wastewater Effluent	Stream Quality
BOD_5	30 mg/L max	4 mg/L max
SS	30 mg/L max	
DO		4 mg/L min
Total Coliforms		5000/100 ml max (water supply) 1000/100 ml max (swimming area)
Fecal Coliforms Per Section 131.40	200/100 ml max	500/100 ml max

mg- milligrams
ml- milliliters
L- liters

In 1987, the Clean Water Act was reauthorized as the Clean Water Act Amendments of 1987. The goal of the Clean Water Act is to control non-point source pollution.

3.4 Compliance with Safe Drinking Water Act

The Safe Drinking Water Act was adopted in 1974 and its purpose is to ensure that the water supply systems serving the public meet minimum standards to protect public health. The Safe Drinking Water Act was amended in 1996 and includes new regulations, new monitoring and reporting requirements, variances and exemptions to the new rules. Florida's drinking water standards are contained in Chapter 62-550, Florida Administrative Code (F.A.C.). The primary and secondary drinking water standards are listed in Table 3-3. Source: National Primary Drinking Water Regulations (EPA 816-F-09-004, May 2009)

Table 3-3
Primary and Secondary Drinking Water Standards

Contaminant	**Primary Standards (Health) MCL**	**Selected Organic Chemicals**	**Primary Standards (Health) MCL**
Total coliforms	≤ 5% positive samples	Endrin	2 ug/L
Giardia lamblia	TT[1]	Lindane	0.2 ug/L
Legionella	TT	Methoxychlor	40 ug/L
Turbidity	TT	Toxaphene	3 ug/L
Antimony	6 ug/L	2,4-D	70 ug/L
Arsenic	10 ug/L	2,4,5- TP	50 ug/L
Inorganic Chemicals	**Primary Standards (Health) MCL**	**Selected Contaminants**	**Secondary Standards (Health) MCL**
Asbestos	$7*10^6$ fibers/L	Aluminum	0.2 mg/L
Barium	2000 ug/L	Chloride	250 mg/L
Beryllium	4 ug/L	Color	15 color units
Cadmium	5 ug/L	Copper	1.0 mg/L
Chromium	100 ug/L	Fluoride	2.0 mg/L
Copper	TT[1]	Iron	0.3 mg/L
Fluoride	4000 ug/L	Odor	3 TON[2]

Table 3-3 Primary and Secondary Drinking Water Standards			
Lead	15 ug/L	pH	6.5-8.5
Mercury (organic)	2 ug/L	Silver	0.1 mg/L
Nickel	100 ug/L	Sulfate	250 mg/L
Nitrate	10,000 ug/L as nitrogen	Total dissolved solids	500 mg/L
Selenium	50 ug/L		
Thallium	2 ug/L		

[1] Standards based on minimum treatment technique requirements

[2] TON-threshold odor number
ug- micrograms
NTU- nephelometric turbidity units

The proposed Stage 1 maximum Contaminant Levels (MCL) for Disinfection By-Products are tabulated in Table 3-4.

Table 3-4 Disinfection By-Product Rule	
Maximum Contaminant Description	**Maximum Contaminant Level**
Trihalomethanes	80 ug/L
Haloacetic Acids	60 ug/L
Chlorite	1.0 mg/L
Bromate	10 ug/L
Maximum Chlorine Residual Level	
Description	**Maximum Contaminant**
Chlorine	4.0 mg/L (as Cl_2)
Chlorine Dioxide	0.8 mg/L

3.5 Compliance with Section 163.3180(2)(a) F.S.

The Section 163.3180(2)(a) , FS went into effect on July 1, 2005. It requires that the local government must consult with the applicable water supplier to determine whether there will be adequate water supplies to serve the new development no later than the anticipated date of certificate of occupancy issuance or its functional equivalent, prior to approval of a building permit.

Section 163.3177(6)(c)3, FS requires that local governments coordinate their water supply facilities work plan with the respective water management district's regional water supply plan.