



DRAFT DRINKING WATER FACILITIES PLAN

Mascotte Public
Services

DRAFT

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0232301.02
City of Mascotte, FL
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CERTIFICATION BY ENGINEER

The information contained in this report is true and correct to the best of my knowledge, the report was prepared in accordance with generally accepted engineering principles, and I and my designees have discussed the recommendations, costs, and funding approach with the City of Mascotte (City) or the City's delegated representative(s). This Drinking Water Facilities Plan was prepared to meet the requirements of the Florida Drinking Water State Revolving Fund (DWSRF) Program under Chapter 62-552, F.A.C. and this certification pertains only to the planning analysis presented in this report. Certification for design and construction of the proposed facilities will be completed under a separate DWSRF project.

Date

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SUMMARY OF FINDINGS AND RECOMMENDATIONS

This Facilities Plan was prepared by Woodard & Curran, Inc. (Woodard & Curran) to meet the requirements of the Florida Drinking Water State Revolving Fund (SRF) program. The City developed this Drinking Water Facilities Plan to evaluate utility needs to support growth, improve resiliency and replace aging infrastructure. The Facilities Plan is a planning-level document that defines project needs and costs to allow the City to secure grant and low-interest funds for the design and construction of utilities.

The Facilities Plan is intended to represent the City's needs for a 20-year planning period beginning in the year 2021 and through the year 2041. The planning area includes the City of Mascotte and contiguous lands located in Lake County as shown in Figure 1-1. The recommendations resulting from this study are consistent with both the City's and the County's Local Comprehensive Plans.

The drinking water production, treatment, and distribution system consists of two active groundwater wells, one 1.223 million gallon per day (MGD) capacity water treatment plant (that is currently active), one 0.252 MGD capacity water treatment plant (that is currently inactive) one 150,000-gallon elevated storage tank, and approximately 45.3 miles of water main that deliver water to about 2,150 service connections.

The population projection for the 2021-2041 planning period in five-year increments, were evaluated based on population projections from the University of Florida Shimberg Center for Affordable Housing, Bureau of Economic and Business Research (BEBR), and the U.S. Census ACS. Since population projection BEBR data is only available at the county level, the projected population was based on future developments. More specifically, when completing the population projection, the City analyzed all developments with approved and pending Developer Agreements, as well as those with Developer Agreements in progress. The Mascotte drinking water service area was evaluated to see how the Comprehensive Plan projected growth would impact drinking water demand and how the City should proceed with production, treatment, and distribution in the future.

Due to the projected growth that the City will undergo over the next 20 years, drinking water system demands are anticipated to exceed capacity of the existing facilities within the planning period. Based on the life cycle analysis, it is most economical and advantageous for the City to rehabilitate the existing Midway Avenue Water Treatment Plant (WTP), construct a new Knight Street WTP to increase production and distribution capacity to 4.75 MGD. Additionally, two 900,000-gallon elevated storage tanks (EST) and 46,250 linear feet (LF) of 12- through 20-inch transmission main will need to be constructed to accommodate anticipated demand increases and reach proposed developments.

The City recently installed an automatic meter reading (AMR) system with new meters at all the existing metered service connections that are compatible with a radio read advanced metering infrastructure (AMI). It is recommended that the City construct a radio frequency fixed network (AMI) to automatically read the meters each month and aid in reducing operating costs for the utility and enhance water conservation and leak detection efforts throughout the system.

The current SCADA system is a proprietary system known as Data Flow Systems (DFS). The system is outdated, does not provide detailed alarms for the systems water assets, and is not connected to any flow meters. It is recommended that the City replace the entire SCADA system to reduce maintenance and repair in the future and enhance risk management for operations.

The City has begun the planning/design stages of constructing a new well to the LFA at the Knight Street site. An update to the existing consumptive use permit (CUP) will be required to increase the Knight Street production and treatment capacity. Since the water quality parameters such as pH and alkalinity may significantly affect finished water

corrosivity, it is recommended that the City conduct corrosion control study prior to the change and / or increase its monitoring frequency for lead and copper under the LCRR.

The Lead and Copper Rule Revisions (LCRR) require all water systems to develop a publicly available inventory of all lead service lines (LSL) or to demonstrate their absence and to develop a plan to replace all LSLs in their system by October 16, 2024. It is recommended that the City conduct a corrosion control study (CCS) to assess the existence of lead service lines and comply with the LCRR.

Florida Department of Environmental Protection (FDEP) will not fund projects beyond the scope of reasonable growth. It is recommended that the presented plan be built in a phased approach in order to ensure that the plan is affordable to the City and its rate payers. Additionally, the phasing makes the plan more affordable to the City and its rate payers and avoids overdesign by installing equipment that will age without being used and water quality issues related to high water age. Phases were broken down into two phases as described below:

- **Phase 1:**
 - Rehabilitate Midway Avenue WTP and construct a new Knight Street WTP
 - Install 38,250 LF of 16- through 20-inch transmission mains and one 900,000-gallon EST
 - Replace the SCADA system
 - Install a radio frequency AMI
 - Conduct special studies for a new CUP, a CCS, and to comply with the LCRR.
- **Phase 2:**
 - Install one addition high service pump at new Knight Street WTP
 - Install 8,000 LF of 12-inch transmission main and one 900,000-gallon EST

Recommended upgrade projects to meet the identified needs and their associated opinion of probable costs (OPC) are shown in Table ES-1 through Table ES-3. The total cost of the recommended projects is estimated to be \$45.6 million in 2021 dollars. Details of the project costs are included in Appendix A.

Table ES-1: Selected Plan Proposed Costs

Alternative Category	Construction Base Cost	10% - Construction Contingency	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$5,479,000	\$548,000	\$6,027,000	\$1,385,000	\$181,000	\$7,593,000
Distribution & Storage	\$28,099,000	\$2,810,000	\$30,909,000	\$5,564,000	\$928,000	\$37,401,000
SCADA	\$225,000	\$23,000	\$248,000	\$45,000	\$8,000	\$301,000
Water Meters	\$194,000	\$20,000	\$214,000	\$39,000	\$7,000	\$260,000
Selected Plan Total	\$33,997,000	\$3,401,000	\$37,398,000	\$7,033,000	\$1,124,000	\$45,555,000

1. Costs for special studies (Update CUP, LCCR, CCR) are include with the engineering costs for Water Production and Treatment.

Table ES-2: Phase 1 Conceptual Level Cost Estimate Summary – Recommended Plan

Alternative Category	Construction Base Cost	10% - Construction Contingency	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$5,385,000	\$539,000	\$5,924,000	\$1,367,000	\$178,000	\$7,469,000
Distribution & Storage	\$21,909,000	\$2,191,000	\$24,100,000	\$4,338,000	\$723,000	\$29,161,000
SCADA	\$225,000	\$23,000	\$248,000	\$45,000	\$8,000	\$301,000
Water Meters	\$194,000	\$20,000	\$214,000	\$39,000	\$7,000	\$260,000
Phase 1 Total Cost ²	\$27,713,000	\$2,773,000	\$30,486,000	\$5,789,000	\$916,000	\$37,191,000

1. Costs for special studies (Update CUP, LCCR, CCR) are include with the engineering costs for Water Production and Treatment.

2. Phase 1 total costs are presented in 2021 dollars.

Table ES-3:Phase 2 Conceptual Level Cost Estimate Summary – Recommended Plan

Alternative Category	Constructi on Base Cost	10% - Constructio n Contingenc y	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$94,000	\$10,000	\$104,000	\$19,000	\$4,000	\$127,000
Distribution & Storage	\$6,190,000	\$619,000	\$6,809,000	\$1,226,000	\$205,000	\$8,240,000
SCADA	\$0	\$0	\$0	\$0	\$0	\$0
Water Meters	\$0	\$0	\$0	\$0	\$0	\$0
Phase 2 Total Cost ²	\$6,284,000	\$629,000	\$6,913,000	\$1,245,000	\$209,000	\$8,367,000

1. Costs for special studies (Update CUP, LCCR, CCR) are include with the engineering costs for Water Production and Treatment.

2. Phase 2 total costs are presented in 2021 dollars.

The FDEP SRF program is expected to be the financing source for the project. A Capital Financing Plan (CFP) has been prepared to explain to the public and to the State Agency the financial impact on the users of the drinking water system. The CFP is shown in Appendix I and demonstrates that water and sewer operating expenses; existing debt service obligations; and proposed project debt service associated with capital projects identified in this facility plan can be funded through current utility rates, existing approved annual increases, and water and sewer impact fees. No additional rate increase is required.

1. INTRODUCTION

This document is provided to meet the planning requirements for the Drinking Water State Revolving Fund (DWSRF) program for the purpose of obtaining funding for new facilities in the City of Mascotte, Florida (City). This report addresses improvements to the distribution, treatment, and operations systems. This report presents estimated cost for three alternatives for each project as required by DWSRF and projects them over the planning period. This plan was developed to be consistent with the City's adopted 2017 Comprehensive Plan.

1.1 Background

The City of Mascotte, located in Lake County, Florida, is located directly west of the City of Groveland on State Road 50 in Lake County, Florida. The State has committed to expanding State Road 50 for the purposes of economic development and improved evacuation routes. As part of Orlando's continued growth and expansion to the West, nearby communities such as Clermont and Groveland have seen significant growth over the last decade. Mascotte may be poised for similar growth as developers seek cheaper land within commuting distance to Orlando. The planning area shown in Figure 1-1 incorporates approximately 41 square miles and includes the City of Mascotte and contiguous surrounding lands in Lake County.

The City treats groundwater from the Upper Floridan Aquifer (UFA) and treats the water with a phosphate blend for iron sequestration and corrosion control and chlorine gas for primary and secondary disinfection before distribution to its customers. The potable water treatment and distribution systems consist of two water treatment plants, one distribution pressure zone, one elevated storage tank, and one ground storage tank. The City's distribution system is classified as a community public water system: Mascotte Water Department (PWS ID 3350812).

1.2 Need

Drinking water infrastructure needs within the City of Mascotte utility service area include:

1.2.1 Water Production and Treatment Facility

The City of Mascotte is growing due to both annexation and migration. Under its current Consumptive Use Permit (CUP) from St. Johns River Water Management District (SJRWMD), the City is permitted to withdraw up to 0.7 MGD from the Upper Floridan Aquifer (UFA) on an average annual day flow basis, or up to 255.5 MG, and 1.0 MGD, or 365 MG, combined from the UFA and Lower Floridan Aquifer (LFA); this CUP is included in Appendix E. The average daily withdraw from the UFA is nearing the maximum permitted volume. The City will soon need to supplement potable water demand with water from the LFA. The City currently does not have any LFA wells but has been permitted for two LFA wells under the existing CUP. Changes in water demand and the augmentation from the UFA to the LFA will require upgrades at the existing water treatment facilities. While the existing Knight Street Water Treatment Facility can meet existing water demands, demands are estimated to exceed its permitted capacity of 1.223 MGD by 2027 and the facility equipment is nearing the end of its useful life. The Midway Avenue Treatment Facility has not been active since 2017. A full source water evaluation is needed.

The City currently does not have any LFA wells nor the capability at any of the treatment sites to withdraw water from the LFA. Therefore, new LFA wells and corresponding treatment and storage facilities will need to be constructed to maintain compliance and continue to provide reliable drinking water. This facilities plan will not evaluate new wells, however it is important to note that new wells will be required to meet future water demands.

1.2.2 Water Distribution

The City's existing water distribution system is lacking redundancy, or looping, and does not reach all locations where new developments are planned and the hydraulic capacity to distribute water to these locations is limited. The need for new transmission mains and additional finished water storage to extend water service to planned developments needs to be considered. This facilities plan will assess the City's utility service area and transmission and distribution piping network capacity and the need for expansion.

Currently, the City has 150,000 gallons of finished water storage available at the Elizabeth Street elevated steel water storage tank. During a water main break, it has been reported that water pressure drops are noticeable at the tap at some locations in the distribution system that are remote to the break point. The current system storage capacity provides a reported 3-hours of emergency storage supply. The system lacks redundancy with water production and emergency storage, or a separate source treated water. In the event of a major failure of water production at the Knight WTP, additional emergency storage is needed in order to maintain water service to customers.

1.2.3 Water Meter Infrastructure

The implementation of a fixed-network Automated Meter Infrastructure (AMI) to automatically read the meters each month would aid in reducing operating costs for the utility and enhance water conservation and leak detection efforts throughout the system. This facilities plan will evaluate the magnitude of non-revenue water and the City's need to consider the implementation of a fixed-network AMI system at major locations throughout the City.

1.2.4 SCADA and Infrastructure Management

In addition to being technologically outdated, the existing SCADA system does not provide detailed alarms for the systems water assets and is not connected to any flow meters in the City's water system. The Water Division staff has trouble operating the water system with the existing SCADA system. With anticipated water system expansion in consideration, the need for upgraded or full replacement of the system's SCADA system needs to be assessed.

1.3 Scope of Study

The scope of this Facilities Plan consists of:

- Inventory existing water facilities, available service area characteristics, and environmental conditions;
- Establish design criteria for the planning period of 20 years;
- Identify and evaluate up to 3 water system alternatives to satisfy the planning year needs;
- Recommended ranking of alternatives;
- Detailed description of the recommended facilities and their cost estimate;
- Implementation schedule of the recommended facilities;
- Identify potential adverse environmental impacts and propose mitigating measures
- Review of infrastructure potable water demand and system capability to meet demand for the following planning activities:
 - o Water Production and Treatment Facility Improvements
 - o Water Distribution System Upgrades
 - o Advanced Metering Infrastructure Improvements
 - o Supervisory Control and Data Acquisition (SCADA) Upgrades

1.4 Facilities Planning Overview

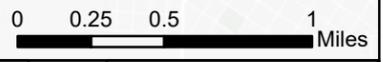
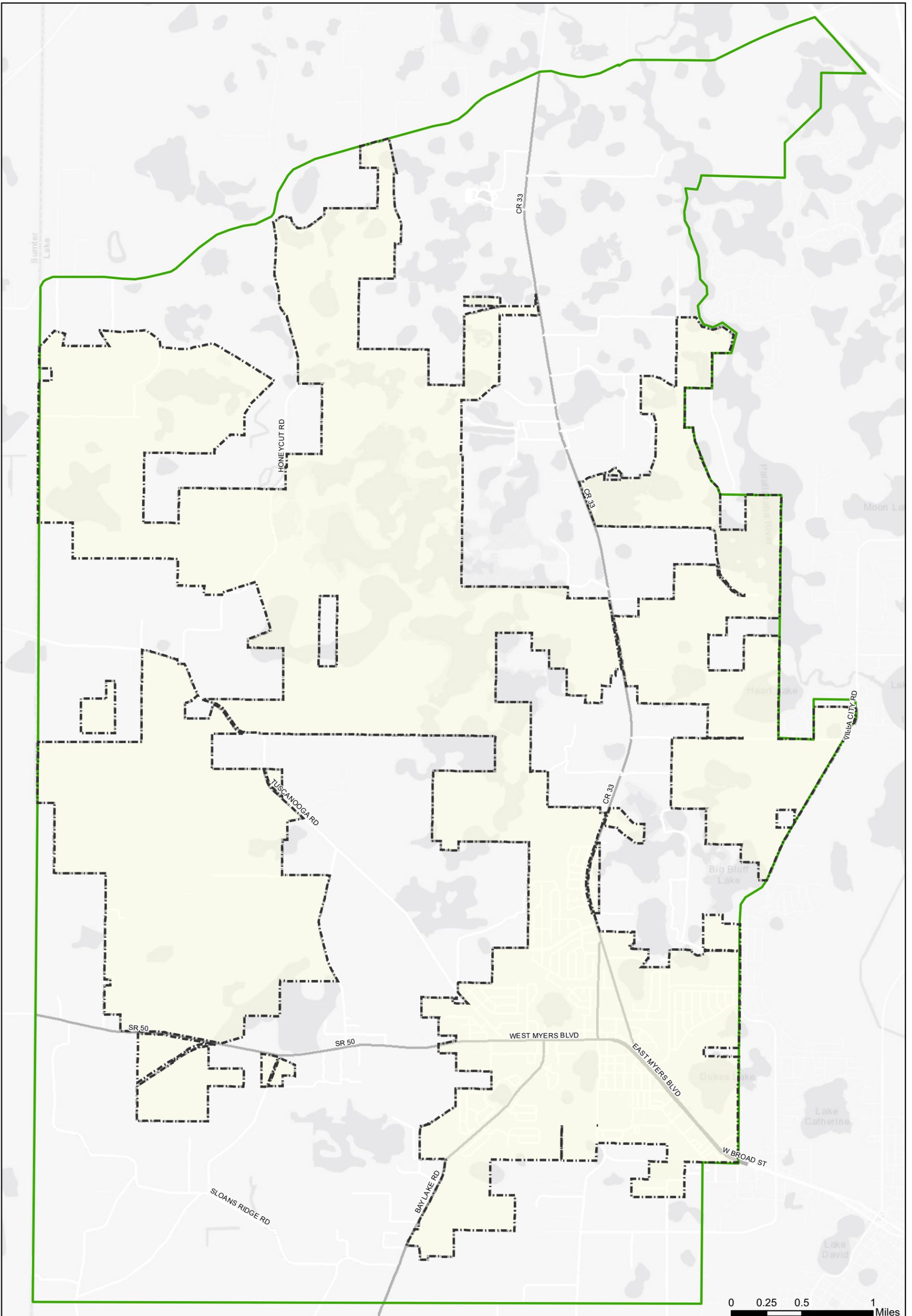
This facilities plan outlines the water system facilities that were estimated to be needed for a 20-year planning period. Strategies were developed within the plan to meet estimated system needs, and the planning basis for subsequent design and construction is provided. Additionally, the existing and projected demographic characteristics, topographic, hydrologic, and institutional features of the planning area and their impact on the water system needs are also examined.

The 20-year planning period for the purpose of this work begins in the year 2021 and extends through the year 2041. Three alternatives for each of the four planning activities were identified and evaluated with a recommendation for the most feasible alternative for meeting the City's needs.

1.5 Reference Standards and Guidelines

This Report has been organized such that it is compatible with the Facilities Planning guidance document published by the Florida Department of Environmental Protection (FDEP) in 2000 and modified in 2017. Technical requirements in the Florida Administrative Code (FAC) were referenced for the alternatives analysis and recommendations.

Figure Exported: 9/10/2021 10:58:11 AM By: cwallis.ch Using: \\woodardcurran.net\shared\Projects\0232301.02 Mascote DW Fcity Plan\wp\GIS\MXDs\Figure 1-1 - Planning Area.mxd



Planning Area

City of Mascote
Figure 1-1

Legend

-  Future Planning Area City Zoning
-  Mascote City Limits

Note: Only selected roads have been shown as visual aids



Project #: 023230 1.03
 Map Created: September 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources: Lake County GIS**

2. EXISTING AND FUTURE CONDITIONS

Section 2 describes the existing physical, organizational, environmental, and demographic conditions within the planning area. This information is used to establish the existing conditions, project future development, and assess needs within the planning area related to the future water management requirements. This section describes the existing condition and limitations of the drinking water system. The current water demand is outlined and used in conjunction with demographic projections to estimate the future water demand of the system during the planning period.

2.1 Description of Planning Area

2.1.1 Planning/Service/Project Area

With the anticipation of continued growth, the planning area extends beyond the existing city limits of Mascotte. The planning area is bordered by Groveland to the east, City of Tuscanooga to the West, Florida Highway 33 to the North, and South Bay Lake Road to the South. Surface features within the planning area include creeks, lakes, rivers, and wetlands with sparse rolling hills. The planning area has a warm climate for most of the year.

2.1.2 Climate

Located in central Florida, the City of Mascotte sits within the boundaries of Lake County, Florida. Mascotte's climate is characterized as hot and humid for approximately six months out of the year with an average daily high temperature of 91.8 degrees Fahrenheit. Mascotte's cold season is relatively short and dry and usually lasts from December to March. The average daily low temperature is 46.4 degrees Fahrenheit during winter. Cooler than most places in Florida, the City has approximately six (6) days when the temperature falls below freezing through the night hours. Rainfall averages approximately 50.5 inches with precipitation approximately 111 days out of the year, which is higher than the United States average of 106.2 days of precipitation a year. See Table 2-1 below.

Table 2-1: Climate Averages

	Mascotte, Florida	United States
Rainfall (in)	50.5	38.1
Snowfall (in)	0.0	27.8
Precipitation (days)	111.1	106.2
Sunny (days)	231	205
Average July High (deg F)	91.8	85.8
Average January Low (deg F)	46.4	21.7
UV Index	6.3	4.3
Elevation (feet)	138	2,443

2.1.3 Topography and Drainage

According to the United States Geological Survey Topographic Map and the United States Fish and Wildlife Service National Wetlands Inventory, the planning area consists of small hills, freshwater ponds, freshwater wetlands, and many lakes. Average elevation of the City is 138 feet above sea level with only moderate variations in elevation. The drainage in the planning area is comprised of the following:

- 39.5% of soils are characterized as excessively drained, well drained, or moderately drained;
- 55.0% of the soils are poorly drained, somewhat drained, or very poorly drained; and
- 5.0% is water

Table 2-2 lists the detailed information on specific types of soils and drainage class within the planning area.

Table 2-2: Soil Types Within Planning Area

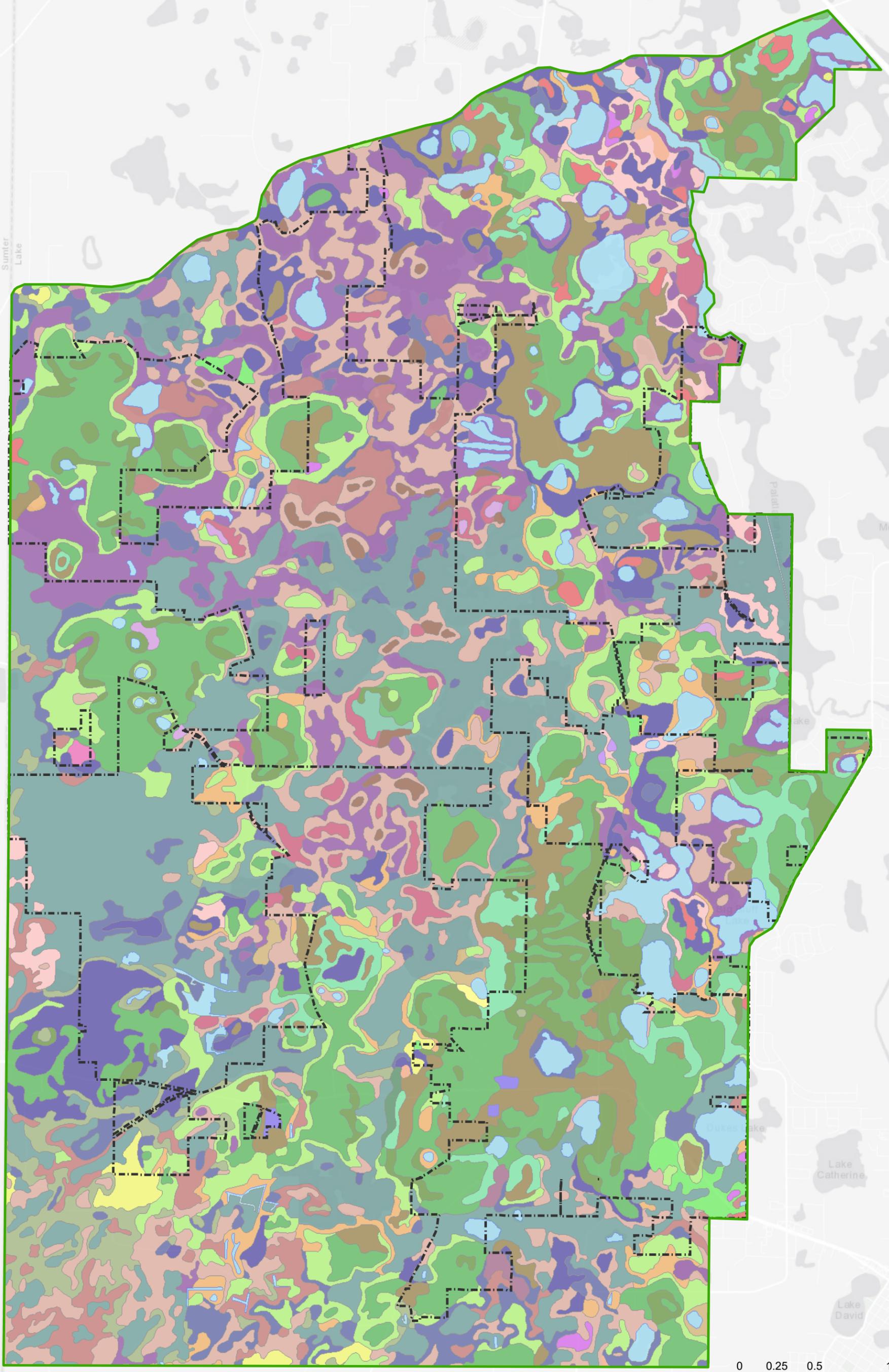
Soil Type	Drainage Class	Percentage of Planning Area
1) Sparr Sand, 0-5% Slopes	Somewhat poorly drained	5.5%
2) Sparr Sand, 5-12% Slopes	Somewhat poorly drained	0.1%
4) Anclote & Myakka Soils	Very poorly drained	0.5%
5) Apopka Sand, 0-5% Slopes	Well drained	5.4%
6) Apopka Sand, 5-12% Slopes	Well drained	2.3%
7) Astatula Sand, 0-5% Slopes	Excessively drained	0.1%
8) Candler Sand, 0-5% Slopes	Excessively drained	13.9%
9) Candler Sand, 5-12% Slopes	Excessively drained	4.0%
12) Cassia Sand	Somewhat poorly drained	0.5%
14) Eureka Loamy Fine Sand	Poorly drained	0%
17) Arents	Somewhat poorly drained	2.1%
22) Lake Sand	Excessively drained	0%
24) Kendrick Sand, 0-5% Slopes	Well drained	0.5%
25) Kendrick Sand, 5-8% Slopes	Well drained	0.1%
28) Myakka-Myakka, Wet, Sands 0-2% Slopes	Poorly drained	10.6%
30) Lochloosa Sand	Somewhat poorly drained	0.2%
32) Oklawaha Muck	Very poorly drained	19.0%
33) Ona-Ona, wet, fine sand, 0-2% Slopes	Poorly drained	0.2%
34) Orlando Fine Sand	Well drained	0%
35) Paola Sand, 0-5% Slopes	Excessively drained	0.1%
37) Ellzey Sand	Poorly drained	0.5%
38) Placid Sand, Frequently Ponded, 0-2% Slopes	Very poorly drained	2.7%
39) Seffner Sand	Somewhat poorly drained	2.2%
40) Placid & Myakka Sand, Depressional	Very poorly drained	9.3%
42) Pompano Sand	Moderately well drained	4.0%
44) Swamp	Very poorly drained	0.2%
45) Tavares Sand, 0-5% Slopes	Moderately well drained	8.1%
46) Orsino Sand	Moderately well drained	1.1%
47) Kendrick Sand, Thin Subsurface	Well drained	0.1%
49) Wauchula Sand	Poorly drained	1.3%

2.1.4 Geology, Soils, Physiography

According to the United States Department of Agriculture Natural Resources Conservation Service Soil Survey denotes 94.6% of land within the planning area is composed of thirty different types of soils, the remaining percent of land is water. Approximately 75% of the land area is composed of soils that are classified as moderately high to very high capacity to transmit water. The remaining percent is classified as very low to moderately low capacity to transmit water.

The most predominant soil types found in the planning area are characterized as sand to sandy clay. The surface to ten inches below, upper horizons, of soils in the planning area are classified as 19.2% muck, 2.1% sandy clay, 0.7% fine sand, and 72.6% sand. Only swamp soil, at 0.2%, is classified as muck at greater depths. Refer to Figure 2-1 for soil mapping within the planning area.

Figure Exported: 9/10/2021 By: cwallis.ch Using: \\woodardcurran.net\shared\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-1 Soil Composition Map.mxd



Soil Composition Map

City of Mascotte, FL

Figure 2-1

Legend

-  Future Planning Area
-  Mascotte City Limits

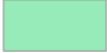
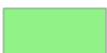
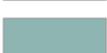
***See accompanying page for Soil Map Units Legend**



Project #: 0232301.03
Map Created: September 2021

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Soil Map Units

-  Anclothe and Myakka soils
-  Apopka sand, 0 to 5 percent slopes
-  Apopka sand, 5 to 12 percent slopes
-  Arents
-  Astatula sand, 0 to 5 percent slopes
-  Borrow Pits
-  Candler sand, 0 to 5 percent slopes
-  Candler sand, 5 to 12 percent slopes
-  Cassia sand
-  Ellzey sand
-  Eureka loamy fine sand
-  Kendrick sand, 0 to 5 percent slopes
-  Kendrick sand, 5 to 8 percent slopes
-  Kendrick sand, thin subsurface
-  Lake sand, 5 to 12 percent slopes
-  Lochloosa sand
-  Myakka sand
-  Oklawaha muck
-  Ona fine sand
-  Orlando fine sand, 0 to 5 percent slopes
-  Orsino sand
-  Paola sand, 0 to 5 percent slopes
-  Placid and Myakka sands, depressional
-  Placid sand, depressional
-  Pompano sand
-  Seffner sand
-  Sparr sand, 0 to 5 percent slopes
-  Sparr sand, 5 to 12 percent slopes
-  Swamp
-  Tavares sand, 0 to 5 percent slopes
-  Water
-  Wauchula sand

Soil Composition Map

Soil Map Units Legend
Mascotte, FL

Figure 2-1



Project #: 0232301.03
Map Created: September 2021

2.1.5 Surface and Ground Water Hydrology, Quality, and Uses

2.1.5.1 Surface and Ground Water Hydrology

All surface waters are designated class III waters, suitable for recreation and for propagation of fish and wildlife. The planning area is located within the St. Johns River Watershed Management District (SJRWMD). The source of drinking water for the planning area is the Upper Floridan Aquifer. The aquifer is composed of limestone and dolomite and has high flows near the center of the state where the planning area is located. There are no wild or scenic rivers in the planning area.

2.1.5.2 Surface and Ground Water Quality

Waterbodies located within the planning area include Honeycut Lake, Bird Lake, Lake Indigo, Big Prairie Lake, Lake Linda, Dukes Lake, Sunset Lake, Lake Jackson, Big Bluff Lake, Lake Isabel, Gourd Lake, Dilly Lake, and Hart Lake. The water quality for all surface water bodies in the planning area is considered good. All of the groundwaters in the planning area are designated class G-II (potable water use). All waterbodies are considered not impaired according to the Florida Department of Environmental Protection Impaired Waters Rule. There are various areas of known contamination within the planning area, shown in Figure 2-2.

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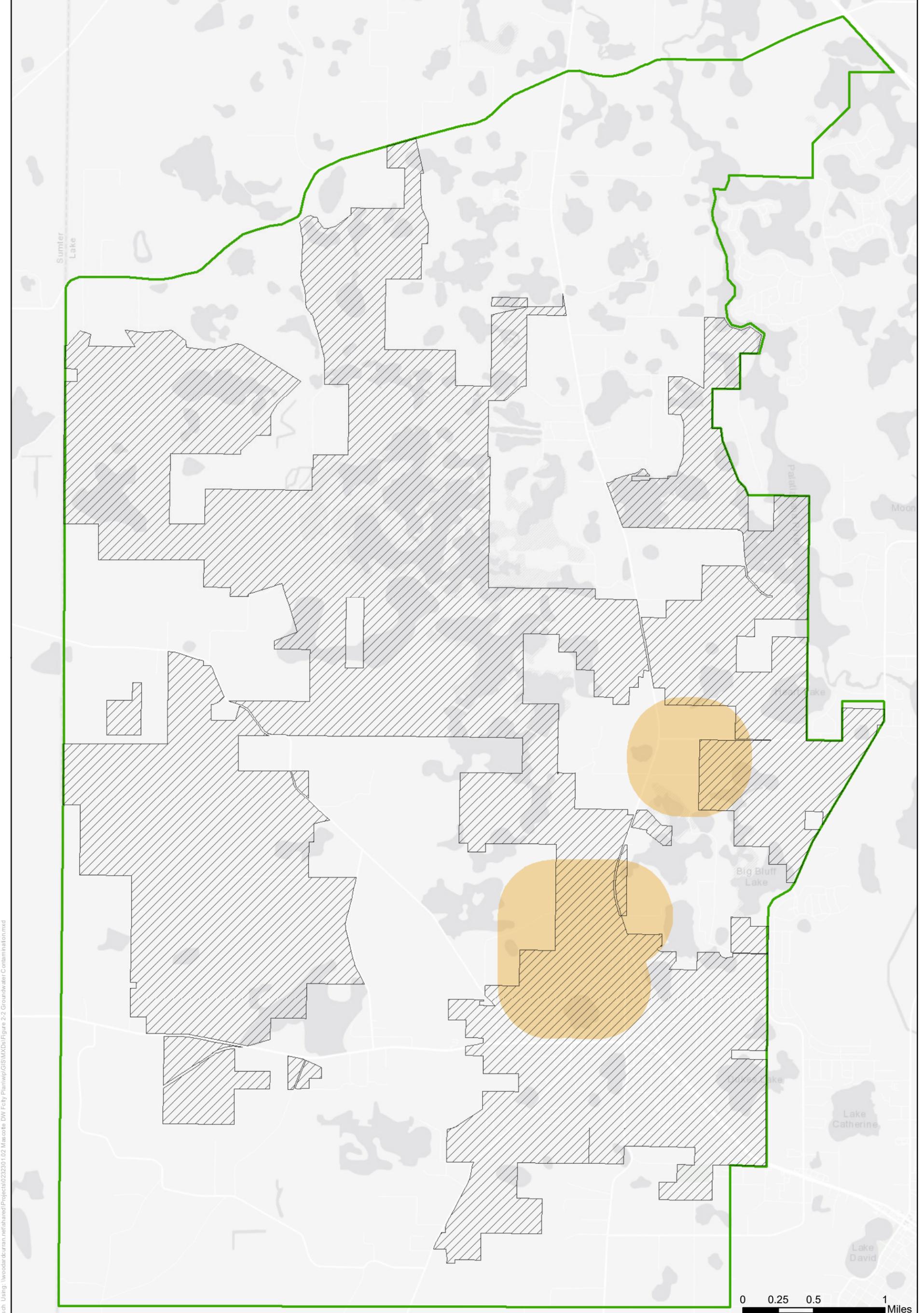


Figure Exported: 9/10/2021 By: cwallis@ch Using: \\woodardcurran.net\shared\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-2 Groundwater Contamination.mxd

Groundwater Contamination Areas
 City of Mascotte
Figure 2-2

Legend		Future Planning Area
		Mascotte City Limits
		Groundwater Contamination Areas

N





WOODARD & CURRAN

Project #: 0232301.03
 Map Created: September 2021

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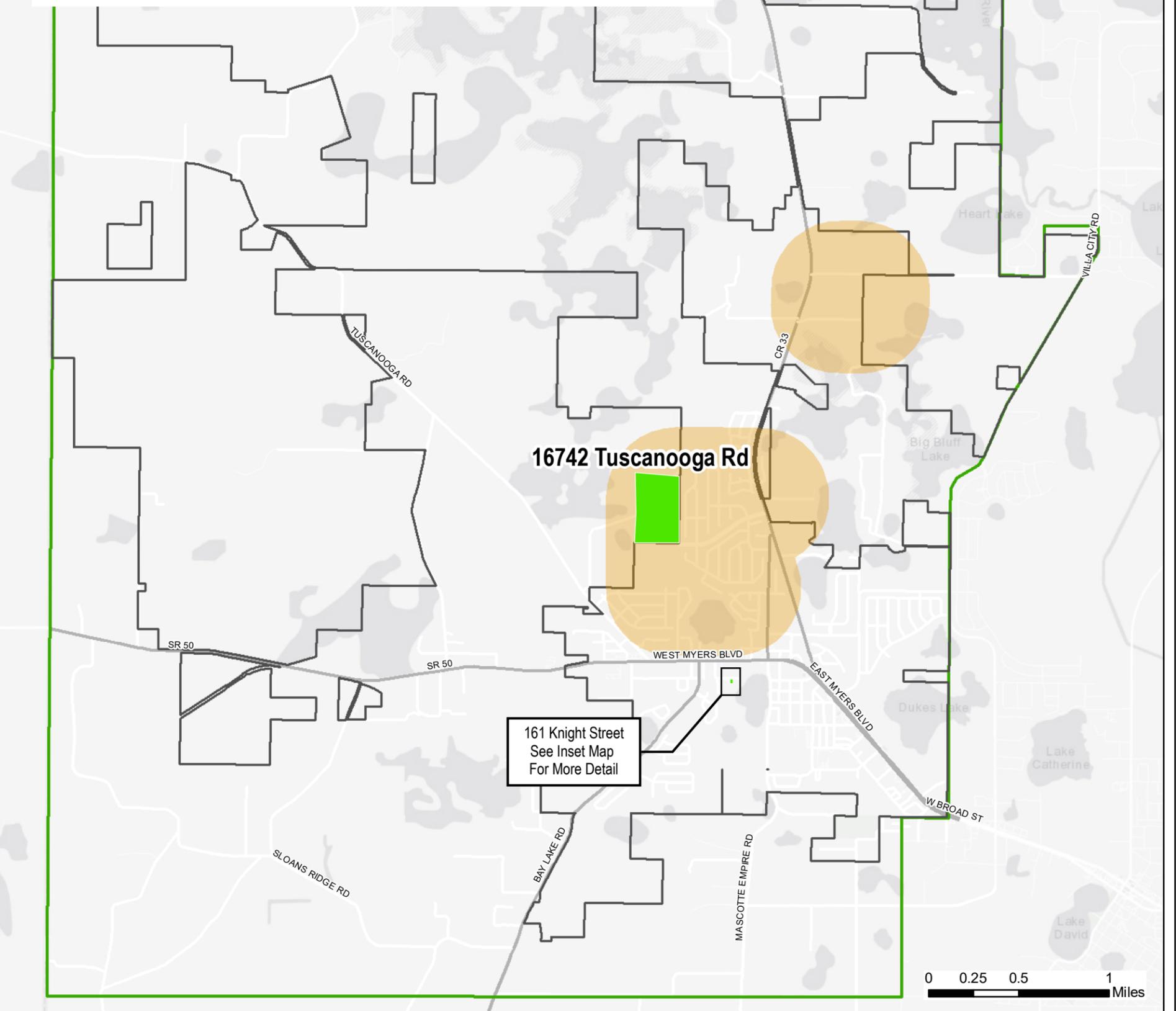
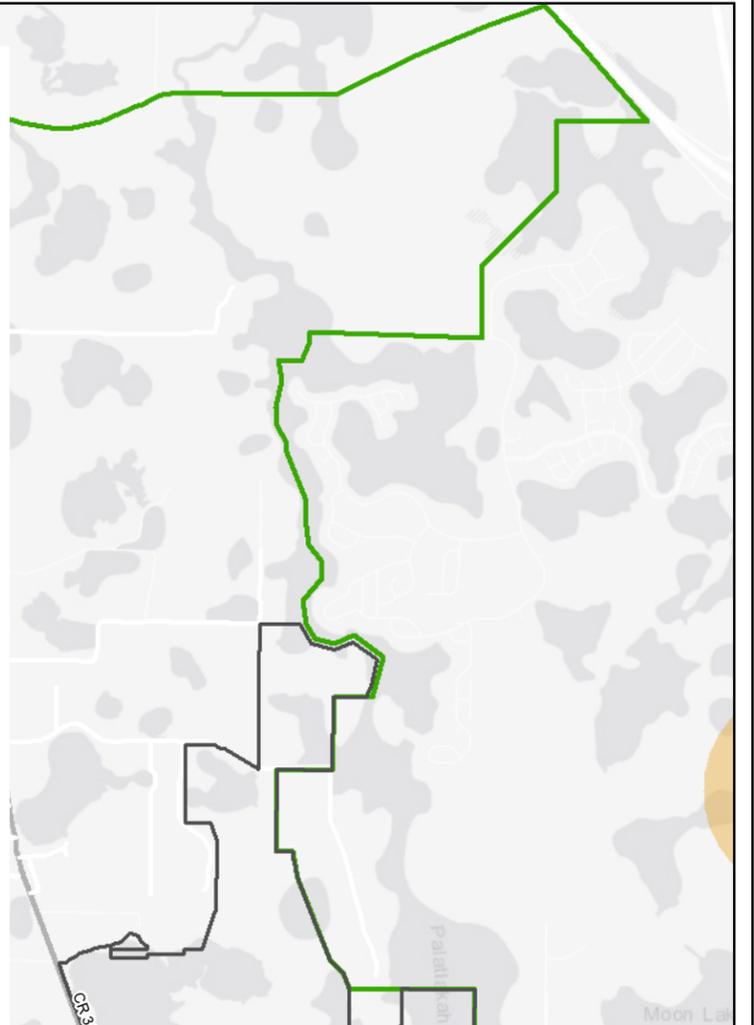
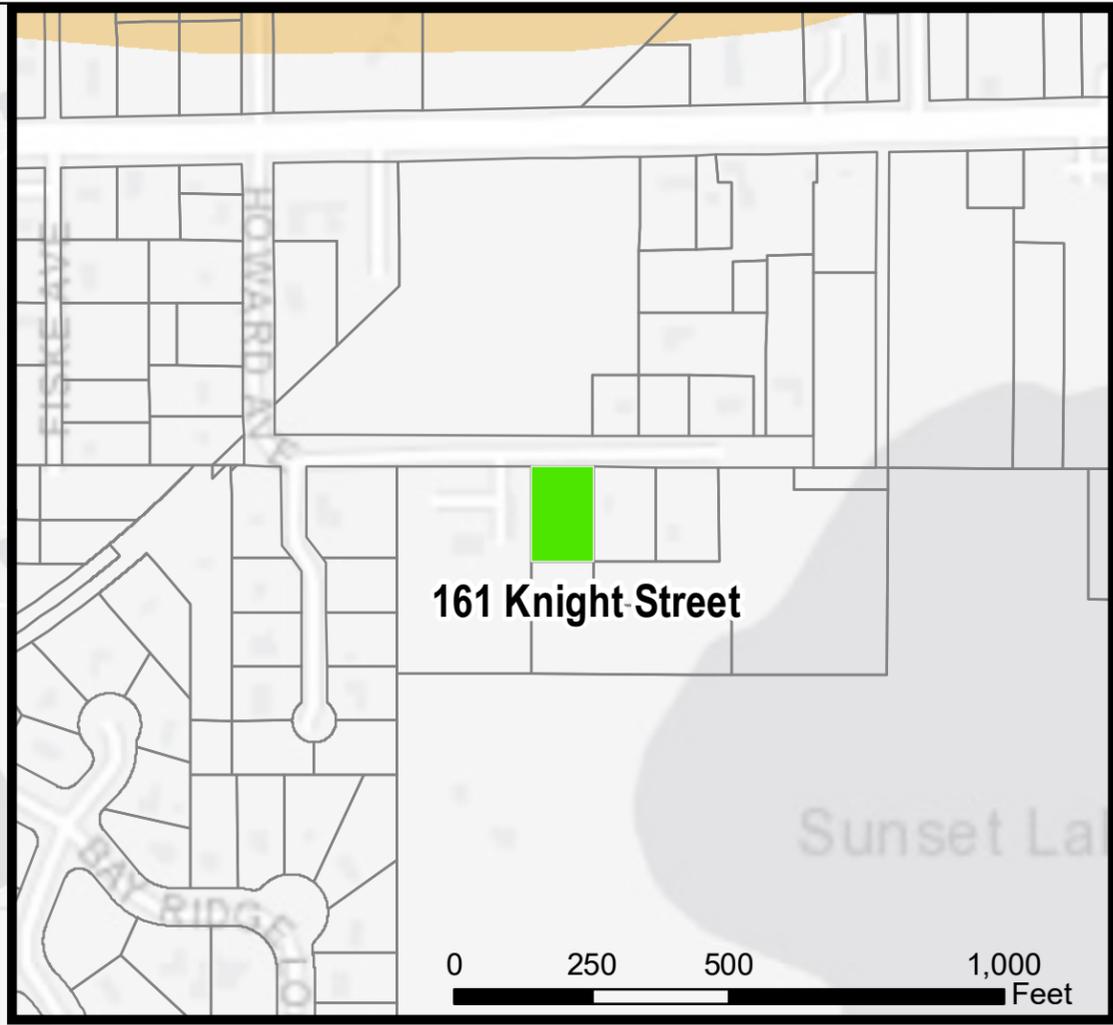
2.1.5.3 Water Uses

The Upper Floridan Aquifer is used as the source of drinking water for the City's utility service area, to include supplemental reclaimed water for irrigation. Surface waters in the planning area are used for recreation purposes such as boating and fishing.

2.1.6 Source Water Protection

In 2020, an assessment of potential contamination to the source water was completed as part of the Source Water Assessment and Protection Program (SWAPP) with FDEP under the Safe Drinking Water Act (SDWA). The source water protection area is the area encompassed within a five-year groundwater travel time, defined as the area from which water will drain to a well pumping at the average daily permitted rate for a five-year period. In this area all potential sources of contamination were identified and given a susceptibility score and a concern level. Per the 2020 SWAPP, there are four (4) unique potential sources of contamination within the protection areas for the potable water wells operated by the City, shown in Figure 2-3. Table 2-3 provides a list of potential contamination sources. It should be noted that the Cal-Maine Foods facility is classified as two different unique sources, a wastewater site and wastewater facility. The potential sources of contamination range from low to moderate concern level, with only the groundwater contamination delineated area registering a moderate concern level. The 2020 SWAPP results for the City can be found in Appendix C.

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Groundwater Contamination Sources

City of Mascotte

Figure 2-3

Legend

-  Future Planning Area City Zoning
-  Groundwater Contamination Areas
-  Mascotte City Limits
-  Potential Source of Contamination
-  Tax Parcels



Project #: 0232301.03
Map Created: August 2021

Table 2-3: Potential Contamination Sources

Facility Type	Facility Class	Status	Name	Susceptibility Score	Concern Level
Industrial Wastewater	Wastewater Site	A	Cal-Maine Foods-Mascotte Facility	0.03	Low
Industrial Wastewater	Wastewater Facility	A	Cal-Maine Foods-Mascotte Facility	0.33	Low
Petroleum Storage Tank	Local Government	Open	Mascotte City-Knight St. WTP	8.33	Low
Delineated Areas	N/A	Active	Zone ID: 35263171	33.33	Moderate

2.1.7 Environmental Sensitive Areas or Features

2.1.7.1 Wetlands

There are many freshwater ponds, lakes, and creeks that border surface water bodies according to the United States Fish and Wildlife National Wetlands Inventory Map. Wetlands are located throughout the planning area. The wetlands consist of both freshwater emergent wetlands and freshwater forested/shrub wetlands. The planning and design include all practicable measures to minimize any harm to wetlands. See Figure 2-4 for a map of wetlands in the planning area.

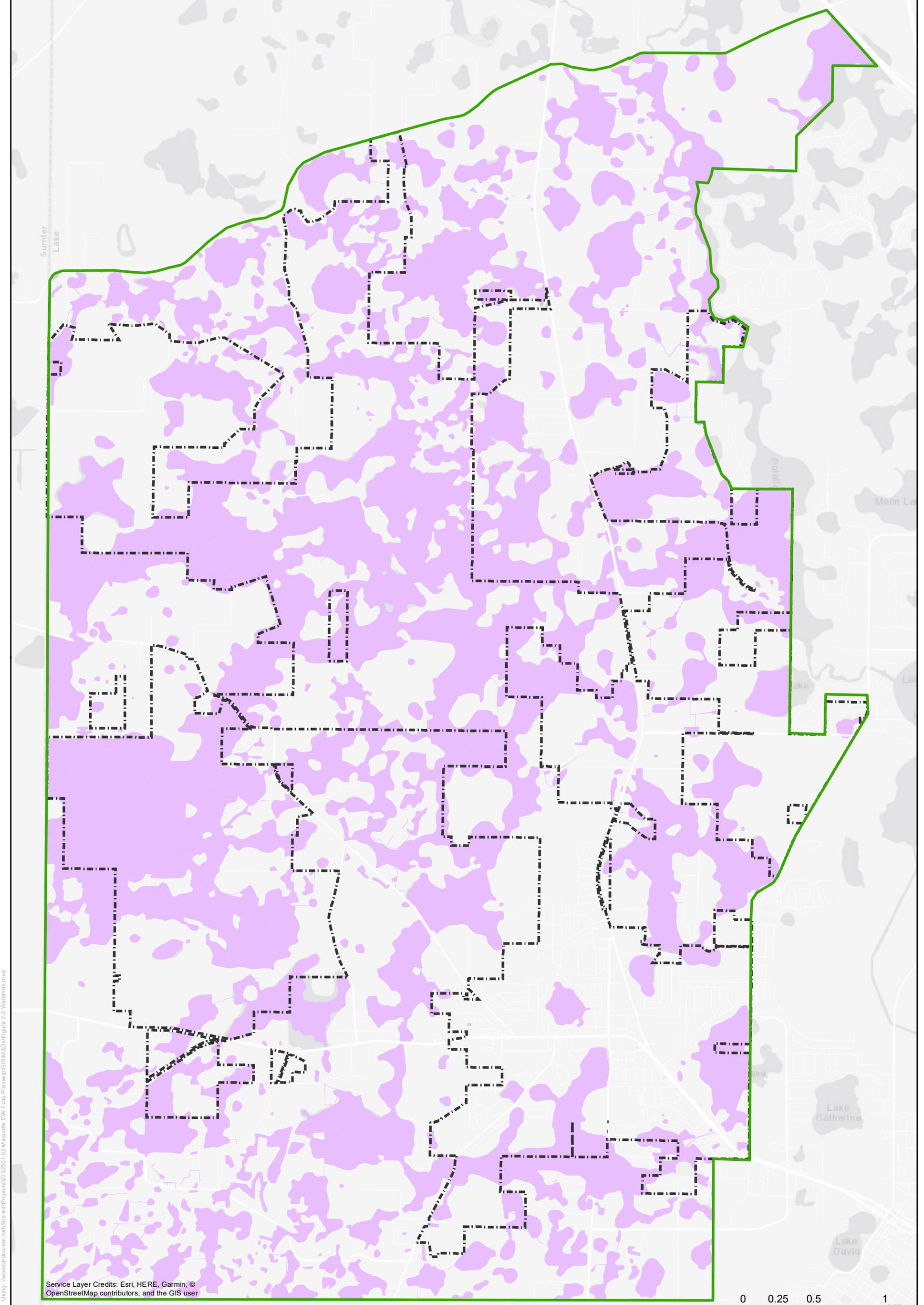


Figure Exported: 7/29/2021 By: cwallisch Using: \\woodardcurran.net\Share\Projects\023201\02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-3 Wetlands.mxd

Wetland Map

City of Mascotte

Figure 2-4

Legend

-  Future Planning Area
-  Mascotte City Limits
-  Mascotte Wetlands



Project #: 0232301.03
Map Created: July 2021

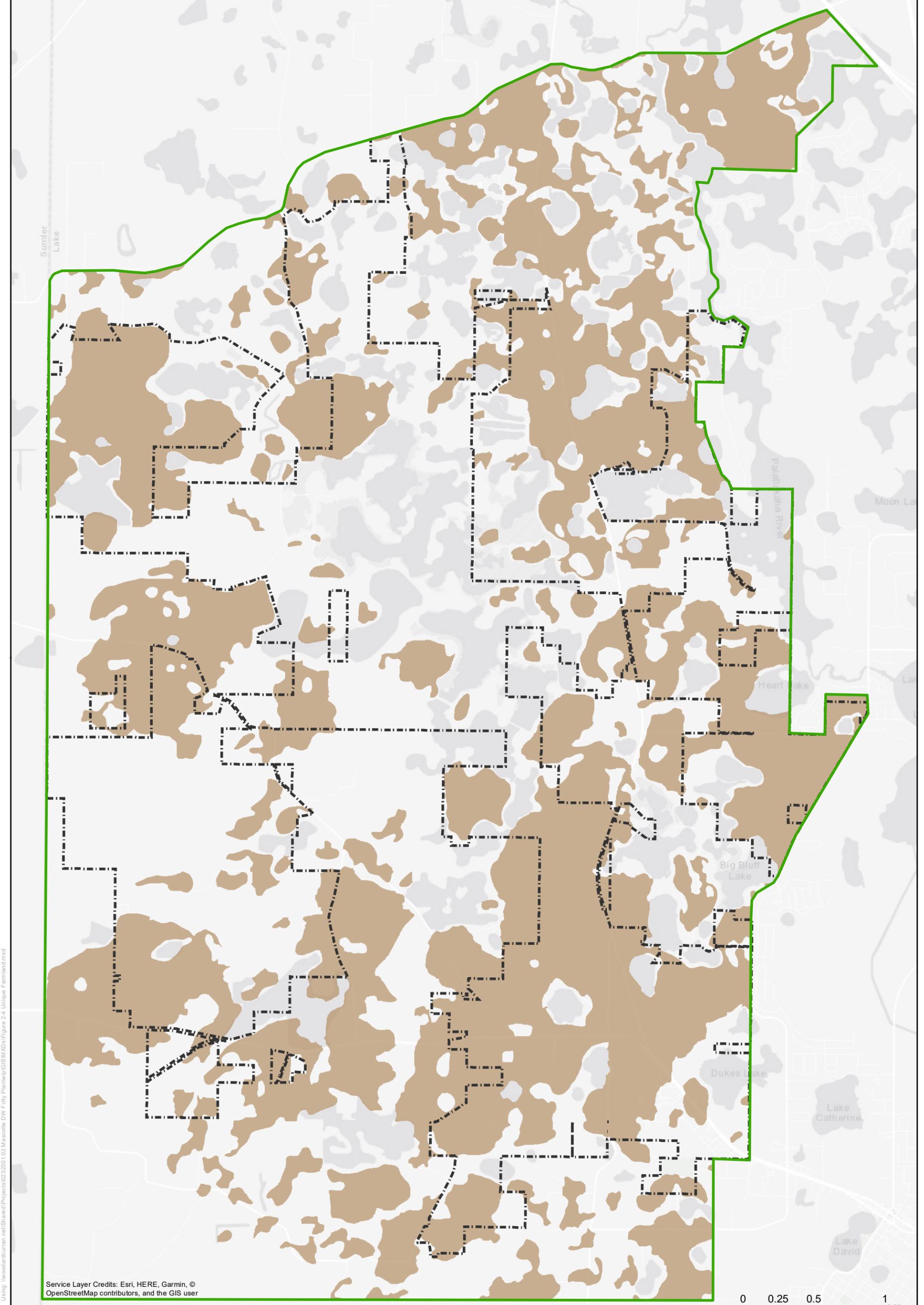
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2.1.7.2 Environmentally Sensitive Lands

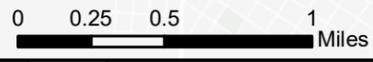
According to the United States Department of Agriculture Natural Resources Conservation Service, 39.5% of the planning area consists of farmland of unique importance, defined as land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Table 2-4 below provides in depth information on the farmland of unique importance within the area of interest. A map of the unique farmland can be seen in Figure 2-5. A map of the environmentally sensitive areas can be found in Figure 2-6.

Table 2-4: Farmland of Unique Importance

Soil Type	Percentage	Acreage
1) Sparr Sand, 0-5 Percent Slopes	5.5%	1,458 Acres
2) Sparr Sand, 5-12 Percent Slopes	0.1%	19 Acres
5) Apopka Sand, 0-5 Percent Slopes	5.4%	1,434 Acres
6) Apopka Sand, 5-12 Percent Slopes	2.3%	6144 Acres
8) Candler Sand, 0-5 Percent Slopes	13.9%	3,673 Acres
9) Candler Sand, 5-12 Percent Slopes	4.0%	1,047 Acres
30) Lochloosa Sand	0.2%	40 Acres
45) Tavares Sand, 0-5 Percent Slopes	8.1%	2,124 Acres
TOTAL:	39.5%	15,939 Acres



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Unique Farmland Map
 City of Mascotte, FL
Figure 2-5

Legend		Future Planning Area
		Mascotte City Limits
		Unique Farmland



N



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Project #: 0232301.03
 Map Created: July 2021

Figure Exported: 7/29/2021 By: cwallisch Using: Woodardcurran.net\Share\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-4 Unique Farmland.mxd

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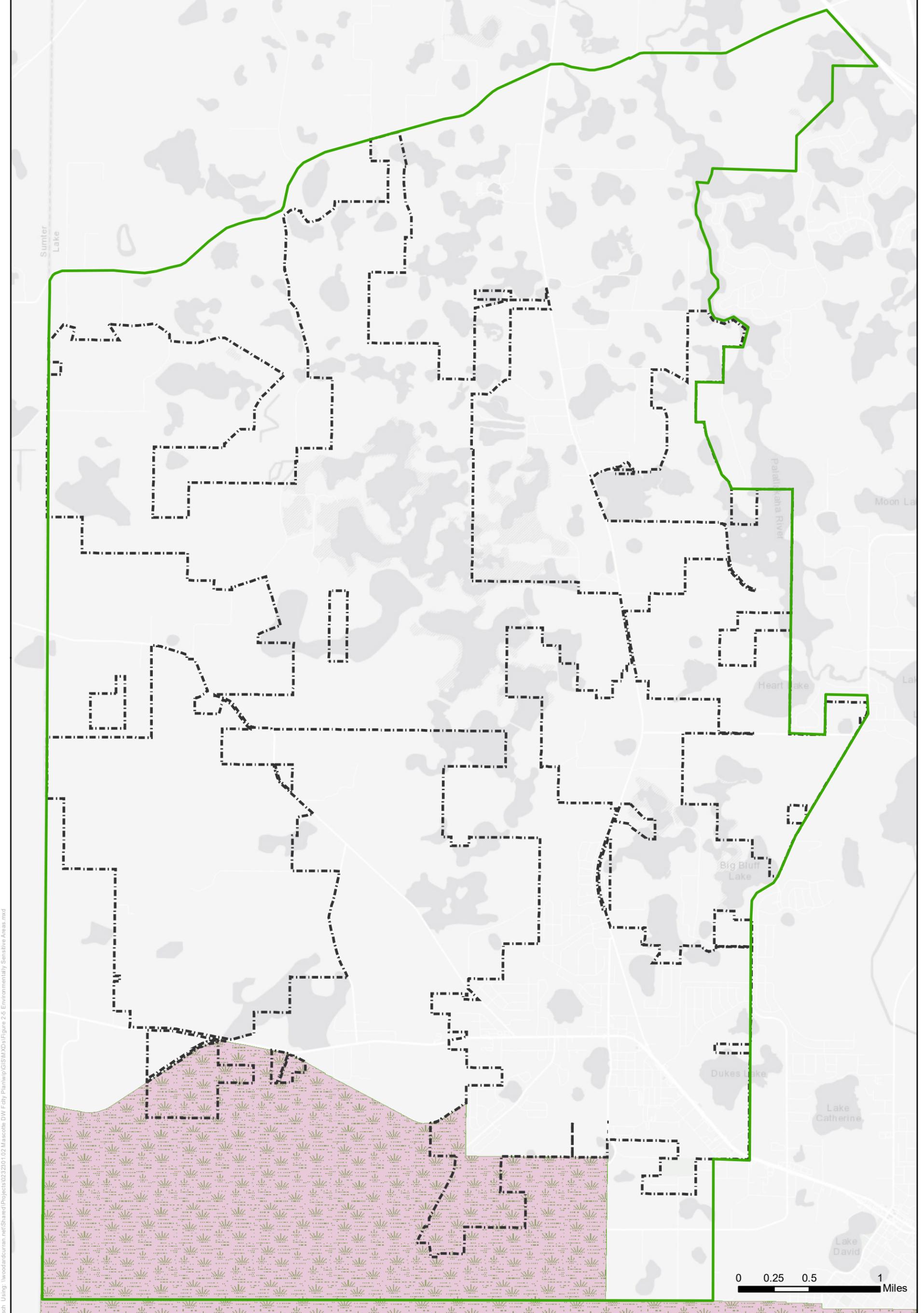


Figure Exported: 7/29/2021 By: cwallisch Using: \\woodardcurran.net\Share\Projects\0232301\02 Mascotte DW Fcity Plan\wp\GIS\SWDs\Figure 2-6 Environmentally Sensitive Areas.mxd

Environmentally Sensitive Areas

City of Mascotte

Figure 2-6

Legend

-  Future Planning Area
-  Environmentally Sensitive Areas
-  Mascotte City Limits
-  Green Swamps



Project #: 0232301.03
Map Created: July 2021

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2.1.7.3 Plant and Animal Communities

The United States Fish and Wildlife Service IPaC List includes sixteen (16) different species of birds, reptiles, flowering plants. No critical habitats were found within the planning area. These species are classified as candidate, proposed threatened, threatened, or endangered. Table 2-5 below shows the endangered species located in the planning area and the status of each one. Because the proposed project is to take place in previously disturbed areas, the project is not likely to adversely affect resources protected by the Endangered Species Act of 1973.

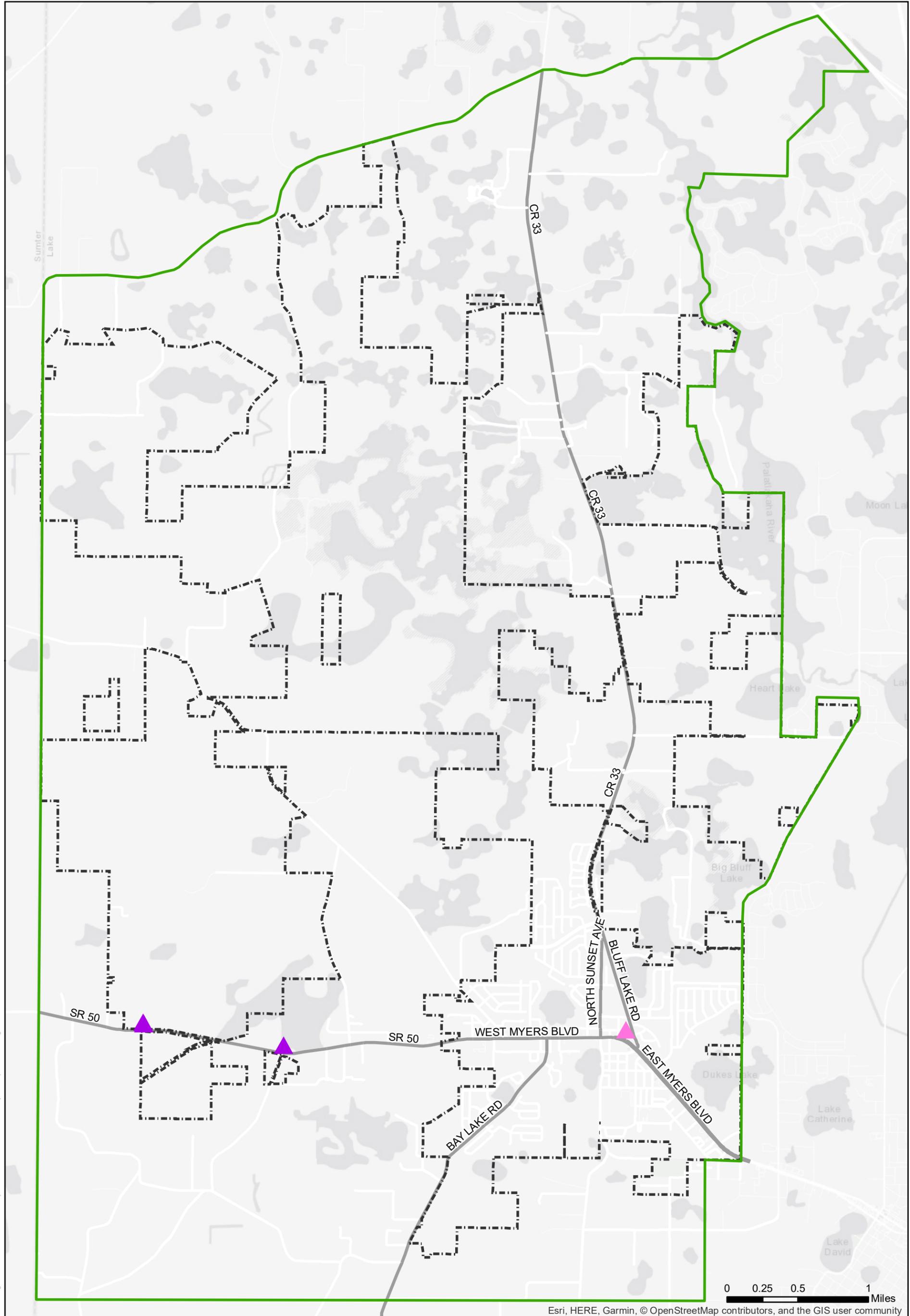
Table 2-5: Endangered Species List Within Planning Area

Category	Species Common Name	Species Scientific Name	Status
Birds	Eastern Black Rail	Laterallus Jamaicensis SSP. Jamaicensis	Threatened
	Everglade Snail Kite	Rostrhamus Sociabilis Plumbeus	Endangered
	Wood Stork	Mycteria Americana	Threatened
Reptiles	Eastern Indigo Snake	Drymarchon Corais Couperi	Threatened
	Gopher Tortoise	Gopherus Polyphemus	Candidate
	Sand Skink	Neoseps Reynoldsi	Threatened
Flowering Plants	Britton's Beargrass	Nolina brittoniana	Endangered
	Cooley's Water-Willow	Justicia cooleyi	Endangered
	Florida Bonamia	Bonamia grandiflora	Threatened
	Lewton's Polygala	Polygala Lewtonii	Endangered
	Papery Whitlow-wort	Paronychia Chartacea	Threatened
	Pigeon Wings	Clitoria fragrans	Threatened
	Pygmy Fringe-tree	Chionanthus pygmaeus	Endangered
	Scrub Buckwheat	Eriogonum longifolium var. gnaphalifolium	Threatened
	Scrub Plums	Prunus geniculata	Endangered
	Wide-leaf Warea	Warea amplexifolia	Endangered

2.1.7.4 Archeological and Historical Sites

According to the National Register of Historic Places Catalog, there are no historical or archaeological sites listed on the national register within the planning area. The proposed project will not have an impact on any historical or archaeological sites. A map of historical sites is provided in Figure 2-7.

Figure Exported: 7/29/2021 By: cwallisch Using: WoodardCurran.net\Share\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-6 Historical Sites.mxd



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Historical Sites Map
City of Mascotte
Figure 2-6

<i>Legend</i>	 Future Planning Area	National Register of Historical Places
	 Mascotte City Limits	 Structure (Eligible for National Historic Registry)
		 Structure (Potentially Eligible for National Historic Registry)

N



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Project #: 0232301.03
Map Created: July 2021

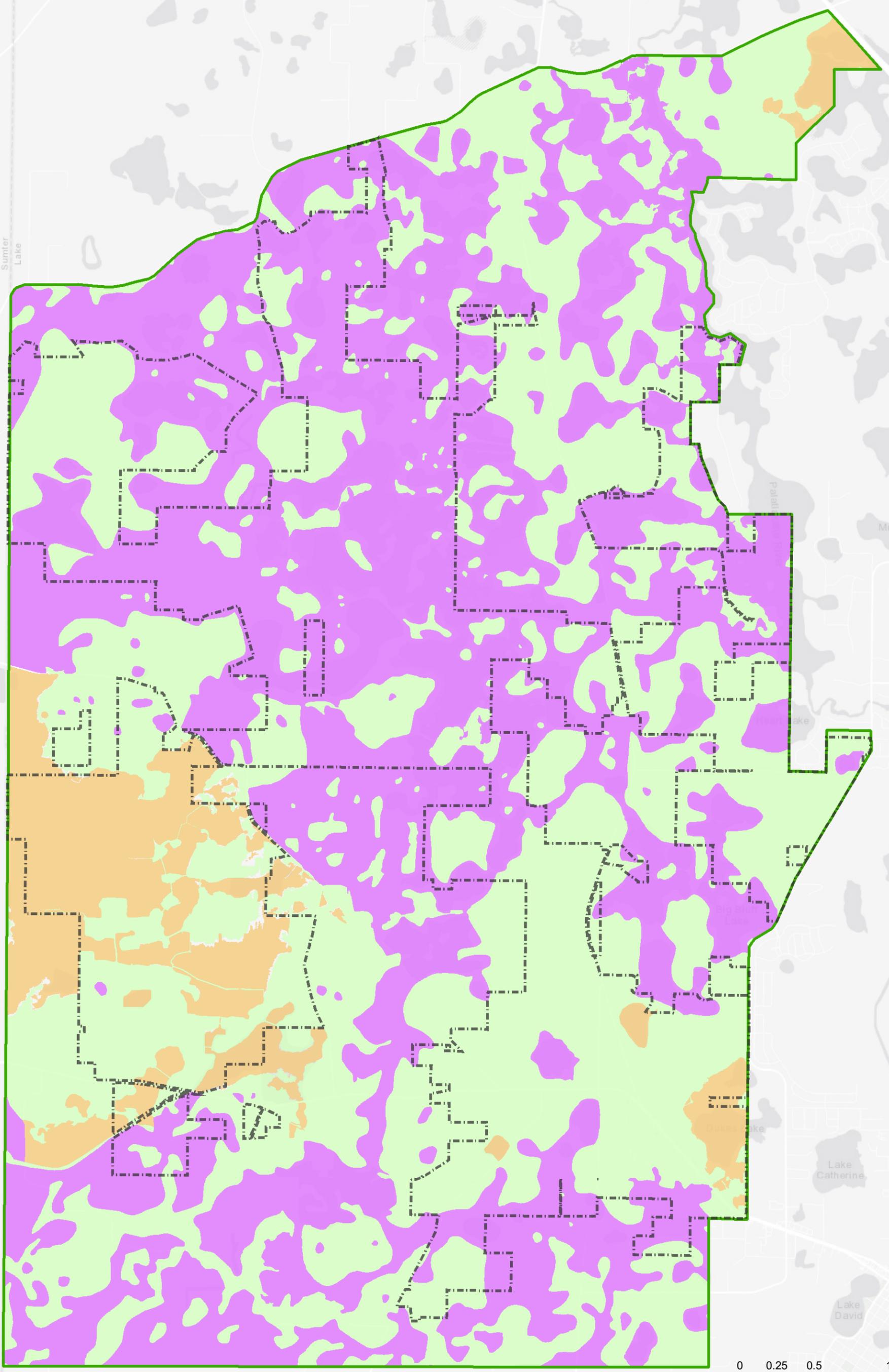
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2.1.8 Flood Plains

Flood zones for the planning area are designated in Figure 2-8. Flood plains are confined to wetlands and areas directly surrounding ponds and lakes. All flood zones in the planning area are categorized as Zone A, Zone AE or Zone X. The Federal Emergency Management Agency (FEMA) defines Zone A and Zone AE as areas subject to inundation by the one percent (1%) annual chance flood event, base flood elevations or flood depths have been determined for Zone AE but have not been determined for Zone A. Zone X are areas of minimal flood hazard and are determined to be outside the point two percent (0.2%) annual chance floodplain.

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Figure Exported: 7/28/2021 By: cwallisch Using: \\woodardcurran.net\Share\Projects\0232301.02 Mascotte DW Fclly Plan\wp\GIS\MapXDs\Figure 2-7 Flood Zones.mxd



Flood Zones

City of Mascotte
Figure 2-8

Legend		Flood Zones	
	Future Planning Area		A
	Mascotte City Limits		AE
			X

0 0.25 0.5 1 Miles

N



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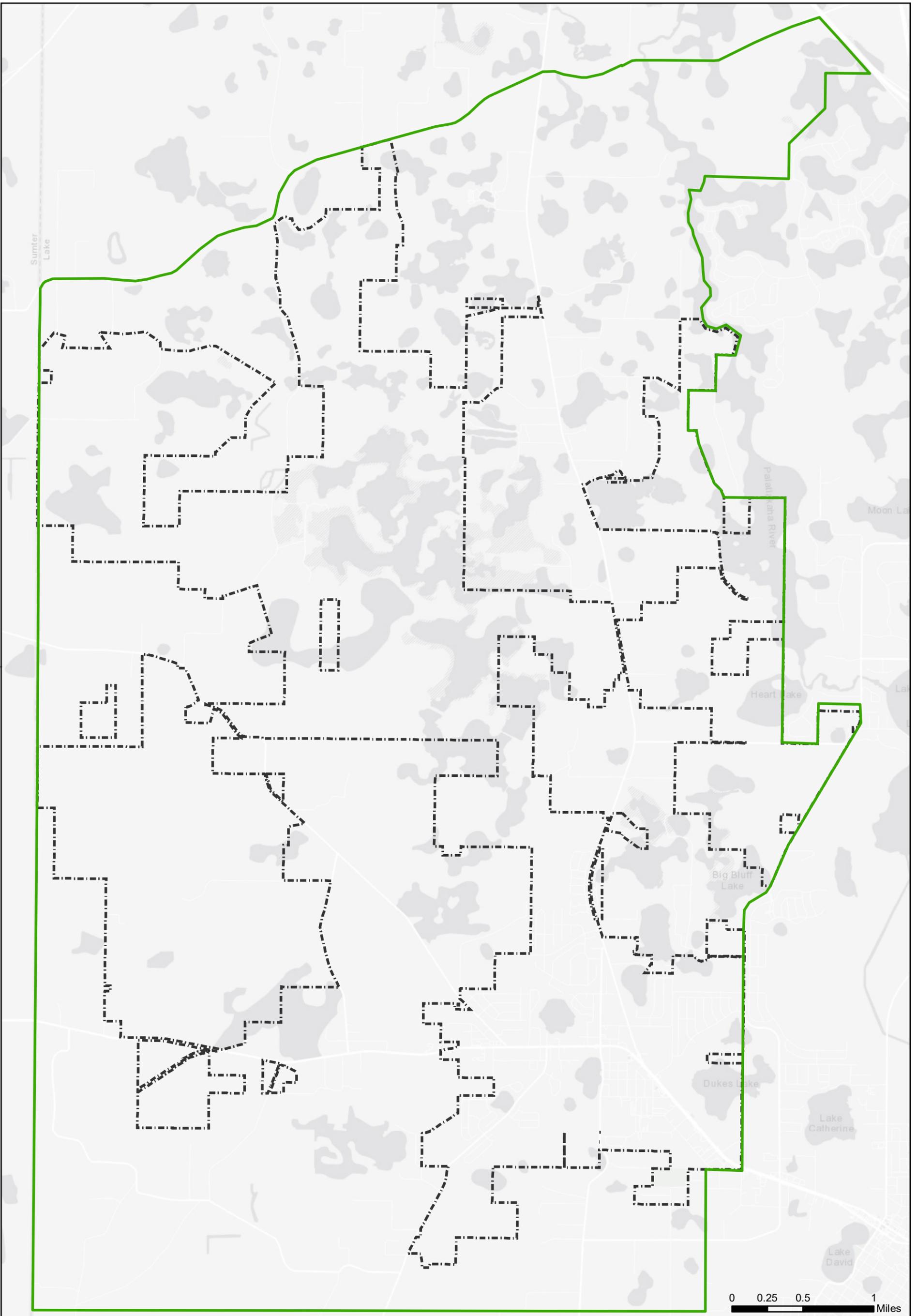
2.1.9 Air Quality

In 2019 the Lake County Air Quality Index was rated “Good” for 326 days of the year and only one day classified as “unhealthy for sensitive groups.” According to FDEP, Lake County is classified as an area of attainment with respect to the National Ambient Air Quality Standards for Ozone. No other criteria air pollutants are monitored in this area. There is no major source of emissions and five (5) minor sources of emissions permitted by FDEP in the planning area, shown in Figure 2-9.

The City of Mascotte plans to follow all Clean Air requirements set by the Florida Department of Environmental Protection. Project activities will be monitored by the Florida Department of Environmental Protection. Emissions from construction vehicles during construction is the only effect on air quality that is anticipated. Construction is anticipated to last twenty-four (24) months. All project activities will be monitored by the FDEP. There are no anticipated long-term environmental consequences in regard to air quality.

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Figure Exported: 7/29/2021 By: cwallisch Using: WoodardCurran.net\Share\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 2-8 Permitted Air Facilities.mxd



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Active Air - Permitted Facilities
City of Mascotte
Figure 2-9

<i>Legend</i>	 Mascotte City Limits	 Active Air Permitted Facility
	 Future Planning Area	 Minor Source

N



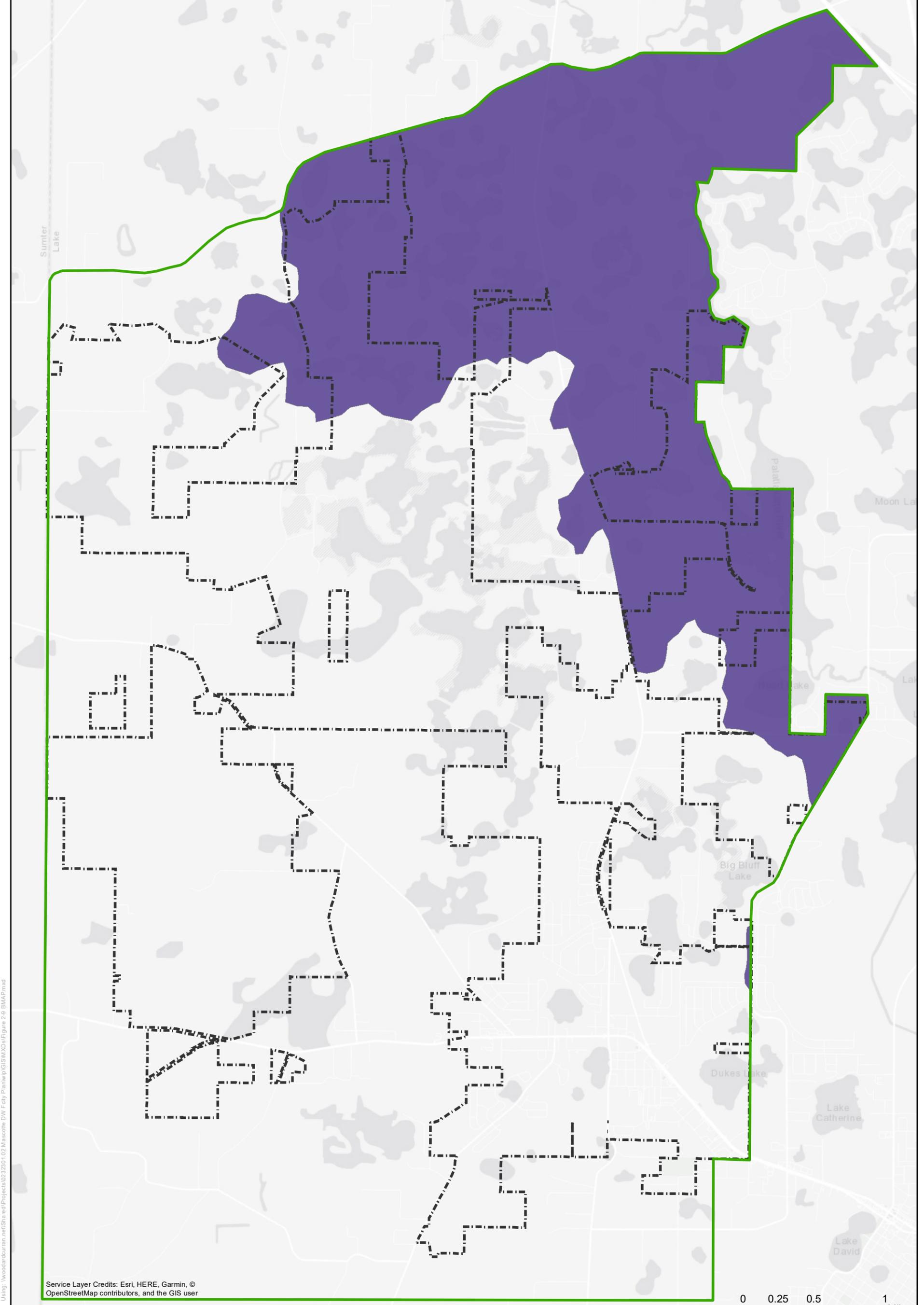
Project #: 0232301.03
Map Created: July 2021

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2.1.10 Upper Ocklawaha Basin Management Action Plan

Adopted in 2014, The Phase 2 Upper Ocklawaha Basin Management Action Plan (BMAP) identified the Palatlahaha River as one of five priority water bodies in the basin that would not meet their total maximum daily loads (TMDLs) without additional effort and management strategies. A common BMAP restoration strategy is implementing wastewater system infrastructure improvements. The BMAP presents the allocations or assignment of loading reductions for developed urban land uses and septic systems (within 200 meters of waterbodies) for the priority waterbodies. The focus of the Upper Ocklawaha BMAP is to reduce the loading of total phosphorus (TP), which is the primary pollutant contributing to the impairment of the five priority waterbodies and 2017 adopted TMDLs. In the Palatlahaha River, Total Nitrogen (TN) contributes to the problem, and biochemical oxygen demand (BOD) was also identified as a pollutant contributing to the impairment in the Palatlahaha River. Although the BMAP currently focuses exclusively on TP, the restoration activities under the BMAP are also expected to result in reductions in TN and BOD. Pounds of TP per year net estimated load for the Palatlahaha River is two thousand seven hundred seventy-nine (2,779). With a Total Maximum Daily Load of two thousand two hundred seven (2,207), required total phosphorus loading reduction to meet TMDL is five hundred seventy-two (572). Adopted BMAP areas within the planning area are provided in Figure 2-10.

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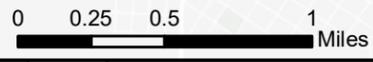


Figure Exported: 7/29/2021 By: cwallisch Using: woodardcurran.net\Share\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\XDOs\Figure 2-9 BMAP.mxd

**Basin Management
Action Plan Area
(BMAP)**
City of Mascotte, FL
Figure 2-10

<i>Legend</i>	 Future Planning Area	 Adopted BMAPs
	 Mascotte City Limits	



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2.2 Socio-Economic Conditions

2.2.1 Population and Anticipated Growth

The population of Mascotte is concentrated in rural areas; 79% of the population of Mascotte lives in an urban area and 21% reside in areas that are considered rural. Urban areas are defined as locations of population densities greater than 2,500 inhabitants per square mile. All territory outside urban places, regardless of population density, are considered rural. Mascotte does not have a large transient population like many other areas within Florida, as most residents live there year-round. According to the U.S. Census American Community Survey (ACS) which is updated annually, it is calculated that 78.0% of houses are owner-occupied. Current census data, 2010, for the service area corresponds to census tracts, 312.02, 312.03, 312.04, and 312.05, as shown in Figure 2-11 and summarized in Table 2-6.

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Table 2-6: Census Data Summary

Population, April 1 st , 2010	5,089
Land Area in square miles, 2010	11.38
Owner-occupied housing unit rate 2015-2019	78.0%
Households, 2015-2019	1,669
Persons per household, 2015-2019	3.43
Median household income (in 2019 dollars) 2015-2019	\$43,544
Persons in poverty, percent	26.5%

Data from United States Census Bureau

The identified service area population data demonstrates a total of 5,089 of which 26.5% are considered poverty income level. The persons per household average is 3.43 which demonstrates 394 households that fall within the poverty level threshold. The minority population is estimated at 20% of the total population.

It is expected that the proposed project will have no adverse effect on poverty demographics or minority individuals located within the service district. The project will predominantly occur within disturbed rights-of-way and on disturbed property that will have no significant impact. No additional impacts to minorities or low-income households outside of previously disturbed property are expected. Safe, reliable, and accessible potable water supply and sanitation services is critical to the greater population's public health. The proposed project addresses water quality, treatment, and services throughout the district. Identified improvements incorporated in this plan address a twenty-year planning period and provide continuous public service to insure no adverse effects on human health.

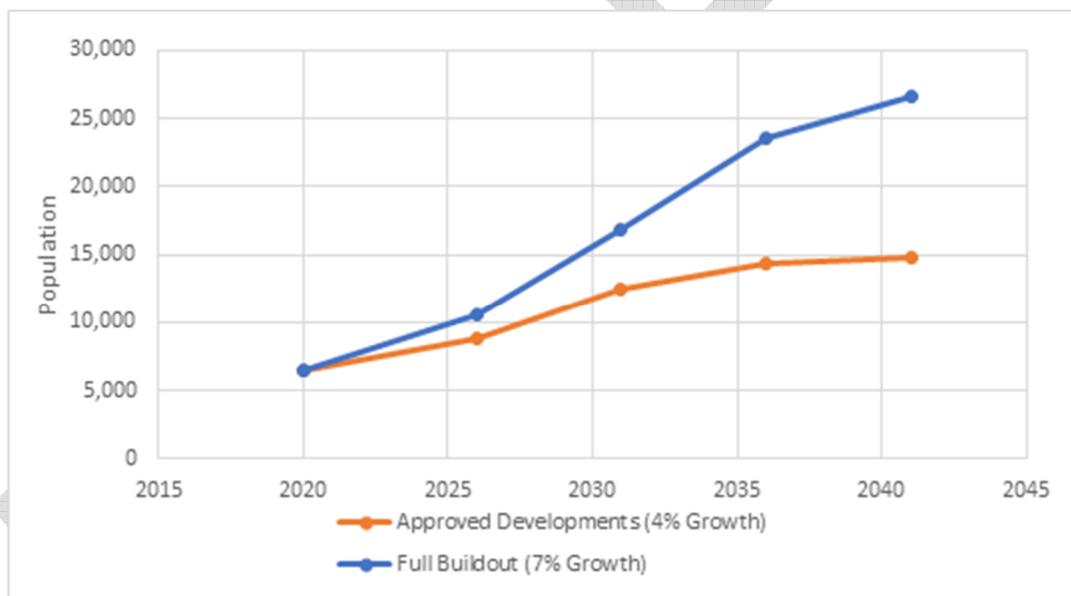
The population projection for the 2021-2041 planning period in five-year increments, is based on population projections from the University of Florida Shimberg Center for Affordable Housing, Bureau of Economic and Business Research (BEHR), and the U.S. Census ACS. Since population projection BEBR data is only available at the county level, the high projected growth rates for Lake County were evaluated against the BEBR 2020 estimate for Mascotte of 6,447 and the projected population based on future developments. More specifically, when completing the population projection, the City analyzed all developments with approved and pending Developer Agreements, as well as those with Developer Agreements in progress. Table 2-7 and Figure 2-12 reflect the City's population projections for the 2021 to 2041 planning period.

Table 2-7: Population Projections per Lake County High Growth

Projection	2021	2026	2031	2036	2041	% Growth Rate (over 20 years)
Lake County High Growth Population Projections ¹	384,400	440,400	496,700	546,800	593,400	2.2%
Mascotte Partial Growth Population Projection ²	6,447	8,824	12,408	14,439	14,785	4.2%
Mascotte Full Growth Population Projection ³	6,447	10,556	16,884	23,511	26,602	7.3%

1. Data from University of Florida Shimberg Center for Affordable Housing, Bureau of Economic and Business Research
 2. Based on growth realized from Approved Developments. Population projection based on planned residential developments expected to be constructed by 2041. See Section 2.2.1.1.1 for more detail. Populations estimated based on 3.43 persons per household.
 3. Based on growth realized from Proposed, Pending and Approved Developments. Population projection based on planned residential developments expected to be constructed by 2041. See Section 2.2.1.1.1. for more detail. Populations estimated based on 3.43 persons per household.

Figure 2-12: Projected Population Growth



2.2.1.1 Residential

The City currently has 2,067 metered residential connections to the water system. There are nine planned residential developments that will need to be connected to the water system. Connecting these subdivisions to the City’s water system will increase the demand for water.

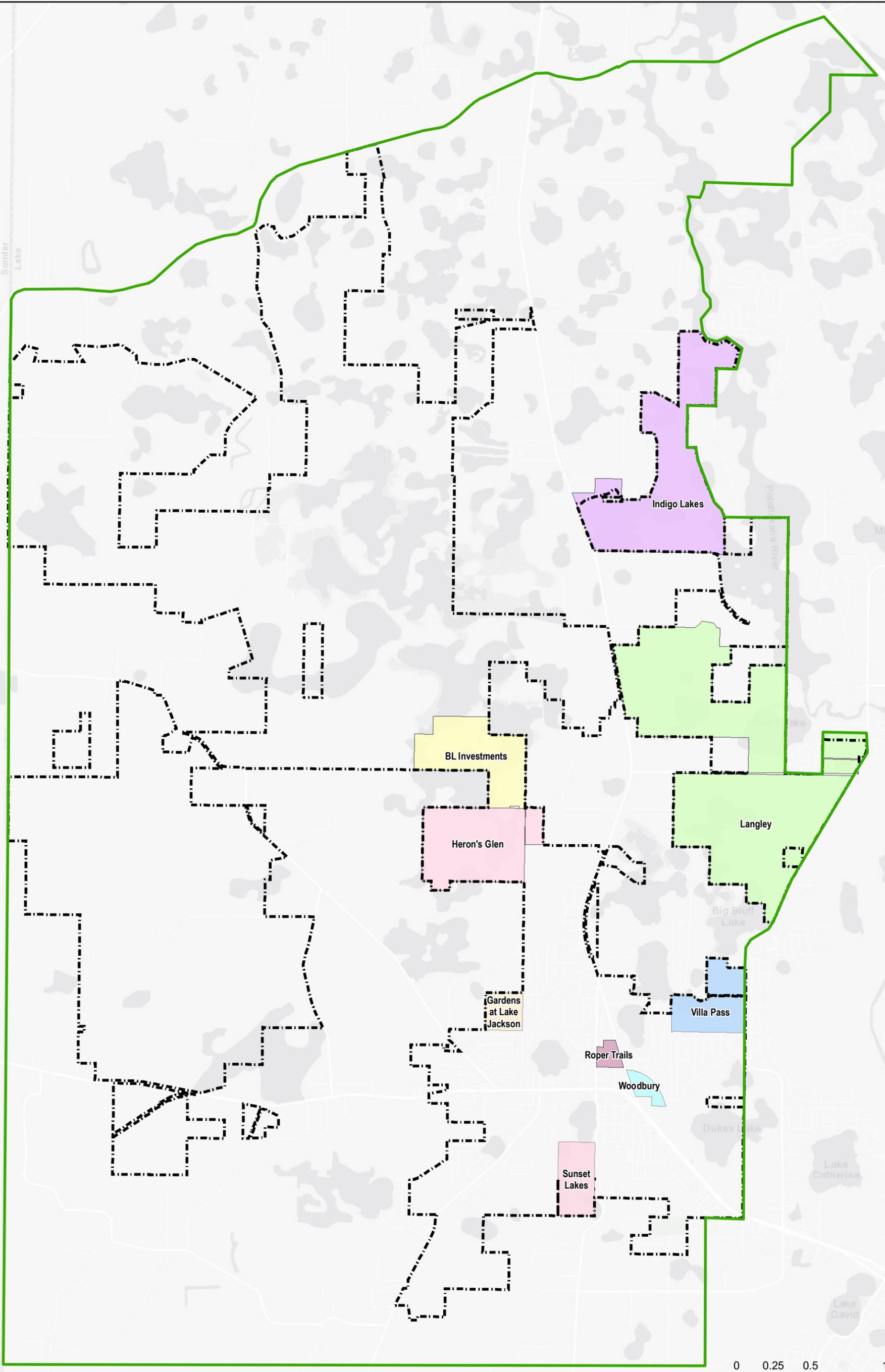
2.2.1.1.1 Planned Developments

The planned developments are either currently in construction, have an approved developer's agreement, or have a pending developer's agreement. The number of units for each development were either provided by City staff or obtained from developer agreements. The list of planned developments is provided in Table 2-8 below and shown on Figure 2-13.

Table 2-8: Planned Residential Developments

Development Name	Proposed Number of Units	Developer Agreement Status
Heron's Glen	999	Approved & Recorded
Indigo Lakes (River Meadows)	794	Approved & Recorded
Roper Trails	75	Approved & Recorded
Sunset Lakes Estates	134	Approved & Recorded
Woodbury	78	Approved & Recorded
Villa Pass	351	Approved, Pending Recording
BL Investments	540	No Application
Gardens at Lake Jackson Estates (KB Homes)	60-150	No Application
Langley Property	2800	No Application

Figure Exported: 7/29/2021 10:58:00 AM Using: WoodardCurran.net\Share\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MapXDs\Figure 2-10 Planned Developments.mxd



Planning Area

City of Mascotte
Figure 2-13

Legend

-  Future Planning Area
-  Heron's Glen
-  Sunset Lakes Estates
-  BL Investments
-  Mascotte City Limits
-  Indigo Lakes
-  Woodbury
-  Gardens at Lake Jackson
-  Roper Trails
-  Villa Pass
-  Langley



Project #: 0232301.03
Map Created: July 2021

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2.2.1.2 Non- Residential

The Indigo Lakes development has identified approximately 150,000 square feet of commercial development. No other commercial uses, both existing and planned, have been identified within the planning area.

2.2.2 Land Use and Development

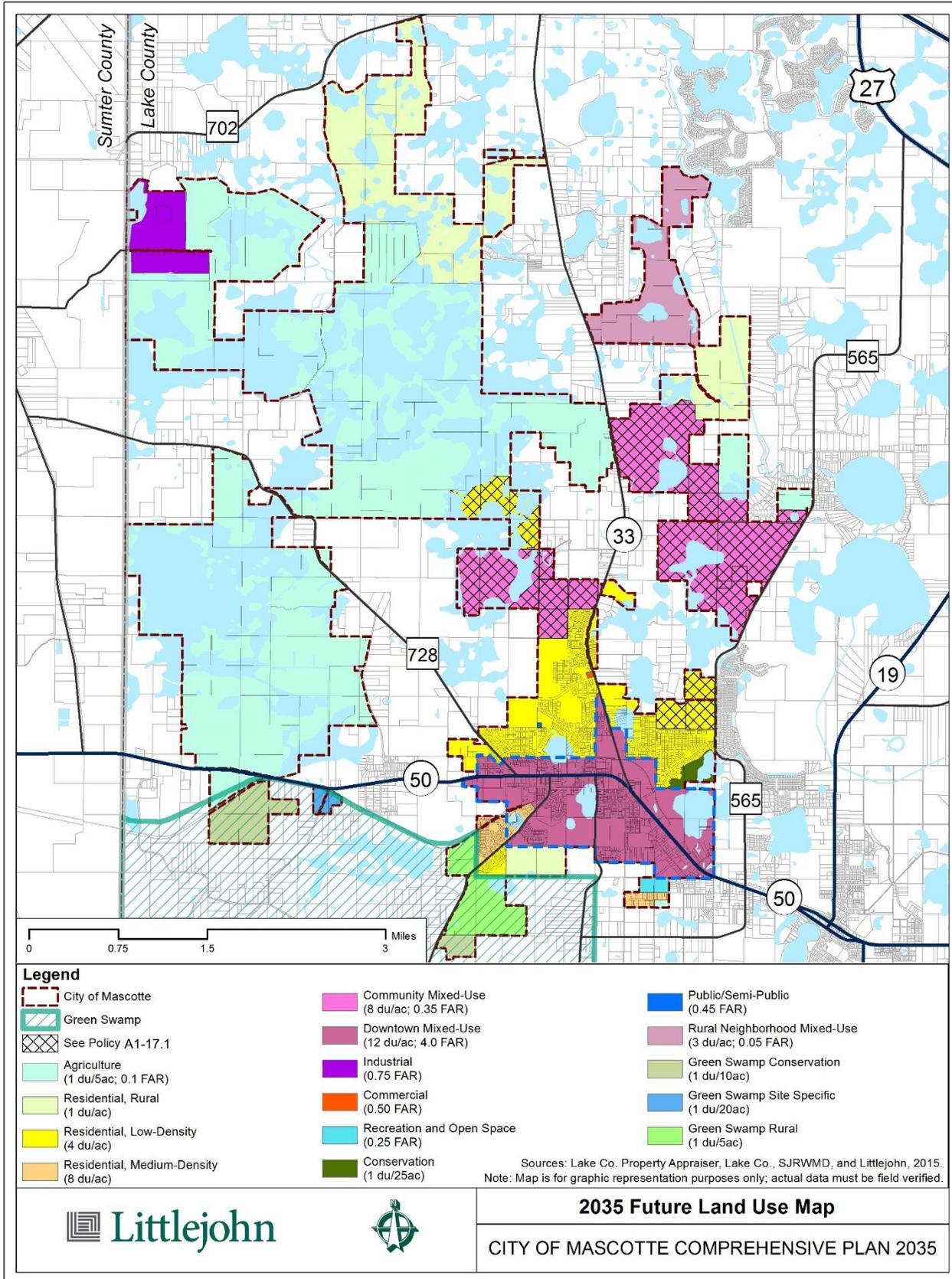
The western and northern portions of the planning area consist of mostly undesignated land, comprised of agricultural and wetlands. The middle of the planning area is made up of planned residential and mixed use, while the southeastern portion includes the existing downtown area with a mix of low-density residential, commercial, planned residential and mixed use. See the land use map in Figure 2-14. Residential and commercial development is expected to continue throughout the planning area.

DRAFT

Figure 2-15: Future Land Use

City of Mascotte Comprehensive Plan - Goals, Objectives and Policies

MAP A - 1: FUTURE LAND USE MAP



2.3 Description of Existing Water System

The water system in the City is comprised of a potable water system and a clean water system. This Facilities Plan includes a detailed description of the potable water system. A description of the clean water system can be found in the Clean Water Facilities Plan.

The Mascotte potable water system includes two water treatment plants, referred to as the Knight Street and Midway Avenue Water Treatment Facilities, for the streets that they are located on. The Midway facility has not been in operation since 2017. The Knight Street Water Treatment Plant pumps to the City's water distribution system that includes the Elizabeth Street elevated water storage tank.

2.3.1 Potable Water Distribution System

The City's potable water system is comprised of two treatment plants in total, that serve a distribution system with a single pressure zone. The newer and larger of the two treatment plants is the Knight Street Water Treatment Plant and consists of one 200,000-gallon ground-storage tank, three 500 gallon per minute (GPM) high service pumps, chlorine gas disinfection, and iron and manganese sequestration and corrosion control. The older and smaller of the two treatment plants is the Midway Avenue Treatment Plant. Both treatment plants are located on the south side of SR-54, about one half-mile apart. The plants are connected to a common water distribution system. The Florida Department of Environmental Protection (FDEP) has established the combined permitted capacity of treatment plants as 1.475 MGD on an average annual daily basis. The distribution system consists of a 150,000-gallon elevated storage tank (EST), the Elizabeth Street Tank for storage during distribution. Well production is based on water surface elevation at the Elizabeth Street storage tank and water is pumped from the Knight Street ground storage tank by three 500 GPM high service pumps to provide and maintain system pressure. See Figure 2-15 for an overview map of the existing water distribution system.

2.3.1.1 Productions Wells & Consumptive Use Permit

All three UFA wells are combined in one consumptive use permit (CUP) issued by the St Johns River Water Management District (SJRWMD). The current CUP allows an annual average daily withdrawal of up to 0.70 MGD from the UFA, and up to 0.3 MGD from the Lower Floridan Aquifer, for a combined 1.0 MGD in total. The City can request to increase the permitted capacity for an additional withdrawal from the UFA by 0.2 MGD. Two new LFA wells have been permitted at the Knight Street site (129641 and 129642) and plans to install the new wells are in progress. The two new LFA well sites have a permitted pumping capacity of approximately 2,000 GPM each.

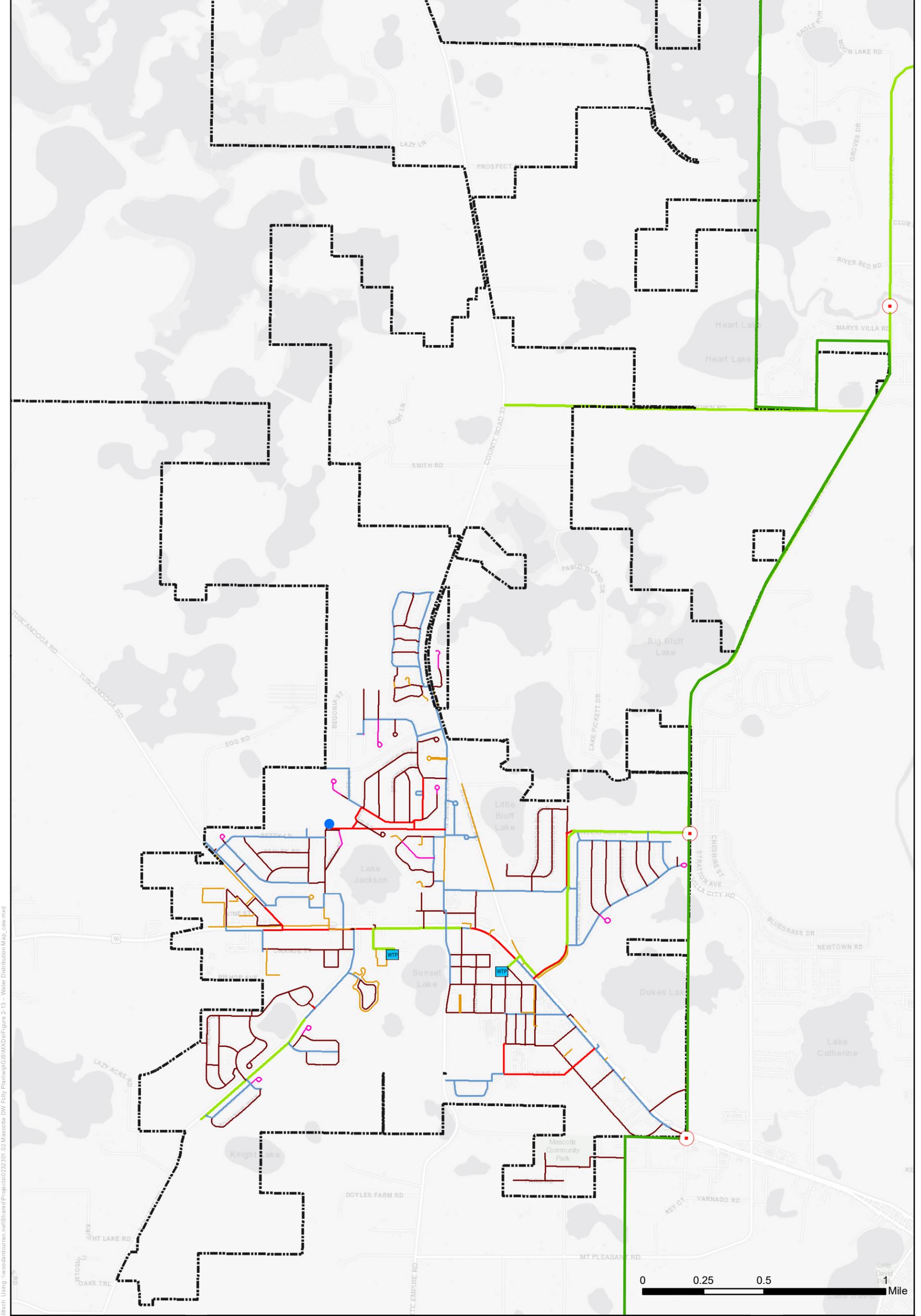


Figure Exported: 7/29/2021 By: cwallisch Using: \\woodardcurran.net\Share\Projects\0232301_02 Mascotte DW Fcity Plan\wpGIS\MXDs\Figure 2-13 - Water Distribution Map_caw.mxd

Water Distribution System Map
City of Mascotte
Figure 2-2

Legend	
●	Water Storage Tank
WTP	Water Treatment Plants (WTP)
◻	Mascotte-Groveland Interconnection
—	2-in Water Main
—	4-in Water Main
—	6-in Water Main
—	8-in Water Main
—	10-in Water Main
—	12-in Water Main
◻	Future Planning Area
◻	Mascotte City Limits

N

WOODARD & CURRAN

Project #: 0232301.02
Map Created: July 2021

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2.3.1.2 Midway Avenue Production Wells & Water Plant

The Midway Avenue water plant is located at the southwest corner of Midway Avenue and Thomas Street, south of SR-50. It was built in the 1950's and is located on a 0.37-acre site. There is one production well at Midway Avenue that pumps from the UFA (Well 2b – 105692). Although Well 2b is not active, it is pumped to waste and sampled monthly for bacterial levels. The permitted maximum day capacity of this treatment facility is 0.252 MGD. Raw groundwater from the well is chlorinated with chlorine gas in an in-line manner as it is pumped into the distribution system. The previous elevated tank at the Midway Avenue Plant was demolished in 2017, and as mentioned previously, the Midway Avenue WTP has been out of service since. There are no backup power facilities at this plant site.

2.3.1.3 Knight Street Production Wells & Water Plant

The Knight Street production wells and treatment plant are also located south of SR-50, southeast of the intersection of Howards Avenue and Knight Street. There are two production wells at Knight Street that pump from the UFA (Well 1 - 19797 and Well 2 – 19798). The Knight Street plant was built in the early 1980's and is located on a 1.63-acre site. The permitted maximum day capacity of this plant is 1.223 MGD. Raw groundwater from the two on-site wells is pumped directly to the plant's ground storage tank (GST). The high service pumps withdraw water from the GST and treatment consists of chlorination with chlorine gas and addition of sequestering agent for managing iron and manganese and subsequent pumping into the distribution system. The plant is equipped with an on-site emergency generator.

2.3.1.4 Elizabeth Street Elevated Storage Tank

The City's Elizabeth Street EST can store 150,000 gallons and is located north of SR-50 at the north end of Elizabeth Street. The tank is connected to the distribution system to aid in demand management and reserve water supply for the water system. The high service pumps at the Knight Street WTP turn on and off based on water level set-points in the tank.

2.3.1.5 SCADA

The City of Mascotte currently has a proprietary SCADA system known as Data Flow Systems (DFS). However, the system is outdated, and the City has reported issues regarding reliability and malfunctions during storm events. A single computer located at the City's Knight Street Water Treatment Plant is used by operators to monitor both wastewater and potable water systems.

There are three plant control panels, a communication panel located in the lab and a master control panel located in the pump room of the WTP and a master telemetry panel located at the antenna tower. The Knight Street plant equipment is controlled automatically via the master control panel off local instrumentation. An elevated tank (Elizabeth Street) level indication is messaged to the master control panel via the telemetry master panel to start and stop the pumps, there is a redundant pressure transducer than can be used to run the system during a communication failure. The plant and remote communication are managed through the communications panel in the Lab, where the SCADA computer is located.

The existing system does not provide detailed alarms. When SCADA does provide an alarm, operators do not know what the alarm means until they manually assess the status of the water system. The SCADA system is not connected to any flow meters and all flow readings must be recorded manually. The existing

monitoring and alarming software is deployed on the same operator machine with no redundant backup system. Operators have no ability to allow secure remote access for authorized support personnel to fix minor issues.

Furthermore, the existing SCADA computer is an obsolete model running an out of date version of Windows 7 operating system that makes the SCADA system susceptible to cyber threats. The existing proprietary software HT4 is an older offering from DFS. Additions, modifications, service and repair must be done through DFS. Comparable non open platform system such as VTSCASDA or Factory Talk Site Edition can be serviced by multiple providers throughout Florida. A single SCADA node is not sufficient for plant redundancy, with only one PC running SCADA software a computer failure would result in a loss of historical data, alarm notification, monitoring and control of the system.

Additions or modifications to the system can only be done by a single solution provider, limiting the City’s ability to get competitive bids and pricing on equipment and services. The existing system will not be easily programmed to work with other technologies such as an asset management system, automated reporting packages or alarm notification systems. The existing equipment is at the end its usable life and some equipment failures have already occurred and have not been addressed by the sole provider in a timely manner. System failures will increase in frequency and severity as the system ages. A major system failure increases the risk to the utility and residents.

2.3.1.6 Water Distribution Piping

Mascotte’s water distribution system consists of approximately 28 miles of water mains, 2-inch to 12-inch in diameter. Most of the water mains are 6 to 8-inch in diameter and PVC, with some ductile and cast-iron pipe. The system has two emergency water connections with the City of Groveland: one 8-inch connection along SR-50 and one 12-inch connection along Villa City Road. Measured pressures in the distribution system range from 45 pound per square inch (psi) to 85 psi. See Table 2-9 for a summary of the distribution system pipes by diameter.

Table 2-9: Distribution System Pipe Diameter

Diameter (in)	Length of Pipe (ft)	Length of Pipe (mi)	Percent of System
< 2	847	0.16	0.4%
2	24,957	4.73	10.4%
4	5,543	1.05	2.3%
6	91,108	17.26	38.1%
8	56,111	10.63	23.5%
10	15,355	2.91	6.4%
12	45,259	8.57	18.9%
Total	239,180	45.30	100%

While the available records show that the distribution mains do not contain lead or copper piping, the material for goosenecks and service lines have not been confirmed by Woodard & Curran. The Lead and Copper Rule Revisions (LCRR) require all water systems to develop a publicly available inventory of all lead service lines (LSL) or to demonstrate their absence and to develop a plan to replace all LSLs in their system by October 16, 2024. Per the Revisions, lines of unknown material are presumed to be lead until identified otherwise. The plan must include procedures for full LSL replacement, procedures to notify consumers prior to a full or partial LSL replacement, and a funding strategy that provides financial assistances to customers who wish to replace their LSL portion but are unable to pay for it.

2.3.2 Water Conservation

Individual water meters are used throughout the City. Utility consumers are billed based upon metered consumption. The City publishes information on water conservation tips for both in the home and irrigation use on the City's website. Saint John's River Water Management District (SJRWMD) has instituted irrigation rules to conserve water. The irrigation rules designate which days each home can irrigate, limits the times in which irrigation can occur, and the quantity of water that can be used. Violation of these irrigation rules are enforceable with fine(s) for the property owner.

The City has outlined its objectives and policies for water conservation in the City of Mascotte Comprehensive Plan, Objective E1-4, effective February 27, 2017, Appendix L. The objective is to maintain initiatives to conserve potable water resources, which ensure that existing level of service standards for potable water (106 gpcpd as indicated in Policy C1-3.5) do not fluctuate higher than twenty (20) gallons per day. The objective is maintained through Policies E1-4.1 through E1-4.10 as follows:

- E1-4.1:** Maintain an inverted water rate structure to ensure conservation of potable water and to provide an incentive for the use of treated wastewater for irrigation purposes should the City choose to implement a central sewer system.
- E1-4.2:** Whenever possible and feasible, and in cooperation with the cities of Leesburg and Groveland through existing interlocal agreements, the City will establish and maintain a reclaimed wastewater effluent program whereby wastewater is treated to standards consistent with Florida Department of Environmental Protection (FDEP) requirements for "unrestricted public access" irrigation of private and public areas, so that potable water is not used for irrigation in areas where reclaimed water is available for such irrigation.
- E1-4.3:** The City shall maintain specific requirements for the use of low consumption plumbing devices in the Code of Ordinances.
- E1-4.4:** The City shall adhere to St. Johns River Water Management District emergency water shortage restrictions when mandated by the District.
- E1-4.5:** The City shall require fifty (50) percent of the required landscaping area, as indicated in the Land Development Code, be drought tolerant plant materials.
- E1-4.6:** The City shall maintain a leak detection program in order to discover and eliminate wasteful losses of potable water from the City's central water supply and distribution system.
- E1-4.7:** The City shall explore all financially feasible alternative water supply options that can be implemented by the City.
- E1-4.8:** The City shall use all available lower quality sources of water in place of higher quality sources for landscape irrigation when technically, economically, and environmentally feasible.
- E1-4.9:** The City shall participate in water conservation public information programs and shall encourage the use of water conserving plumbing fixtures and drought-resistant native vegetation for landscaping.
- E1-4.10:** The City shall encourage the use of low impact development (LID) principles to minimize impacts to the nature environment and facilitate water conservation.

2.3.3 Performance of Existing Water System

The existing WTPs have both adequately and consistently treated the UFA source water. Currently the Midway Avenue Plant is not in operation. However, the WTPs, in their current state, do not have the capacity to meet the projected demand for 2041, as all the City's active supply wells draw from the UFA and the CUP limits withdrawal from the UFA. The treatment facility at Midway Avenue will need improvements prior to being brought back into service due to the age and reconfiguration of the facility with the recently demolished storage tank.

The three high service pumps at the Knight Street Water Treatment Plant were replaced in June 2009. Operationally, one pump serves as the lead pump, the second pump as the lag pump that comes on during periods of high demand with the third pump on stand-by during normal operations. The facility operates two pumps at a time, with the third for pumping redundancy. The pumps run continuously during the dry season, typically November to April. The pumps run at fixed speed and currently do not have variable frequency drives (VFD), and as a result the pumps frequently turn on and off to meet system demand. The City plans to install new VFDs by end of 2021.

The distribution system appears to be in good condition, although some leaks and water main breaks are reported to occur throughout the system each year, with no notable trends. Historically, there were a significant amount of water main breaks in the areas around SR-50. However, the City has since upgraded the water main on SR-50 and resolved the issue of frequent breaks. During times of high-water demand, like a water main break, the residual system pressure drops significantly. This is likely due to a lack of adequate storage to consistently meet system demand.

Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (EPA) has developed revisions to the Lead and Copper Rule. The water system is performing adequately with respect to the Lead and Copper Rule Revisions (LCRR). The 2020 Annual Drinking Water Quality Report from the City shows that the P90 copper concentration is below the Allowable Limit (AL) of 1.3 ppm. W&C assumes that the system has not exceeded the LCRR ALs for at least three years because current monitoring frequency is on a triennial basis (i.e., the system meets the criteria for reduced monitoring frequency under the Rule). Since the system has been in compliance with the lead and copper ALs during at least two consecutive six-month tap sampling monitoring periods, it is deemed to have optimal corrosion control under the original LCR and it is not required to re-optimize under the LCRR because the P90 lead level does not exceed either the trigger limit (TL) and AL.

2.3.3.1 Hydraulic Model Analysis

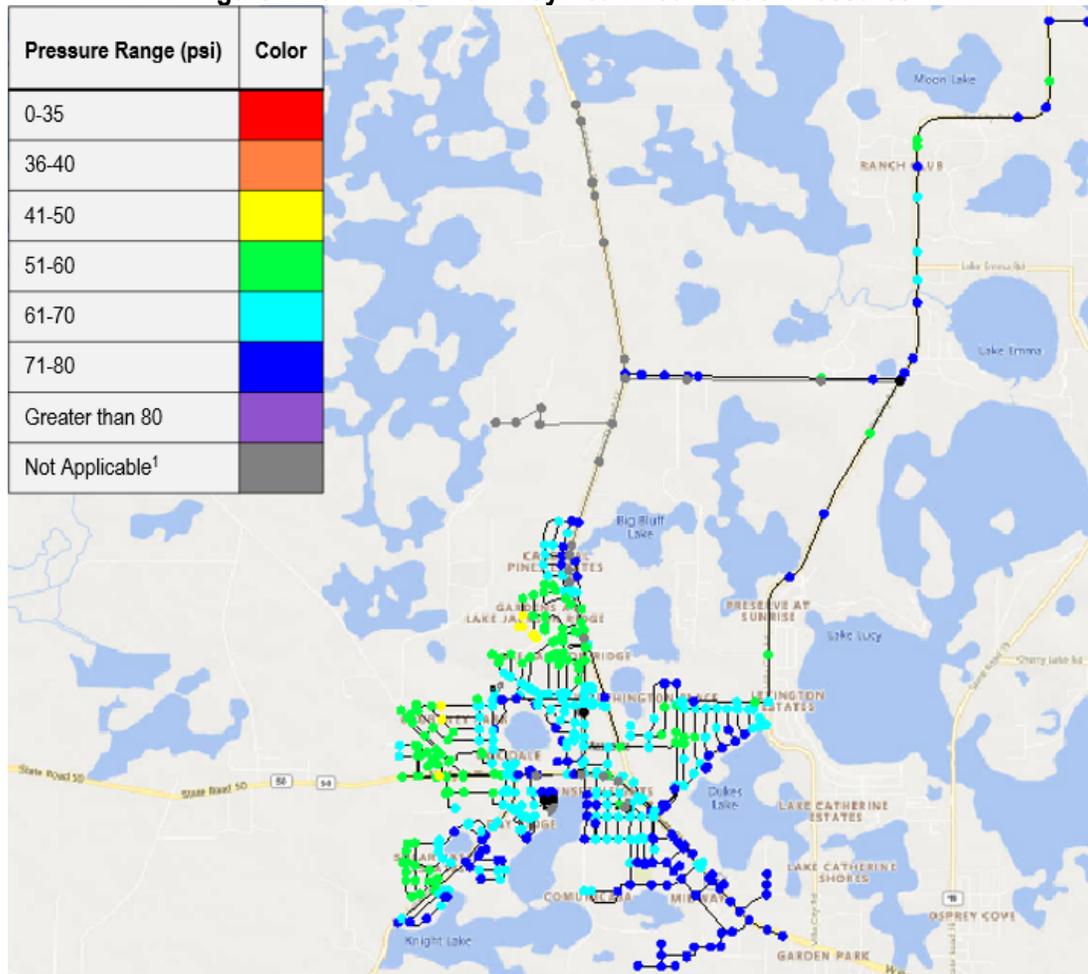
In order to better analyze the water distribution system, identify projects, and model future scenarios, a water distribution system hydraulic model was developed by Woodard & Curran for the City of Mascotte. The Model was used to evaluate the existing conditions under average day, maximum day, and fire flow demand conditions. The complete hydraulic analysis is included in Appendix B.

2.3.3.1.1 System Pressure

The AWWA recommends maintaining a minimum pressure above 20 psi under normal operating conditions, while the 10 States Recommended Standards for Water Works recommends a normal working pressure of approximately 60-80 psi and no less than 35 psi. The City has a target minimum distribution pressure of 40 psi.

In both average and maximum demand day scenarios, model predicted water pressure was above 40 psi and below 87 psi at all junctions for the duration of the scenario. According to the diurnal curve, see Appendix B, the peak hour for a maximum demand day is 6:00 AM. Figure 2-16 below shows the model-predicted system pressures at peak hour.

Figure 2-16: Maximum Day Peak Hour Model Pressures



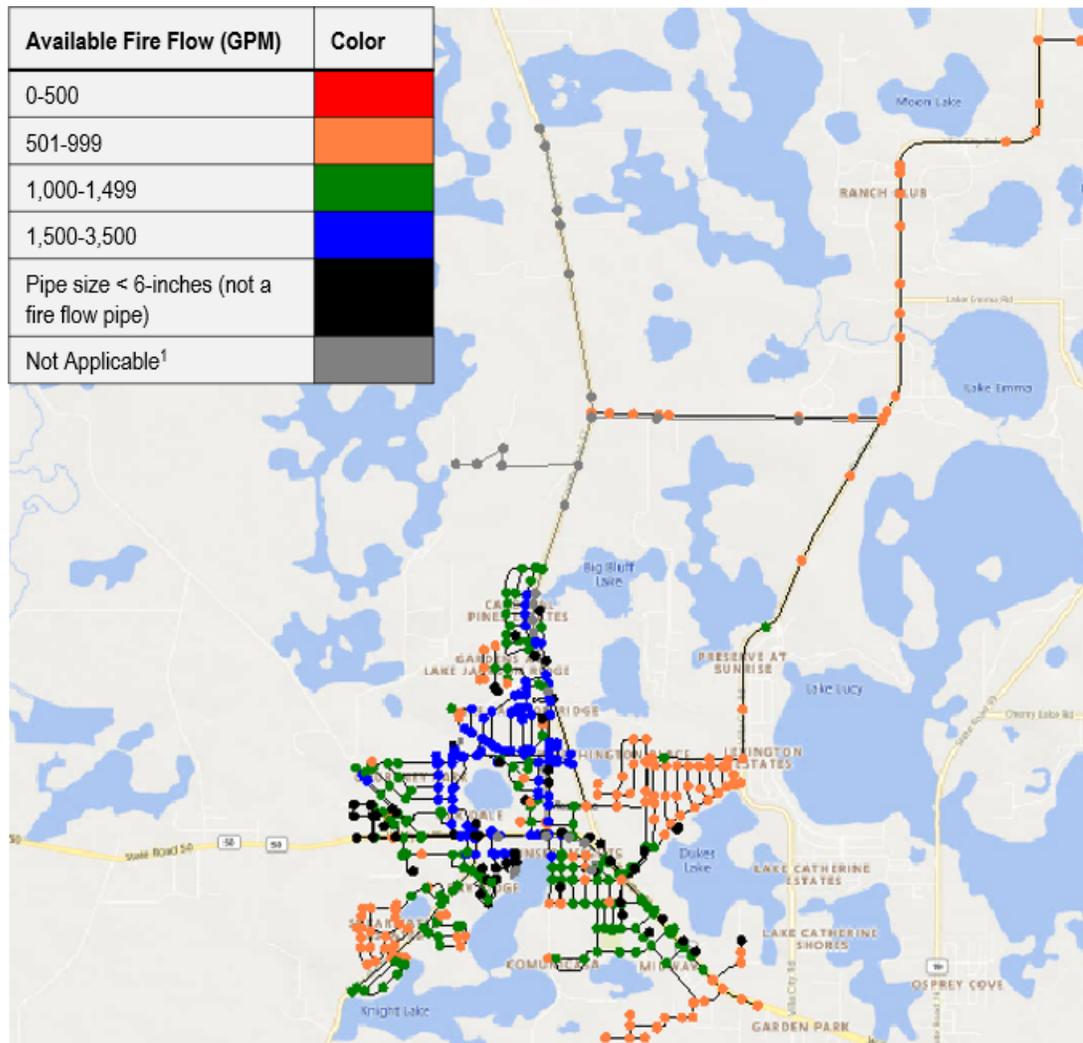
1. Junction was not active for this scenario (ex: possible future work)

It can be observed in Figure 2-16, that the lowest pressures in the system are experienced in the Gardens at Lake Jackson Ridge area, Betty Lane, and Ashley Road. The modeled scenarios indicate that current peak hour conditions promote adequate working pressure for domestic usage.

2.3.3.1.2 Fire Protection

The ability to provide required sufficient and sustained water flows and pressures during a fire emergency is a key goal for all water providers. The AWWA recommends that fire flows be evaluated for maximum day demands instead of average day demand to ensure sufficient flow is available during high usage periods. Necessary fire flows developed by the Insurance Services Office (ISO) for specific areas in the system are used as the standard. In areas without a recommended available fire flow from the ISO, hydrants with less than 500 gpm of available fire flow were considered deficient. Available fire flows were modeled during MDD conditions, and the results of this simulation are presented in Figure 2-17 below.

Figure 2-17: Maximum Day Available Fire Flow in Gallons Per Minute



1. Junction was not active for this scenario (ex: possible future work)

All system fire hydrants are located on water mains sized 6-inches or larger. There are numerous small diameter mains (less than 6-inch) in the hydraulic model that have been removed from the analysis (displayed in black in Figure 2-17) since these mains will not be used to fight fires.

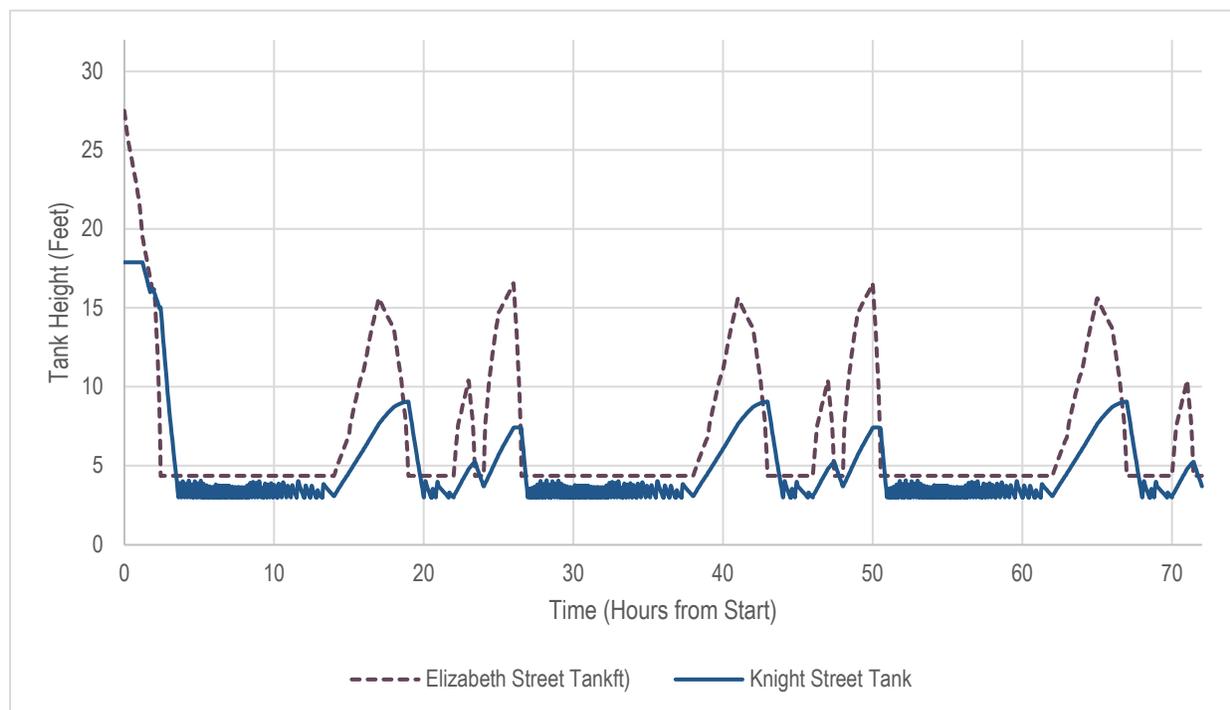
The model predicted that all junctions have more than 500 GPM of available fire flow. The lowest available fire flows occurred in the northeast, southwest, and southeast extents of the City, which had less than 1,000 GPM of available flow. Other individual junctions throughout the City had available flows in this range, but had nearby water mains with greater available flow that could be used in the event of a fire.

2.3.3.1.3 Ability to Recover from High Flow Events

A high flow event was simulated in the hydraulic model on a maximum demand day with all tanks full at the time of the event. A high flow event could be a result of a water main break or a fire event and was simulated by applying an additional 1500 GPM of demand to a single junction located on the 6-inch water main on Elizabeth Avenue near North

Carol Avenue. Model simulated pressures fell below 20 psi after two and a half hours, at which time the Elizabeth Street tank became empty. Both tanks were able to fill during periods of low domestic usage, however the levels were not able to be maintained throughout the simulation, as shown in Figure 2-18.

Figure 2-18: 1500 GPM Flow Event Tank Level Fluctuations



These model-predicted results are an indication that the City has limited ability to maintain system pressures during high flow events on a maximum demand day. This data corroborates customer reports of low-pressure during water main breaks. Additional water supply and storage would reduce the impacts of a high flow event.

2.3.4 Criticality and Redundancy

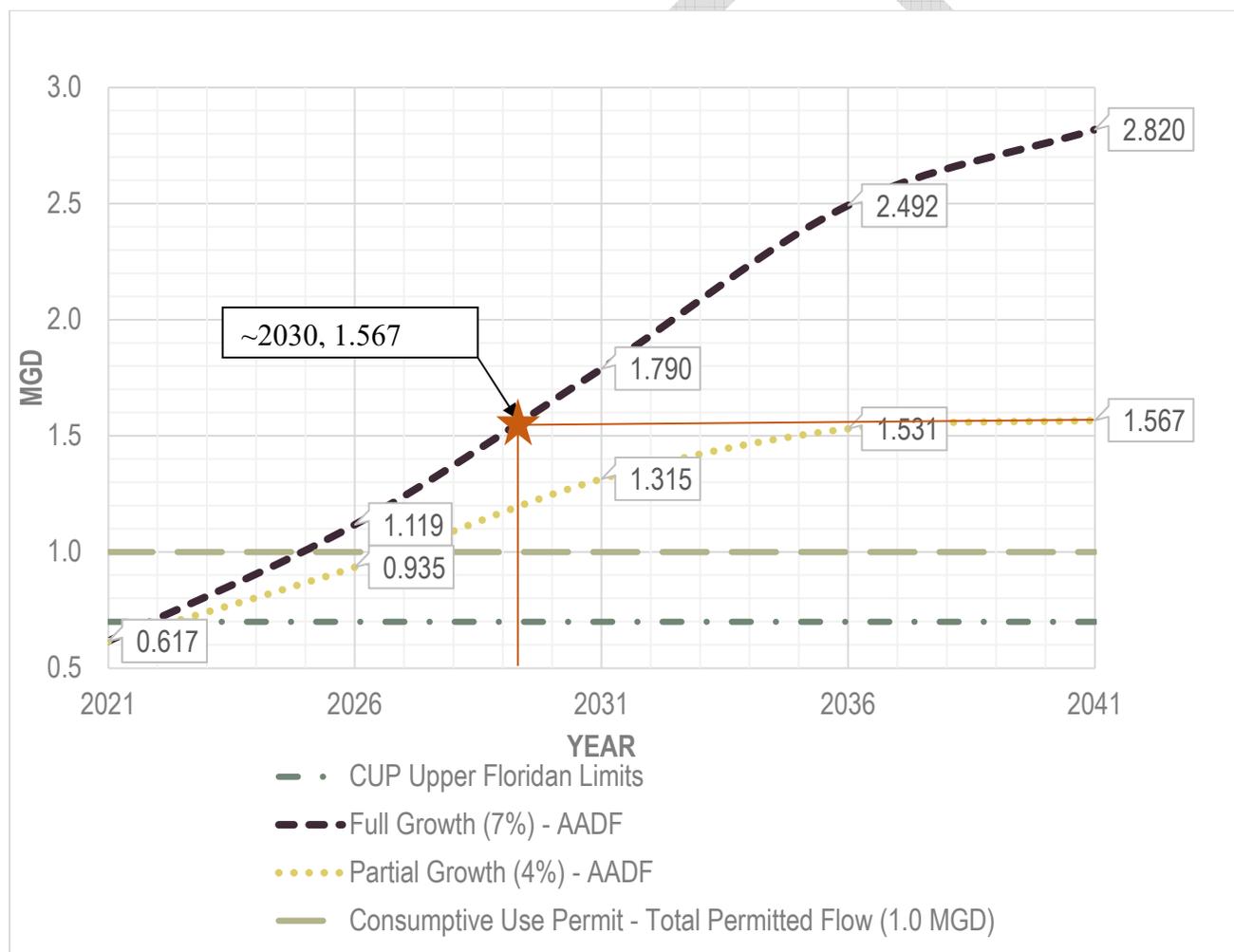
The City's distribution system is dependent on the operation of both the well pumps and at least two of the high service pumps to provide water service to customers on a maximum demand day. On an average demand day, water service can be provided with just one well pump and one high service pump.

The hydraulic model predicted that if the City is unable to produce water due to failure of the well pumps and/or the water treatment plant, and system tanks are full at the time of failure, system storage can sustain pressures above 40 psi for approximately five hours on a maximum demand day and thirteen hours on an average demand day, after which system pressures rapidly fall below 20 psi. This time could be increased with additional elevated storage volume.

2.3.5 Demand Analysis

The 2041 water demand projection is based on a review of the City's realized water demands from all sources. The average gross gallons per capita per day (GPCD) is 106 GPCD as required by the February 2017 City of Mascotte Comprehensive Plan Policy C1-3.5. The future water demands, or annual average daily flow (AADF), are based upon the updated population projections and a constant GPCD of 106. Future water demand was evaluated based on population projections. Population growth was projected based on partial and full rates of growth, representative of 4% and 7% growth, respectively. Based on population projections, future demand is forecasted to exceed the permitted combined withdrawal from the City's existing wells. The existing allowable daily water withdrawal will need to be increased to meet forecasted future demand. The water demand forecast, for each 4% and 7% estimated population projections is plotted against the CUP allowable daily water withdrawal, in Figure 2-19. Figure 2-19 shows that 2041 4% demand projections will be met by 2030 on the 7% demand projection line.

Figure 2-19: Water Demand Forecast



Twelve months of historical data, from May 2020 to April 2021, was analyzed to determine existing water demands and peaking factors. Table 2-10 shows the monthly average daily demand (MADD) and maximum day demand (MDD) for the period stated above. Based on this data, the annual average demand (AADD) is 617,000 gpd and the MDD is 1,031,000 GPD. The ratio of MDD to AADD is 1.67.

Table 2-10: Historical Demand Data

Month	MADD (gpd)	MDD (gpd)	MDD/MADD
May-2020	726,200	895,000	1.23
June-2020	630,500	789,600	1.25
July-2020	572,500	753,700	1.32
August-2020	584,500	666,900	1.14
September-2020	535,200	640,900	1.20
October-2020	563,600	695,000	1.23
November-2020	591,800	670,700	1.13
December-2020	583,700	721,700	1.24
January-2021	586,600	685,000	1.17
February-2021	574,100	675,700	1.18
March-2021	664,200	962,200	1.45
April-2021	790,700	1,031,000	1.30
Annual Average Daily Demand	617,000		
Max Day Demand		1,031,000	
MDD/AADD			1.67

2.3.6 Capacity Analysis

A capacity evaluation of the existing facilities was completed to determine the magnitude of upgrades needed to handle existing and future demands. Capacity was evaluated based on FAC.

FAC 62-555.320(6) dictates that the capacity of drinking water facilities shall be at least equal to the design maximum day demand including the design fire flow demand for the system. Additionally, the treatment and distribution facilities must be capable of handling peak hour demands of the system through high service pumping and/or through finished water storage capacity. The fire flow demand, established by the February 2017 City of Mascotte Comprehensive Plan, Policy E2-1 is 1,500 GPM. The Comprehensive Plan does not specify the needed fire flow duration, but the National Fire Protection Association requires a minimum 2-hour flow period, which was used in this evaluation and results in a fire flow volume of 180,000 gallons. Mascotte's water system was evaluated for future demands in 2041 using partial population growth projections, a rate of about 4% annual growth and full population growth projections 7% annual growth. The following sections itemize the components of the water treatment and distribution system to determine future capacity needs of the overall system. The existing and future design demands for the system are summarized in Table 2-11.

Table 2-11: System Demands

Demand Condition	Existing	2041 - Partial Growth	2041 - Full Growth
Average Day Demand (ADD)	617,000 GPD	1,568,000 GPD	2,820,00 GPD
Max Day Demand (MDD)	1,031,000 GPD	2,621,000 GPD	4,713,000 GPD
¹ Peak Hour Demand (PHD)	860 GPM	2,180 GPM	3,920 GPM
² Fire Flow Demand (FFD)	1,500 GPM		
Max Day + Fire Flow	1,211,000 GPD	2,801,000 GPD	4,893,000 GPD

1. 4 hours of peak hour demand was assessed for finished water storage capacity.

2. 2-hours of fire flow demand was assessed for finished water storage capacity.

2.3.6.1 Finished Storage Capacity

The existing elevated water storage tank, the Elizabeth Street Tank (EST), has a storage capacity of 150,000 gallons. The water tower floats on the system as passive storage, meaning the tank is filled during periods of lower demand and drains during periods of peak demand. FAC Chapter 62-555.320(15)(b) states:

(b) Where elevated finished-drinking-water storage is provided, the total capacity of all high-service pumping stations connected to a water system, or the capacity of a booster pumping station, shall be sufficient to at least meet the water system's, or the booster station service area's maximum-day water demand (including design fire-flow demand if fire protection is being provided) and to maintain distribution system pressure as specified in subparagraph 62-555.320(15)(a)2., F.A.C. In addition, the total capacity of the high-service pumping station, or the capacity of the booster pumping station, combined with the useful elevated finished-water storage capacity shall be sufficient to meet the water system's, or the booster station service area's, peak-hour water demand for at least four consecutive hours (and if fire protection is being provided, shall be sufficient to meet the water system's, or the booster station service area's, design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand for the design fire-flow duration).

Peak hour demands for comparable jurisdictions are typically designed as twice the maximum day demand. Since there is no historical data to provide an alternate peak factor, peaking factor of 2.0, referenced from the February 2017 City of Mascotte Comprehensive Plan, Policy E1-1.2 when evaluating well capacity, was used to derive the existing peak hour demand of 860 GPM, or 207,000 gallons over a period of four-hours. The combination of the existing peak hour demand and fire flow demand equates to 387,000 gallons. Treatment Facility Capacity

As previously mentioned, the capacity of the system's treatment, pumping and storage facilities must be capable of meeting peak hour demands plus fire flow. The total permitted capacity of Mascotte's existing treatment facilities is 1,475,000 GPD and when considering that the Midway Avenue WTP is offline the effective permitted capacity is only that of the Knight Street WTP, or 1,223,000 GPD. The water system must either meet peak hour demands with high service pumping or have elevated storage with the capacity for both peak hour and fire flows.

When the Knight WTP capacity of 1.223 MGD or 850 GPM is compared to the estimated peak hour demand of 860 GPM, the WTP is 10 GPM shy of meeting handling peak hour demands. If system demands continue to increase as estimated the WTP's ability to handle peak hour demand will diminish to a capacity deficit of 1,330 GPM by 2030. For the purposes of this evaluation, the system capacity was evaluated to meet the MDD with high service pumping and peak hour and fire flow demands with elevated storage. Table 2-12 summarizes the existing system capacity compared to existing and projected max daily demands.

Table 2-12: Capacity Comparison

Demand Condition	2021 - Existing (Permitted)	2021 - Existing Design	2041 - 4% Projected Growth	2041 - 7% Projected Growth
MDD (MGD)	1,223,000	1,211,000	2,801,000	4,893,000
Treatment Facility Capacity Deficiency (MGD)	-	None	1,578,000	3,670,000

2.4 Non-Revenue Water Analysis

Woodard & Curran reviewed plant production data against available metered water usage for the City for a period of January 2018 through December 2020. Figure 2-20 below plots water production, metered water usage and the volumetric difference between each. This data is representative only of the water production at the Knight Street Water Treatment Plant (Knight Street WTP). The Midway Avenue Water Treatment Plant did not produce any water during the period reviewed.

Figure 2-20: Water Production Versus Water Usage

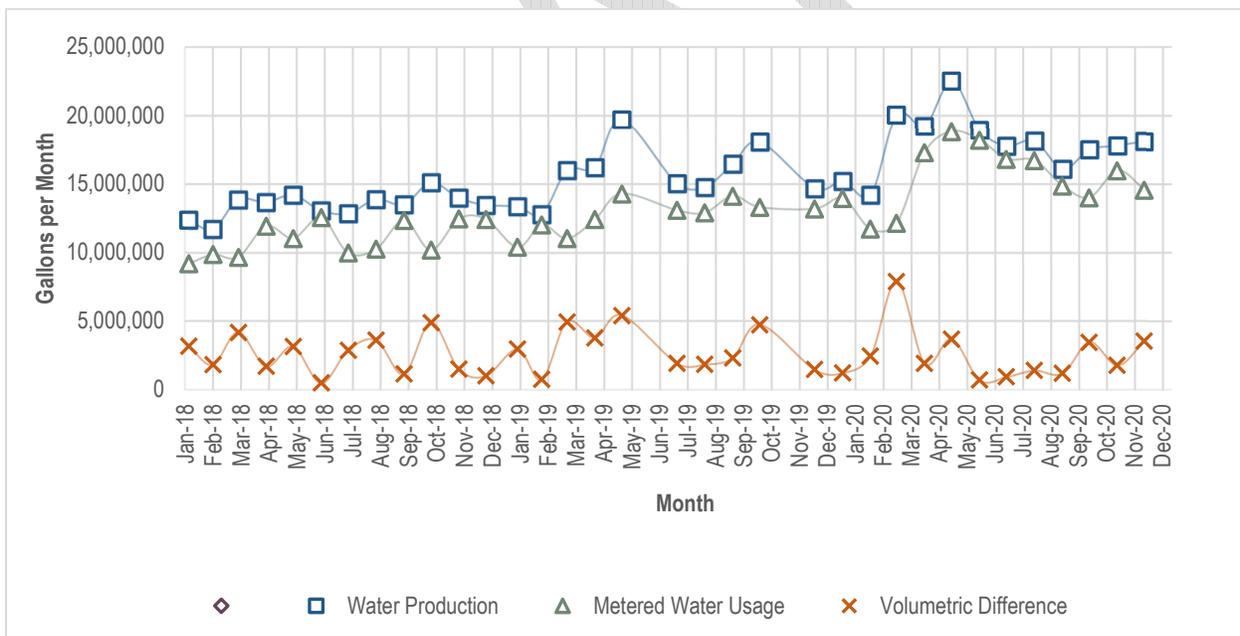


Figure 2-20 indicates that there is an inconsistent volume of estimated non-revenue water, however it is difficult to further analyze this discrepancy based on the meter data available because the data available from the water billing system identified the volume of water for which the accounts were billed, not the usage. Actual water usage from the meter readings was not available to be analyzed and compared to the water production. This is typical of utilities in that billed water volume can be significantly less than actual metered or unmetered but authorized water usage.

Percent non-revenue water is presented by month and year in Table 2-13 below. The accuracy of data for June and November are not accurate because they indicated more water used than produced, therefore the data was not shown in this table. The largest discrepancy is observed in March of each year.

Table 2-13: Water Volume – Production and Metering

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	26%	16%	30%	13%	22%	4%	22%	26%	9%	32%	11%	8%
2019	22%	6%	31%	23%	27%		13%	13%	14%	26%		10%
2020	8%	17%	39%	10%	16%	4%	5%	8%	7%	20%	10%	20%

The projects proposed within this facilities report will address the complications associated with adequately estimating the non-revenue water, due to future improvements in the metering system that will allow the City to collect better quality of data.

2.5 Managerial Capacity

The City’s Water Division manages operations and maintenance (O&M) of the water system and maintains responsibility for construction projects. The Knight Street is designated the Plant Category V and Plant Class C, per 62-699(4), FAC. The water system is operated by a total of three operators including the Lead Operator. Two of the operators maintain Class C licenses and one a Class B license. One Class C Operator manages the Knight Street WTP plant activities Monday through Friday, with weekend visits, while the other two operators visit weekends or as needed.

The City maintains an inter-local agreement for emergency water supply with the neighboring City of Groveland.

2.5.1 Operation and Maintenance Program

The Mascotte Water Division staff maintains and operates the water system. Recent upgrades were constructed on the water main in SR-50, with a variety of new 8-inch through 14-inch HDPE and PVC, AWWA C-900, pipe. As needed repairs or rehabilitation of the water mains due to broken pipes and joints are performed by local contractors. In 2017, the Midway Avenue storage tank was demolished. The Knight Street treatment plant is operated continuously with regular operator visits. The City is planning to add variable frequency drives (VFDs) to the high service pumps at the Knight Street WTP and re-coat the Elizabeth Street Water EST. The Water Division performs annual fire flow tests for every City-owned fire hydrant. WTP operational parameters including chlorine and phosphate dosing and water level set points at the GST and EST for high service and well pump operations are monitored and adjusted for optimization as demand trends change. Water demands for the system are summarized in Table 2-11.

3. DEVELOPMENT OF ALTERNATIVES

3.1 General

An evaluation of the City's treatment facilities and distribution system was conducted to develop alternatives to address the water system challenges for future development within the 20-year planning period.

The Alternatives for Drinking Water Production and Treatment Facility are as follows:

1. No Action
2. Midway Avenue WTP Rehabilitation, Existing Knight Street WTP Improvements, and a New Knight Street WTP.
3. Midway Avenue WTP Rehabilitation and a New Knight Street WTP

The Alternatives for Water Distribution System Upgrades are as follows:

1. No Action
2. Install New Transmission Main and Storage Tanks - Without Looping
3. Install New Transmission Main and Storage Tanks – With Looping

The Alternatives for Advanced Metering Infrastructure (AMI) with Fixed Network are as follows:

1. No Action
2. Cellular-based fixed network AMI
3. Radio-based fixed network AMI

The Alternatives for SCADA Infrastructure Implementation are as follows:

1. No Action
2. Retrofit Existing SCADA System
3. Full SCADA System Replacement

3.2 Water Production and Treatment Facility Upgrades

3.2.1 Alternative 1 - No Action

Under this alternative, no capital cost will be required, and represents continuing to operate and maintain the existing treatment facility as is, without rehabilitation or expansion. If the City were to do nothing, water demands projected because of the proposed developments will exceed the permitted capacity of the Knight Street WTP. It also limits capacity to provide adequate water supply to its customers, as some of the existing facility components are reaching the end of their useable life or have met or are nearing capacity. This alternative would only be feasible if there was not population growth anticipated and the MDD was not estimated to exceed 1.223 MGD. In addition to physical and permitted capacity constraints at the WTP, as population increases water demands are approaching the City's CUP withdrawal limit from the UFA of 0.7 MGD. As growth within the City is anticipated, improvements will be needed to accommodate for the newly permitted future LFA wells at the Knight Street site.

3.2.2 Alternative 2 - Midway Avenue WTP Rehabilitation, Existing Knight Street WTP Improvements, and New Knight Street WTP

The Knight Street WTP components are nearing the end of their useful life and have not been upgraded to reliably meet existing or future demands. The Midway Avenue WTP has been offline since demolition of the on-site elevated water storage tank, leaving its permitted capacity of 252,000 GPD unavailable. This alternative proposes rehabilitation and upgrades of the Midway Avenue WTP to return it to an operable condition and improvements to the Knight Street WTP to enhance its reliability and capabilities to treat and distribute flows to meet maximum day demands. This alternative is designed so that the combination of flows from the Midway and Knight WTPs will meet projected 7% growth MDD demands of about 4,750,000 MGD. Peak hour and fire flow demands will be handled using a combined elevated storage tank volume of 1,800,000 gallons; refer to Section 3.3 – Water Distribution System Upgrades for more detail.

The rehabilitation and upgrade components at the Midway Avenue WTP consist of rehabilitation of the existing UFA well pump replacement, replacement of the chlorine disinfection system, and replacement of the phosphate injection system (for iron sequestration and corrosion control). The current configuration of the Midway Avenue WTP does not include any ground storage. This alternative includes the addition of one 40,000-gallon GST, two high service pumps between 10 and 50 break horsepower (BHP) with protective structure, a back-up power genset, and related site and electrical work.

The City plans to install at least one new LFA well at the Knight Street site that is estimated to provide 2,000 GPM. Under this alternative, the Knight Street WTP components will be upgraded to include four new high service pumps between 20 and 70 BHP, replacement and upgrade of the disinfection system and iron and manganese sequestration system, the addition of one 500,000-gallon GST and related site and electrical work.

Increasing the capacity of the Knight Street WTP through upgrades is limited by the size of its suction and discharge piping and the size of the chlorine gas room to accommodate the anticipated increase in demand. The upgrades indicated above will only be able to handle demands up to the 4% projected growth MDD of approximately 2,700,000 GPD, unless the structure is expanded, and the underground piping is replaced with larger diameter pipes. Reconstruction of the structure and underground piping components is not practical because the City does not have a redundant water source and temporary treatment would need to be provided so that the City could continue to provide water during reconstruction of the existing WTP. Upgrades to the existing WTP are included because these could be completed in a shorter timeline than constructing a new WTP and would add flexibility in system capacity expansion by expanding in phases, not all at once. Therefore, this alternative includes upgrades to the existing facility to handle anticipated demands up to 4% projected growth MDD of approximately 2,700,000 GPD, followed by the construction of a new Knight Street WTP, as detailed in Alternative 3, to handle anticipated demands up to 7% projected growth MDD of approximately 4,750,00 GPD. This assumes a phased plan where the Midway Avenue WTP rehabilitation and the Existing Knight Street WTP Improvements construction will be completed by 2023 and the construction of the new Knight Street WTP will be completed by 2030, at which point the existing facility could be decommissioned and parts salvaged.

The City is in the early planning/design stages of constructing a new well to the LFA at the Knight Street site. An update to the existing CUP will be required to increase the Knight Street production and treatment capacity. Water quality samples at this location in the aquifer have not been analyzed and water treatment processes should be re-assessed once the water quality parameters are determined so that adequate treatment provisions can be implemented to mitigate water quality and possible blending issues with the existing Upper Floridan Aquifer well water. Specifically, since the water quality parameters such as pH and alkalinity may significantly affect finished water corrosivity, augmenting the WTP's source water supply with the LFA may require the City to conduct a corrosion control study prior to the change and / or increase its monitoring frequency for lead and copper under the LCRR.

See Figure 3-1 for proposed layout of Midway Avenue WTP Rehabilitation and Figure 3-2 for proposed layout of the Knight Street WTP Upgrades.

3.2.3 Alternative 3 - Midway Avenue WTP Rehabilitation and New Knight Street WTP

The Knight Street WTP components are nearing the end of their useful life and have not been upgraded to reliably meet existing or future demands. The Midway Avenue WTP has been offline since demolition of the on-site elevated water storage tank, leaving its permitted capacity of 252,000 GPD unavailable. This alternative proposes rehabilitation and upgrades of the Midway Avenue WTP to return it to an operable condition and a new water treatment plant at the Knight Street site is proposed to replace the existing plant. This alternative is designed so that the combination of flows from the Midway and Knight WTPs will meet projected 7% growth projected MDD of demands of about 4,750,000 MGD. Peak hour and fire flow demands will be handled using a combined elevated storage tank volume of 1,800,000 gallons; refer to Section 3.3 – Water Distribution System Upgrades for more detail.

Under this alternative, a new water treatment plant at the Knight Street site is proposed to replace the existing plant. Components of the new plant will include a new treatment building, four high service pumps between 60 and 110 BHP, a disinfection system, iron and manganese and corrosion control treatment system(s), and one 500,000-gallon ground storage tank (GST). The proposed GST will be in supplement to the existing 200,000-gallon GST for a total of 700,000-gallons. A new WTP building will be constructed initially with three high service pumps to meet 4% growth projected demands and a fourth by 2030 to meet 7% growth projected demands. The sizing of the high service pumps is based on adding elevated storage to the distribution system as described in Section 3.3 – Water Distribution System Upgrades.

The City is in the early planning/design stages of constructing a new well to the LFA at the Knight Street site. An update to the existing CUP will be required to increase the Knight Street production and treatment capacity. Water quality samples at this location in the aquifer have not been analyzed and water treatment processes should be re-assessed once the water quality parameters are determined so that adequate treatment provisions can be implemented to mitigate water quality and possible blending issues with the existing Upper Floridan Aquifer well water. Specifically, since water quality parameters such as pH and alkalinity may significantly affect finished water corrosivity, augmenting the WTP's source water supply with the LFA may require the City to conduct a corrosion control study prior to the change and/or increase its monitoring frequency for lead and copper under the LCRR.

This alternative also includes the rehabilitation of the Midway Avenue WTP as identified in Alternative 2.

See Figure 3-1 for proposed layout of Midway Avenue Rehabilitation and Figure 3-3 for the proposed layout of the New Knight Street WTP.

The new EST is shown in this site layout for spatial depiction but is a component of the Distribution and Storage Upgrades Alternatives and the value is not accounted for in the Midway Avenue WTP Rehabilitation cost estimate or life cycle analysis.

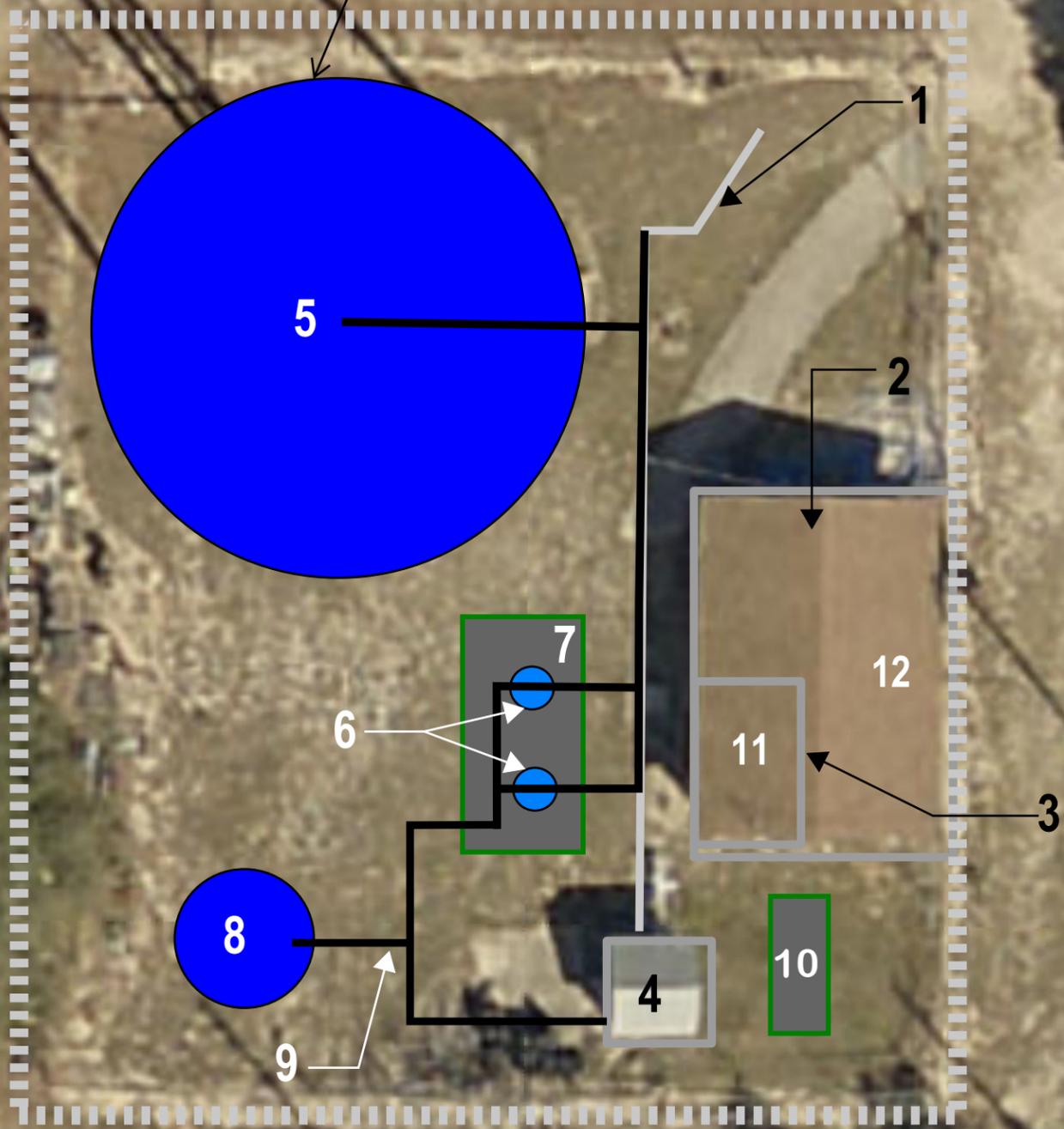


Figure Exported: 7/30/2021 11:58:11 AM; User: woodardcurran.net\Share\Projects\0232301_02 Mascotte DW Fcyl Plan\wpGIS\MXDs\Figure 3-1 Midway WTP Rehab Layout.mxd

Midway Avenue WTP Rehabilitation - Layout
City of Mascotte, FL
Figure 3-1

Legend

- WTP Property Boundary
- Item Key**
- 1. Existing Site Piping (Typ.)
- 2. Existing Concrete Masonry Building
- 3. Existing Chlorine Room
- 4. Rehabilitate Existing Well

- 5. New 900,000 Gal Elevated Storage Tank
- 6. New 100-GPM High Service Pump (2)
- 7. New High Service Pump Building
- 8. New 40,000 Gal Ground Storage Tank

- 9. New Site Piping (Typ.)
- 10. New Backup Power Generator
- 11. Replace Chlorine Gas Disinfection System
- 12. Replace Phosphate Blend Injection System



Project #: 0232301.02
Map Created: September 2021

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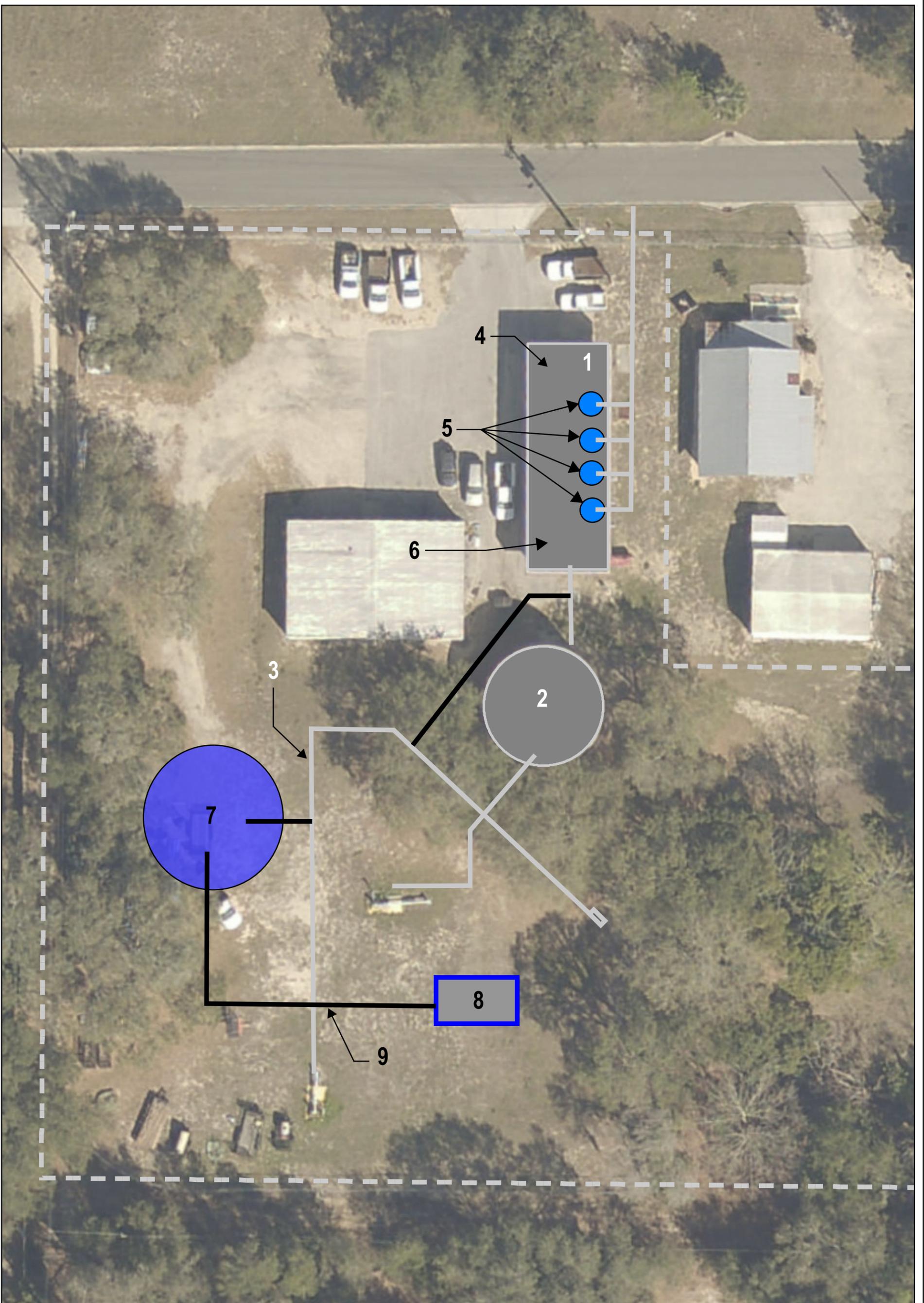


Figure Exported: 8/4/2021 10:42:01 AM Mascotte DW Fdty Platwip\GIS\MapDocs\Figure 3-2 Knight St WTP Upgrades - Layout.mxd

Knight St WTP Upgrades - Layout

City of Mascotte, FL
Figure 3-2

Legend

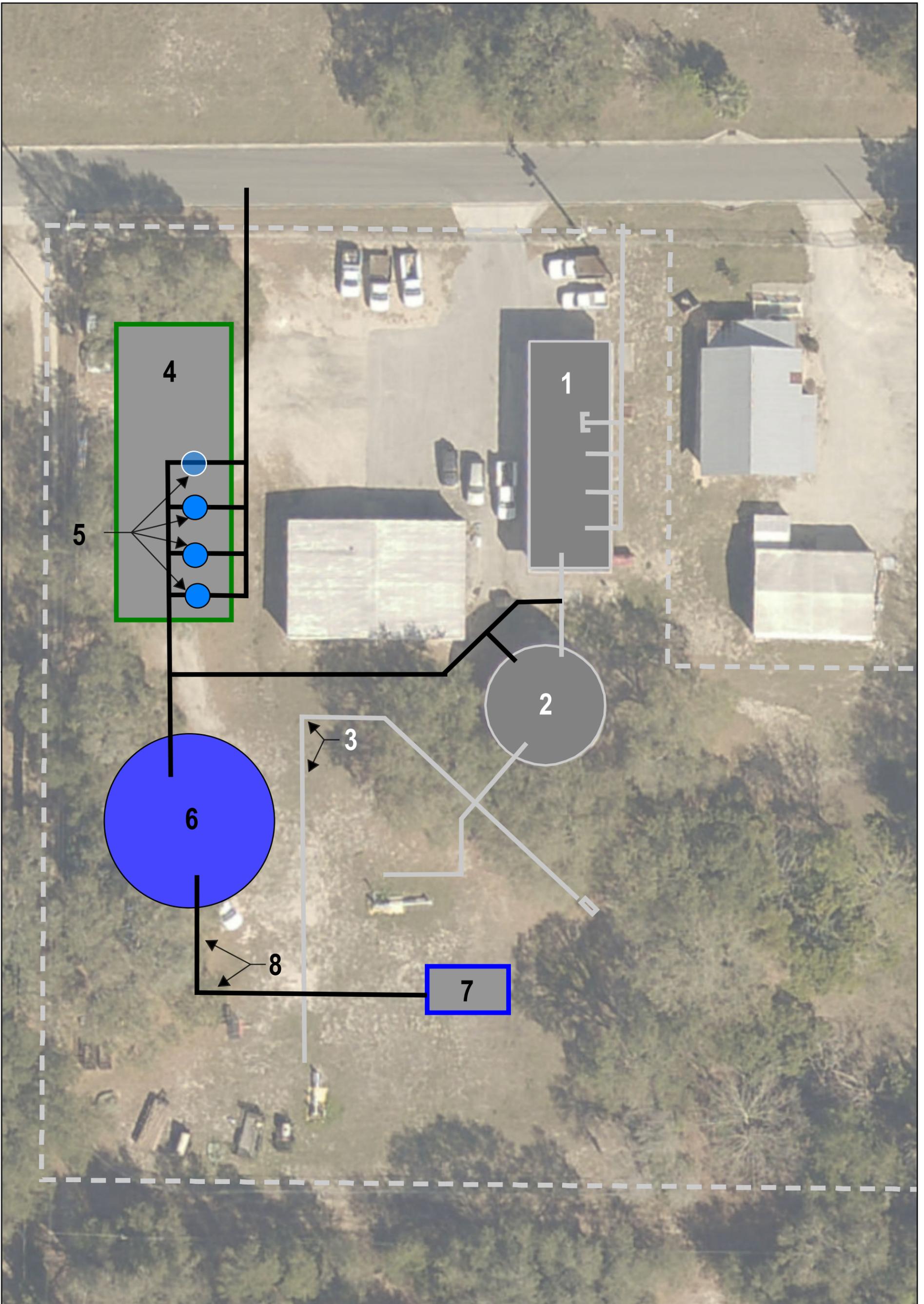
-  WTP Property Boundary
-  1. Existing Concrete Masonry Building
-  2. Existing 200,000 Gal GST
-  3. Existing Site Piping (Typ.)
-  4. New 250 PPD Chlorine Gas Disinfection System
-  5. New 20 - 70 BHP High Service Pumps (4)
-  6. New Phosphate Blend Injection System
-  7. New 500,000 Gal GST
-  8. Future Lower Floridian Aquifer Well
-  9. New 12" Site Piping (Typ.)



Project #: 0232301.02
Map Created: August 2021

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Figure Exported: 8/4/2021 10:42:01 AM By: cwellstech Using: \\woodardcurran.net\shared\Projects\0232301.02 Mascotte DW Fdy\GIS\MXDs\Figure 3-3 New Knight St WTP Layout - Copy.mxd



**New Knight St WTP
Conceptual Layout**
City of Mascotte, FL
Figure 3-3

Legend	WTP Property Boundary	4. New Water Treatment Plant	6. New 500,000 Gal GST
	1. Existing Concrete Masonry Building	5. New High Service Pumps: 60 - 160 bhp (3 - Ph. 1, 1 - Ph. 2)	7. Future Lower Floridian Aquifer Well
	2. Existing 200,000 Gal GST	8. New Site Piping (Typ.)	
	3. Existing Site Piping (Typ.)		

N

**WOODARD
& CURRAN**

Project #: 0232301.02
Map Created: August 2021

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3.2.4 Water Production and Treatment Facility Alternatives Cost Comparison

A cost comparison of the Water Production and Treatment Facility alternatives are presented in Table 3-1. The cost estimates shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and materials costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the estimate presented here. All costs are presented in 2021 dollars.

DRAFT

Table 3-1: Water Production and Treatment Facility Alternatives Cost Comparison

Item No.	Cost Item	Alternative 2:	Alternative 3:
		Midway Avenue WTP Rehabilitation, Existing Knight Street WTP Improvements, and New Knight Street WTP	Midway Avenue WTP Rehabilitation and New Knight Street WTP
1	CAPITAL COST SUMMARY		
1.10	Midway Avenue WTP Rehabilitation	\$1,040,000	
1.11	Existing Knight Street WTP Improvements	\$1,913,000	-
1.12	New Knight Street WTP	\$4,439,000	
1.13	CAPITAL BASE COST	\$7,392,000	\$5,479,000
1.14	Construction Contingency (10%)	\$740,000	\$548,000
1.15	Total Construction Cost	\$8,132,000	\$6,027,000
1.16	Engineering (18%)	\$1,464,000	\$1,085,000
1.17	Special Studies ¹	\$300,000	
1.18	Legal, fiscal, and administrative (3%)	\$297,000	\$181,000
1.19	TOTAL CAPITAL COST	\$10,193,000	\$7,593,000
2	ANNUAL O&M COST SUMMARY		
2.10	<i>Operations ²</i>		
2.1.1	Labor	\$404,000	
2.1.2	Water Analysis	\$5,000	
2.1.3	Public Utilities ³	\$50,000	
2.1.4	Chemicals	\$17,000	
2.2	<i>Repairs and Maintenance ²</i>		
2.2.1	Buildings	\$7,000	
2.2.2	Equipment	\$7,000	
2.2.3	Grounds	\$1,000	
2.2.4	Wells, pumps, & Lines	\$50,000	
2.3	O&M COST TOTAL	\$541,000	

1. Special studies include update of the existing CUP, LCCR study, and CCS.

2. O&M Costs are based on Mascotte's FY 2021 Proposed Operating Budget (See Appendix N).

3. Utilities cost include "Public Utilities" and "Communication Services" as indicated in the Mascotte FY 2021 Proposed Operating Budget (See Appendix N.).

3.2.5 Life Cycle Cost Analysis

Table 3-2 and Table 3-3 provide the 20-year life cycle cost analysis for the two proposed water production and treatment facility alternatives. The analysis is important for comparing the alternatives on an equivalent basis over the project life. Average service lives were established based on values provided in Florida Administrative Code Rule 25-30.140(2)a), assuming a class C, small utility.

Table 3-2: Alternative 2 – Midway Avenue WTP Rehabilitation, Existing Knight Street WTP Improvements, and New Knight Street WTP

Description	Construction Capital Cost	Expected Life	Years Remaining	Salvage Value (\$)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Midway Avenue WTP Rehabilitation							
High Service Pumps	\$150,000	17	-3	\$0	\$26,000	\$3,000	\$221,000
Pump housing	\$80,000	35	15	\$34,000	\$0	\$10,000	\$227,000
Well Rehabilitation	\$50,000	27	7	\$0	\$0	\$4,000	\$119,000
Chlorine Gas	\$13,000	7	-13	\$0	\$24,000	\$4,000	\$100,000
I&M and Corrosion Control Treatment	\$7,000	6	-14	\$0	\$16,000	\$4,000	\$88,000
Ground Storage Tank	\$100,000	37	17	\$46,000	\$0	\$1,000	\$84,000
Site Work	\$188,000	35	15	\$81,000	\$0	\$0	\$128,000
Standby Genset	\$188,000	17	-3	\$0	\$33,000	\$0	\$213,000
Electrical	\$234,000	15	-5	\$0	\$78,000	\$7,000	\$413,000
SCADA	\$30,000	15	-5	\$0	\$10,000	\$4,000	\$107,000
Existing Knight Street WTP Improvements							
High Service Pump Replacements	\$275,000	17	-3	\$0	\$49,000	\$0	\$312,000
Chlorine Gas Upgrade	\$63,000	10	-10	\$0	\$63,000	\$0	\$110,000
Phosphate Blend Chemical Injection	\$7,000	6	-14	\$16,000	\$0	\$0	-\$5,000
Ground Storage Tank	\$938,000	37	17	\$431,000	\$0	\$0	\$618,000
Site Work	\$188,000	35	15	\$81,000	\$0	\$0	\$128,000
Electrical	\$442,000	15	-5	\$0	\$147,000	\$0	\$552,000
New Knight Street WTP							
High Service Pumps	\$375,000	17	-3	\$0	\$66,000	\$404,000	\$7,361,000
New WTP Building	\$929,000	35	15	\$398,000	\$0	\$19,000	\$960,000
Chlorine Disinfection	\$811,000	7	-13	\$0	\$1,506,000	\$15,000	\$2,187,000
I&M and Corrosion Control Treatment	\$10,000	6	-14	\$0	\$23,000	\$8,000	\$165,000
Ground Storage Tank	\$938,000	37	17	\$431,000	\$0	\$1,000	\$636,000
Site Work	\$313,000	35	15	\$134,000	\$0	\$7,000	\$334,000
Electrical	\$1,013,000	15	-5	\$0	\$338,000	\$32,000	\$1,814,000
SCADA	\$50,000	15	-5	\$0	\$17,000	\$18,000	\$372,000
Total:	\$7,392,000			\$1,652,000	\$2,396,000	\$541,000	\$17,244,000

Table 3-3: Alternative 3 – Midway Avenue WTP Rehabilitation and New Knight Street WTP Present Worth Analysis

Description	Construction Capital Cost (C)	Expected Life	Years Remaining	Salvage Value (S)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Midway Avenue WTP Rehabilitation							
High Service Pumps	\$150,000	17	-3	\$0	\$26,000	\$3,000	\$221,000
Pump housing	\$80,000	35	15	\$34,000	\$0	\$10,000	\$218,000
Well Rehabilitation	\$50,000	27	7	\$13,000	\$0	\$4,000	\$106,000
Chlorine Gas	\$13,000	7	-13	\$0	\$24,000	\$4,000	\$100,000
I&M and Corrosion Control Treatment	\$7,000	6	-14	\$0	\$16,000	\$4,000	\$88,000
Ground Storage Tank	\$100,000	37	17	\$46,000	\$0	\$1,000	\$72,000
Site Work	\$188,000	35	15	\$81,000	\$0	\$0	\$107,000
Standby Genset	\$188,000	17	-3	\$0	\$33,000	\$0	\$213,000
Electrical	\$234,000	15	-5	\$0	\$78,000	\$7,000	\$413,000
SCADA	\$30,000	15	-5	\$0	\$10,000	\$4,000	\$107,000
New Knight Street WTP							
High Service Pumps	\$375,000	17	-3	\$0	\$66,000	\$404,000	\$7,361,000
New WTP Building	\$929,000	35	15	\$398,000	\$0	\$19,000	\$858,000
Chlorine Disinfection	\$811,000	7	-13	\$0	\$1,506,000	\$15,000	\$2,187,000
I&M and Corrosion Control Treatment	\$10,000	6	-14	\$0	\$23,000	\$8,000	\$165,000
Ground Storage Tank	\$938,000	37	17	\$431,000	\$0	\$1,000	\$525,000
Site Work	\$313,000	35	15	\$134,000	\$0	\$7,000	\$300,000
Electrical	\$1,013,000	15	-5	\$0	\$338,000	\$32,000	\$1,814,000
SCADA	\$50,000	15	-5	\$0	\$17,000	\$18,000	\$372,000
Total:	\$5,479,000			\$1,137,000	\$2,137,000	\$541,000	\$15,227,000

3.3 Water Distribution System Upgrades

3.3.1 Alternative 1 - No Action

Under this alternative, no improvements would be made to the existing water distribution system.

3.3.2 Alternative 2 - Install New Transmission Main and Storage Tanks – No Looping

Based on proposed developments, the City is expected to incur development past the City's limits of existing water infrastructure. The City does not currently have adequate water distribution infrastructure to these areas. This option includes upgrading the diameter of existing transmission main between the Knight Street WTP along East Myers Boulevard (SR-50), Underpass Road, Villa City Road (CR-565) up to Simon Brown Road and along Simon Brown Road to Bluff Lake Road (SR-33) to 36-inches, approximately 29,000 LF, and adding approximately 12,500 LF of new 16-inch transmission main from the intersection of Simon Brown Road and SR-33 to each Indigo Lakes to the North and BL Investments and Heron's Glen to the West. This option also includes two new 900,000-gallon elevated storage tanks, one at each the existing Midway Avenue WTP site and Elizabeth Street EST site. In combination with the Water Production and Treatment Facility recommended alternative, this alternative is designed to mitigate existing low pressure issues during times of high demand and to deliver drinking water to proposed developments at the projected 7% growth rate demands. Sizing of the water distribution upgrades were validated using the hydraulic modeling of Mascotte's Water System, simulated with 7% growth rate demands.

This alternative results in long dead-end segments of water main and is not configured for circulation of water within the distribution system; this can lead to high water age and subsequently, water quality issues like disinfection byproducts.

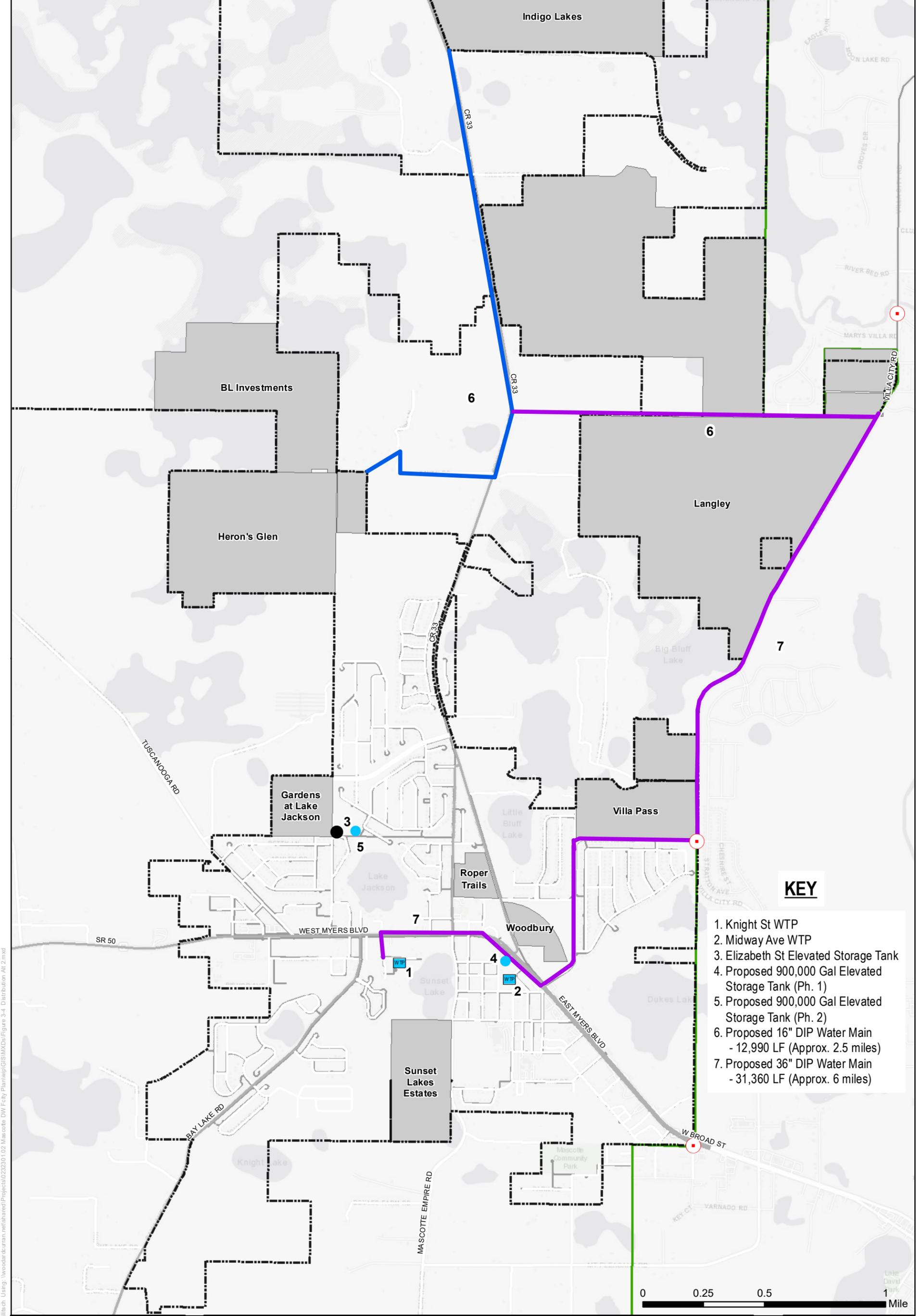
See Figure 3-4 for a graphic summary of the Alternative 2 components.

3.3.3 Alternative 3 - Install New Transmission Main and Storage Tanks – With Looping

Based on proposed developments, Mascotte is expected to incur development past the City's limits of existing water infrastructure. The City does not currently have adequate water distribution infrastructure to these areas. This option includes the addition of a new 20-inch transmission main, approximately 4,000 LF, between the Knight Street WTP and Underpass Road along SR-50, approximately 13,250 LF of new 20-inch transmission main from SR-50 along SR-33 to Simon Brown Road, approximately 12,500 LF of new arterial main in Route 33 to the existing 12-inch transmission main, on Simon Brown Road and an additional 12,500 LF of new 16-inch transmission main from the intersection of Simon Brown Road and SR-33 to each Indigo Lakes to the North and BL Investments and Heron's Glen to the West, and approximately 8,000 LF new 12-inch transmission main along Simon Brown Road from SR-330 to CR-565, parallel to the existing 12-inch. This option also includes two new 900,000-gallon elevated storage tanks, one at each the existing Midway Avenue WTP site and Elizabeth Street EST site. In combination with the Water Production and Treatment Facility recommended alternative, this alternative is designed to mitigate existing low pressure issues during times of high demand and to deliver drinking water to proposed developments at the projected 7% growth rate demands. Sizing of the water distribution upgrades were validated using the hydraulic modeling of Mascotte's Water System, simulated with 7% growth rate demands.

By adding new segments of pipeline, this alternative results in a looped transmission main configuration that will help promote circulation of water in the system and mitigate water quality issues associated with high water age.

See Figure 3-5 for a graphic summary of the Alternative 3 components.



KEY

- 1. Knight St WTP
- 2. Midway Ave WTP
- 3. Elizabeth St Elevated Storage Tank
- 4. Proposed 900,000 Gal Elevated Storage Tank (Ph. 1)
- 5. Proposed 900,000 Gal Elevated Storage Tank (Ph. 2)
- 6. Proposed 16" DIP Water Main - 12,990 LF (Approx. 2.5 miles)
- 7. Proposed 36" DIP Water Main - 31,360 LF (Approx. 6 miles)



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Distribution Alternative 2
City of Mascotte
Figure 3-4

Legend	
— Proposed 16" Water Main	● Existing Water Storage Tank
— Proposed 36" Water Main	WTP Water Treatment Plants (WTP)
● Proposed Water Storage Tank	■ Mascotte-Groveland Interconnection
 Planned Developments	 Mascotte City Limits
 Future Planning Area City Zoning	
— Existing Water Mains	

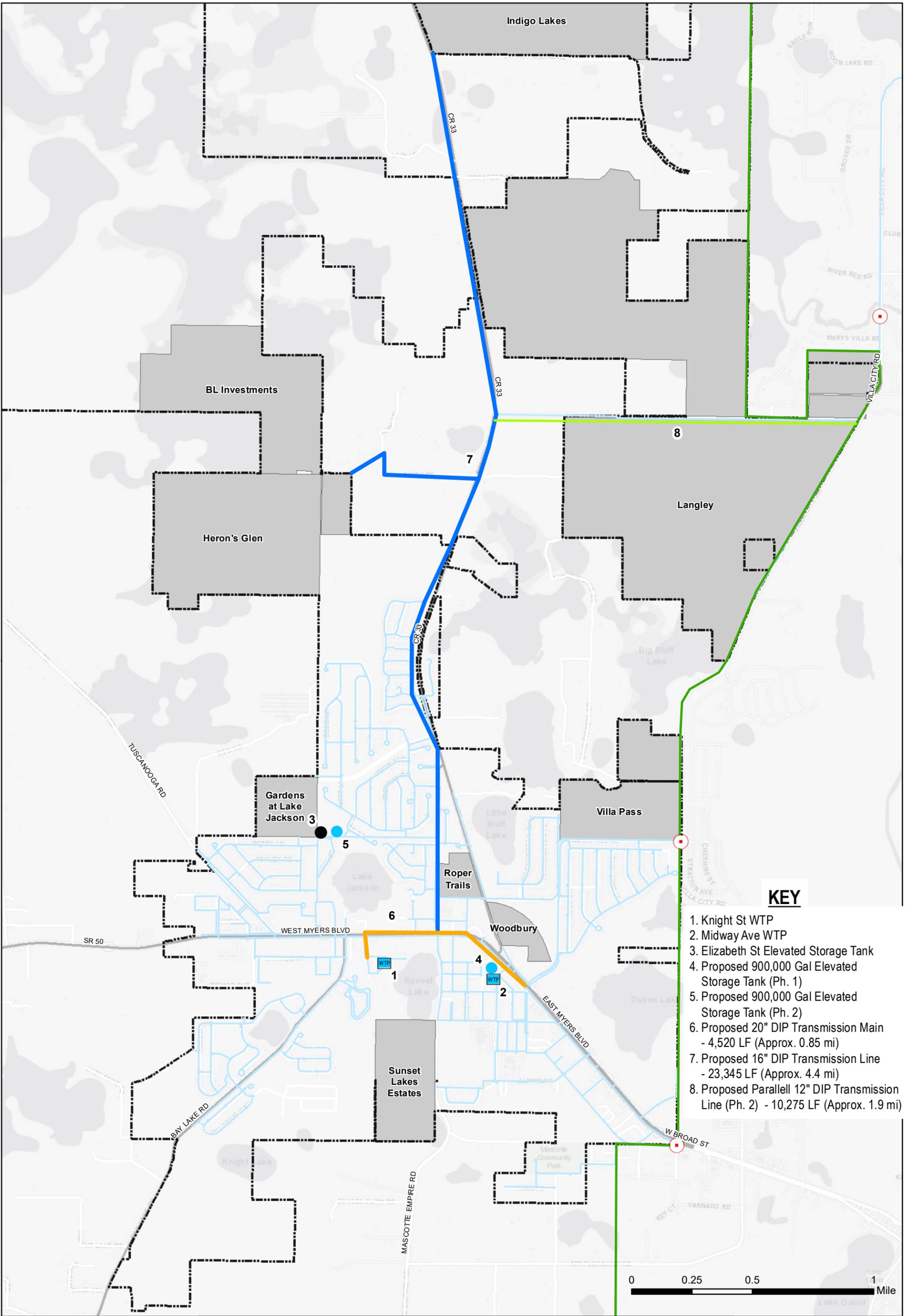
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WOODARD & CURRAN

Project #: 023230.1.02
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Figure Exported: 9/10/2021 10:51:00 AM By: cwallis.ch Using: \\woodardcurran.net\shared\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 3-5 Distribution Alt 3.mxd



KEY

- 1. Knight St WTP
- 2. Midway Ave WTP
- 3. Elizabeth St Elevated Storage Tank
- 4. Proposed 900,000 Gal Elevated Storage Tank (Ph. 1)
- 5. Proposed 900,000 Gal Elevated Storage Tank (Ph. 2)
- 6. Proposed 20" DIP Transmission Main - 4,520 LF (Approx. 0.85 mi)
- 7. Proposed 16" DIP Transmission Line - 23,345 LF (Approx. 4.4 mi)
- 8. Proposed Parallel 12" DIP Transmission Line (Ph. 2) - 10,275 LF (Approx. 1.9 mi)

Distribution Alternative 3
City of Mascotte
Figure 3-5

Legend

- | | | |
|---|---|---|
| — Proposed 12" Water Main | ● Existing Water Storage Tank | Planned Developments |
| — Proposed 16" Water Main | WTP Water Treatment Plants (WTP) | Future Planning Area City Zoning |
| — Proposed 20" Water Main | — Existing Water Mains | Mascotte City Limits |
| ● Proposed Water Storage Tank | Mascotte-Groveland Interconnection | |



Project #: 0232301.02
Map Created: September 2021

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3.3.4 Water Distribution System Alternatives Cost Comparison

A cost comparison of the Water Production and Treatment Facility alternatives are presented in Table 3-4. The cost estimates shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and materials costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the estimate presented here.

Table 3-4: Water Distribution System Alternatives Cost Comparison

Item No.	Cost Item	Alternative 2:	Alternative 3:
		Install New Transmission Main and Storage Tanks - Without Looping	Install New Transmission Main and Storage Tanks - With Looping
1	CAPITAL COST SUMMARY		
1.1	Transmission Main	\$26,551,000	\$15,719,000
1.2	Elevated Storage Tanks	\$12,380,000	\$12,380,000
1.4	CAPITAL BASE COST	\$38,931,000	\$28,099,000
1.5	Construction Contingency (10%)	\$3,894,000	\$2,810,000
1.6	Total Construction Cost	\$42,825,000	\$30,909,000
1.7	Engineering (18%)	\$7,709,000	\$5,564,000
1.8	Legal, fiscal, and administrative (3%)	\$1,285,000	\$928,000
1.9	TOTAL CAPITAL COST	\$51,819,000	\$37,401,000
2	O&M COST SUMMARY		
2.1	Fire Hydrant Testing & Repairs		\$100,000
2.2	Cleaning & Coating		\$20,000
2.3	TOTAL ANNUAL O&M COST		\$120,000

3.3.5 Life Cycle Cost Analysis

Table 3-5 and Table 3-6 provide the 20-year life cycle cost analysis for the two proposed water production and treatment facility alternatives. The analysis is important for comparing the alternatives on an equivalent basis over the project life. Average service lives were established based on values provided in Florida Administrative Code Rule 25-30.140(2)a), assuming a class C, small utility.

**Table 3-5: Alternative 2 - Install New Transmission Main and Storage Tanks
Without Looping Present Worth Analysis**

Description	Construction Capital Cost	Expected Life	Years Remaining	Salvage Value (\$)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Transmission Main	\$26,551,000	35	15	\$11,379,000	\$0	\$100,000	\$19,820,000
Elevated Storage Tanks	\$12,380,000	30	10	\$4,127,000	\$0	\$20,000	\$9,660,000
Total:	\$38,931,000			\$15,506,000	\$0	\$120,000	\$29,480,000

**Table 3-6: Alternative 3 - Install New Transmission Main and Storage Tank
With Looping Present Worth Analysis**

Description	Construction Capital Cost	Expected Life	Years Remaining	Salvage Value (\$)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Transmission Main	\$15,719,000	35	15	\$6,737,000	\$0	\$100,000	\$12,434,000
Elevated Storage Tanks	\$12,380,000	30	10	\$4,127,000	\$0	\$20,000	\$9,660,000
Total:	\$28,099,000			\$10,864,000	\$0	\$120,000	\$22,094,000

3.4 AMI Upgrades

The alternatives described in this section relate to the City's ability to accurately track water usage and to collect the revenue required to continue to provide a reliable source of high-quality drinking water for potable use and fire protection.

3.4.1 Alternative 1 - No Action

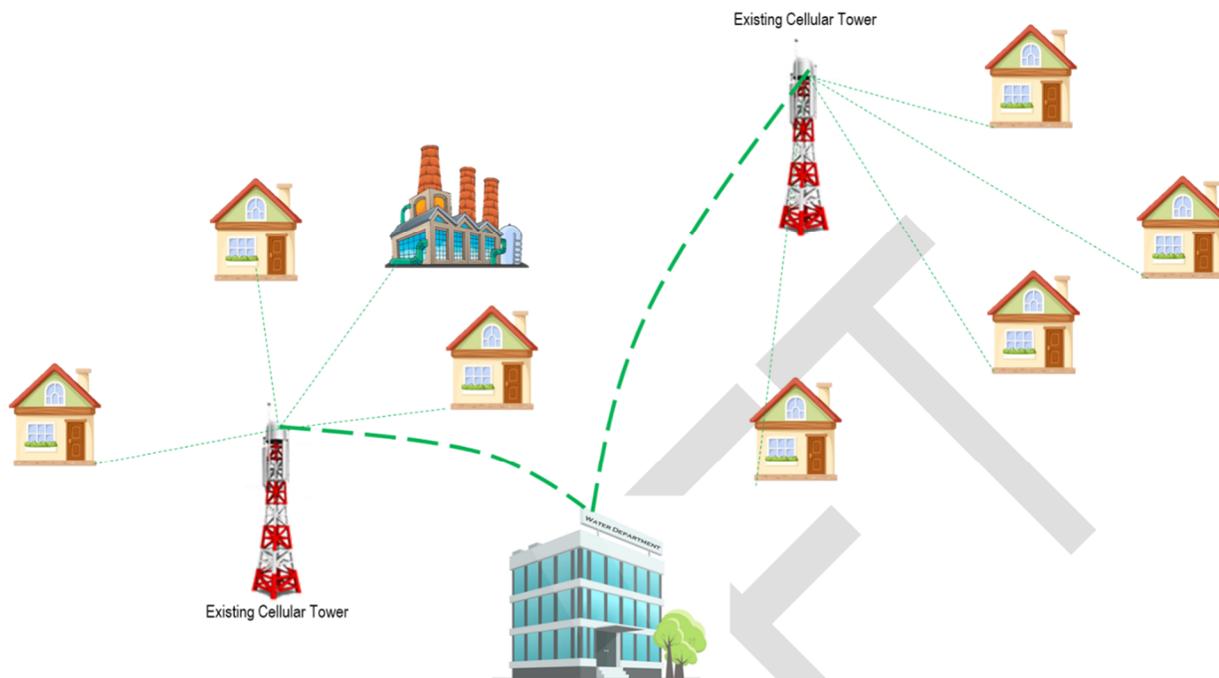
Under this alternative, the existing water meters will remain in service. The current meters must be read through a drive-by system which is time consuming. The drive-by system only gives the utility meter data once a month and is unable to provide trends throughout the system nor identify leaks in real time.

3.4.2 Alternative 2 – Metering Replacement Program with Cellular Based AMI

Under this alternative, all 2,148 water meters that were recently replaced would need to be replaced with meters that have integral cellular registers. MTUs Registers on each meter will send out a cell signal to a cell tower and the meter data will be collected on a web-based platform that can be accessed on-line (see Figure 3-6). This alternative is not very intrusive and does not require significant infrastructure. Meter data will be collected typically four times a day and metrics provided by the AMI vendor services for utility operators and consumers about usage and potential leaks in the system.

Florida regularly experiences severe weather events than can cause power outages. Cellular based communications are generally less prone to power outages than radio, making this option more reliable than a radio-based AMI system. However, the City has recently replaced its customer meters and they are radio AMI compatible. The cellular based alternative would require all the new meters to be retrofitted or replaced, making the cellular alternative more expensive.

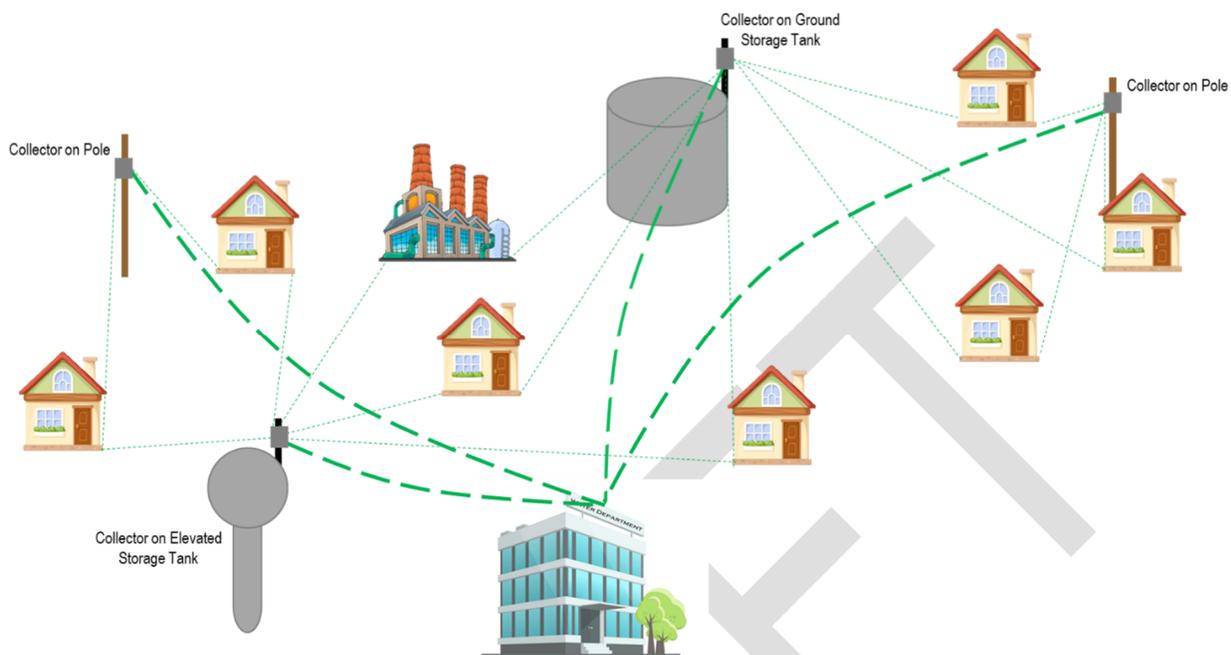
Figure 3-6: Cellular Based AMI System



3.4.3 Alternative 3 – Upgrade to Radio AMI

The City replaced their water meters in 2018 and 2019 within the existing service area with new meters which are compatible with AMI technology, see Figure 3-7. A propagation study was completed by Neptune Technology Group, which reported that four radio collectors are necessary to cover the existing service area of the City. The location of each proposed collector, or gateway location, is displayed in Figure 3-8. Under this alternative four collectors will be installed on existing municipal infrastructure and on newly constructed poles throughout the City to receive the signal from the meters. Each tower has an individual base station and collects data from a wide geographical range allowing redundancy for each collector. Under this alternative, the meters will send a radio signal to one of the four collectors around the City and transmit the usage data for that meter. The cost estimate and radio tower locations presented in this Facilities Plan were based on the 2019 Neptune Technology Groups Propagation Analysis. Refer to Appendix F for the Neptune R900 Propagation Analysis. If a different vendor is selected by the City during the implementation of metering upgrades, then a new propagation study may be necessary to confirm the estimated number and locations of the proposed towers.

Figure 3-7: Schematic for Radio AMI System



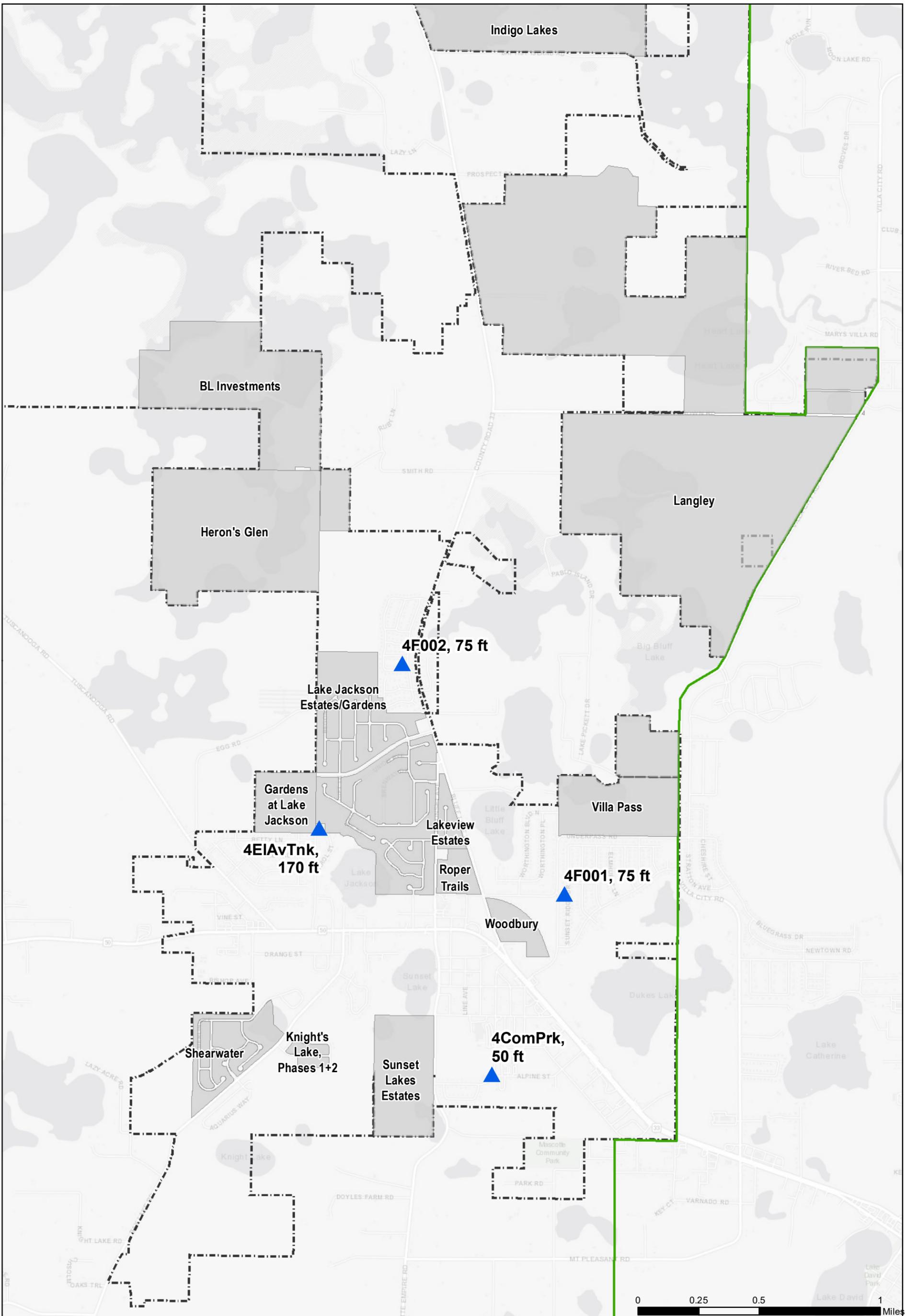


Figure Exported: 9/10/2021 By: cwallis.ch Using: WoodardCurran.net\shared\Projects\0232301.02 Mascotte DW Fcity Plan\wp\GIS\MXDs\Figure 4-1 Water Meter Propagation Study.mxd

AMI Radio Frequency Gateway Locations
99% Coverage
 City of Mascotte, FL
Figure 3-8

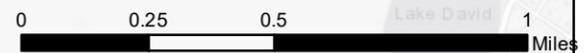
- Legend**
- Mascotte Property Developments
 - Future Planning Area City Zoning
 - Mascotte City Limits

▲ Gateway Location*

* As obtained by Neptune Technology Group



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 Map Created: September 2021



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3.4.4 AMI Alternatives Cost Comparison

A cost comparison of the AMI alternatives is presented in Table 3-7. The cost estimates shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and materials costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the estimate presented here.

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Table 3-7: Automated Metering Infrastructure Alternatives Cost Comparison

Item No.	Cost Item	Alternative 2:	Alternative 3:
		Metering Replacement Program with Cellular Based Advanced Metering Infrastructure	Meter Upgrade to Radio Advanced Metering Infrastructure
1	CAPITAL COST SUMMARY		
1.1	AMI Meter Upgrade	\$769,000	\$194,000
1.4	CAPITAL BASE COST	\$769,000	\$194,000
1.5	Construction Contingency (10%)	\$76,900	\$20,000
1.6	Total Construction Cost	\$850,000	\$214,000
1.7	Engineering (18%)	\$150,000	\$39,000
1.8	Legal, fiscal, and administrative (3%)	\$30,000	\$7,000
1.9	TOTAL CAPITAL COST	\$1,030,000	\$260,000
2	O&M COST SUMMARY		
2.1	Tower Maintenance		\$2,000

3.4.5 Life Cycle Cost Analysis

Table 3-8 and Table 3-9 provide the 20-year life cycle cost analysis for the two proposed water production and treatment facility alternatives. The analysis is important for comparing the alternatives on an equivalent basis over the project life. Average service lives were established based on values provided in Florida Administrative Code Rule 25-30.140(2)a), assuming a class C, small utility.

Table 3-8: Alternative 2 – Cellular Based AMI Present Worth Analysis

Description	Construction Capital Cost (C)	Expected Life	Years Remaining	Salvage Value (S)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Meters	\$672,000	17	-3		\$119,000.00	\$0.00	\$791,000
Meter/Transmitter Installation	\$81,000	17	-3		\$14,000.00	\$21,000	\$95,000
Mobilization/Demobilization	\$8,000			\$0.00	\$0.00	\$0.00	\$8,000
Billing Integration	\$4,000			\$0.00	\$0.00	\$0.00	\$4,000
Online Beacon Training	\$4,000			\$0.00	\$0.00	\$0.00	\$4,000
Total:	\$769,000			\$0.00	\$14,000.00	\$21,000.00	\$902,000

Table 3-9: Alternative 3 – Radio AMI Present Worth Analysis

Description	Construction Capital Cost (C)	Expected Life	Years Remaining	Salvage Value (S)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Set Up Fee	\$6,000			\$0	\$0	\$0	\$6,000
On-Site Training	\$3,000			\$0	\$0	\$0	\$3,000
1/2" x 50' Coax Antenna Cable w/ Connectors	\$2,000	17	-3	\$0	\$1,000	\$0	\$3,000
R900 Gateway RF Antenna	\$2,000	17	-3	\$0	\$1,000	\$20,000	\$347,000
UPS Outdoor Power Supply	\$10,000	17	-3	\$0	\$2,000	\$0	\$12,000
R900 Gateway V4 W/Cellular Modem	\$43,000	17	-3	\$0	\$8,000	\$0	\$49,000
7/8" x 170' Coax Antenna Cable W/ Connectors	\$3,000	17	-3	\$0	\$1,000	\$0	\$4,000
Antenna Towers/Poles Installation	\$125,000	17	-3	\$0	\$23,000	\$0	\$143,000
Total:	\$194,000			\$0	\$36,000	\$20,000	\$567,000

3.5 SCADA System Upgrades

The City's water operators need better monitoring and alarms for supervision and operation of the water system. It is recommended that the City implement a modern SCADA system with non-proprietary parts and considerations for future growth.

3.5.1 Alternative 1 – No Action

Under this alternative, there would be no rehabilitation or replacement of the aging and unreliable existing SCADA system. The existing SCADA system consists of a proprietary control system and software by Dataflow, Inc.

3.5.2 Alternative 2 – Retrofit Existing SCADA System

This alternative consists of reusing a portion of the existing electrical equipment in the system including instrumentation, conductors, control panels and terminal block equipment while only replacing the programmable logic controllers and SCADA computer. Retrofitting the existing system will include programming the new controllers to match the existing processes. All existing proprietary equipment would be removed. Future facilities will be specified to add the selected hardware platform to ensure consistency, serviceability, and compatibility. The alternative also includes implementing a Licensed Frequency, point to multiport radio system to connect communications to existing and future water sites including the water tank from central polling master location.

Retrofitting each site will require some manual operation while the system is being modified. The existing programmable controllers will be removed, and new, preprogrammed PLCs will go in place and re-wired, wire for wire to duplicate the existing IO layout. The digital inputs, analog inputs, digital outputs, and analog outputs will be pre-assigned to terminals and internal program alias tags. Startup will consist of testing the processes at the water plant to ensure everything is working as planned, checking each IO point in the process.

The existing SCADA PC would be replaced with a single computer running modern SCADA software. A secure firewall and router will be included in the installation to provide network security and secure remote access to authorized service personnel.

3.5.3 Alternative 3 – Full SCADA System Replacement

This alternative consists of replacing the entire SCADA system. This consists of all new controls, instruments, equipment, and a licensed radio system for remotes at both the Knight Street WTP and Elizabeth Tank site. Complete replacement of the control system may incur a higher capital cost than retrofitting the existing, but this alternative will provide reduced maintenance and repair in the future and a better risk management for operations. Upgrading the plant controls along with the recommended upgrades to the pumping and distribution system is more practical than retrofitting when considering longevity and scalability of the utility.

The existing SCADA PC will be replaced with a redundant set of computers running modern SCADA software. Uninterruptible power supplies will keep the computers on during a power failure long enough for the system to transfer to generator power. All SCADA panels and communication equipment would also be modified to include 120VAC and 24VDC uninterruptible power supplies for continuous monitoring and reduced production downtime.

A firewall and router will be installed and configured to provide remote access and secure pathways for data to reach the cloud. A setup with a DMZ as shown is recommended as shown in Figure 3-8. Network improvements including a managed switch to control the flow of data within the system is recommended.

3.5.4 SCADA Alternatives Cost Comparison

A cost comparison of the SCADA alternatives is presented in **Error! Reference source not found.** The cost estimates shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and materials costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the estimate presented here.

Figure 3-9: Cybersecurity Networking Diagram

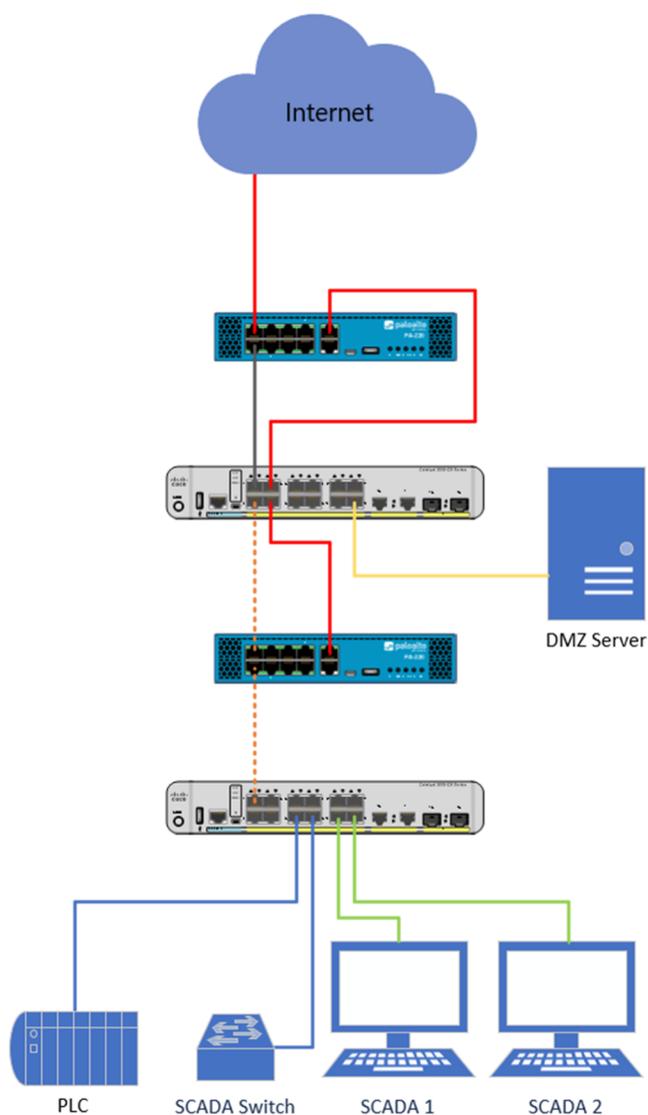


Table 3-10: SCADA Upgrades Alternatives Cost Comparison

Item No.	Cost Item	Alternative 2:	Alternative 3:
		Retrofit Existing SCADA System	Full SCADA System Replacement
1	CAPITAL COST SUMMARY		
1.1	Knight Street WTP	\$47,000	\$98,000
1.2	Operator SCADA Terminals, Control Screens	\$34,000	\$44,000
1.3	Master RTU	\$38,000	\$38,000
1.4	Cybersecurity - Firewall, Managed Routers, Historian Server	\$19,000	\$19,000
1.5	Elizabeth Street Tank	\$16,000	\$26,000
1.6	CAPITAL BASE COST	\$154,000	\$225,000
1.7	Construction Contingency (10%)	\$15,000	\$23,000
1.8	Total Construction Cost	\$169,000	\$248,000
1.9	Engineering (18%)	\$30,000.00	\$45,000.00
1.10	Legal, Fiscal and Administrative (3%)	\$5,000	\$7,000
1.11	TOTAL CAPITAL COST	\$204,000	\$300,000
2	O&M COST SUMMARY		
2.1	<i>Operation</i>	\$6,000	\$4,000
2.2	<i>Maintenance</i>	\$3,000	\$1,000
2.3	TOTAL ANNUAL O&M COST	\$9,000	\$5,000

1. Implementation costs are included in capital costs.

3.5.5 Life Cycle Cost Comparison

Table 3-11 and Table 3-12 provide the 20-year life cycle cost analysis for the two SCADA alternatives. The analysis is important for comparing the alternatives on an equivalent basis over the project life. Average service lives were established based on values provided in Florida Administrative Code Rule 25-30.140(2)a), assuming a class C, small utility.

Table 3-11: Alternative 2 – Retrofit Existing SCADA System Present Worth Analysis

Description	Construction Capital Cost (C)	Expected Life	Years Remaining	Salvage Value (S)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Knight Street WTP	\$47,000	10	-10	\$0	\$47,000	\$9,000	\$237,000
Operator SCADA Terminals, Control Screens	\$34,000	10	-10	\$0	\$34,000	\$0	\$60,000
Master RTU	\$38,000	10	-10	\$0	\$38,000	\$0	\$67,000
Cybersecurity - Firewall, Managed Routers, Historian Server	\$19,000	10	-10	\$0	\$19,000	\$0	\$34,000
Elizabeth Street Tank	\$16,000	10	-10	\$0	\$16,000	\$0	\$28,000
Total:	\$154,000			\$0	\$154,000	\$9,000	\$426,000

Table 3-12: Alternative 3 – Full SCADA System Replacement Present Worth Analysis

Description	Construction Capital Cost (C)	Expected Life	Years Remaining	Salvage Value (S)	Replacement Cost (R)	Annual O&M (O&M)	Life Cycle Cost (LCCA)
Knight Street WTP	\$98,000	10	-10	\$0	\$98,000	\$5,000	\$257,000
Operator SCADA Terminals, Control Screens	\$44,000	10	-10	\$0	\$44,000	\$0	\$77,000
Master RTU	\$38,000	10	-10	\$0	\$38,000	\$0	\$67,000
Cybersecurity - Firewall, Managed Routers, Historian Server	\$19,000	10	-10	\$0	\$19,000	\$0	\$34,000
Elizabeth Street Tank	\$26,000	10	-10	\$0	\$26,000	\$0	\$46,000
Total:	\$225,000			\$0	\$225,000	\$5,000	\$481,000

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4. SELECTED PLAN

This section of the report presents the recommended alternatives for the water system. The recommended plan is based on Woodard & Curran's evaluations described within this report. An investigation into environmental impacts and cost estimates of the recommended plan are also included in this section. The recommended facilities are located on existing properties owned by the City. The Site Certification form is provided in Appendix H.

4.1 Description of Proposed Facilities

The recommended facilities are located on existing properties owned by the City. The recommended proposed facilities comprise of Alternative 3 from each the alternative categories - Water Distribution System Upgrades, Water Production and Treatment Facility Improvements, AMI Upgrades, and SCADA Upgrades. The recommendations for each the Water Production and Treatment Alternative and the Distribution and Treatment Alternative address existing issues in demand capacity, redundancy and auxiliary water storage, water quality, and the community water system's ability to accommodate projected demands. The AMI and SCADA upgrades are designed to increase water system operations efficiency in collecting meter data and proficiency in monitoring, recording, and alarming of system operational parameters.

4.1.1 Water Production and Treatment Facility Upgrades

As depicted in Figure 2-17, the City's water demand is expected to grow significantly and it is unlikely that the SJRWMD will permit additional withdrawal capacity from the UFA, so any additional capacity required in the future is planned to be sourced from the LFA. Alternative 1 is not feasible due to capacity requirements to meet existing and future projected demands; it is necessary that the City expand its production and treatment facilities to meet anticipated demands. Alternative 2 is feasible and provides both an interim solution, by upgrading the existing WTP to handle demands anticipated to 2030, and a long-term solution, by replacing the existing WTP with a new WTP to handle demands anticipated beyond 2030. However, this alternative is more costly than Alternative 3 because it requires a separate project to upgrade the existing facility.

Alternative 3 involves upgrades to the Midway Avenue WTP and construction of a new Knight Street WTP. Alternative 3 is recommended because it is the most cost-effective and practical alternative to meet the anticipated increase in demand over the planning period.

The planning level cost estimates for rehabilitation of the Midway Avenue WTP and construction of a new Knight Street WTP are based on having the capacity to handle the projected 7% growth rate maximum day demand of 4.75 MGD.

4.1.2 Water Distribution System Upgrades

Alternative 1 is not feasible due to capacity and distribution requirements to meet existing and future projected demands. Alternative 2 includes the upsizing and extension of the existing system to reach proposed developments and handle anticipated demands and would replace the existing 12-inch transmission main that follows CR-565 (north and south) and Simon Brown Road (east and west). Although feasible, this proposed configuration would result in a longer route and a larger diameter main that is estimated to be more expensive than the configuration in Alternative 3. Also, this configuration does not provide a loop in the system and may promote excessive water age.

Alternative 3 upgrades include construction of two 900,000- gallon elevated storage tanks and approximately 46,250 linear feet new 12-inch through 20-inch transmission mains within existing city owned land. The construction of the proposed storage tanks should be phased so that the first is installed by 2023 and the second by 2030. This phased plan will expand the water system capacity gradually with the anticipated rate of increase in demand so that water age and maintenance and repair costs are minimized. It will be necessary that new transmission mains are constructed to

distribute water to the proposed developments. Under this recommended alternative a new 20-inch main will be installed from the Knight Street WTP in SR-33 to two new 16-inch mains at Smith Road and two each a new and an existing 12-inch main in Simon Brown Road. One 16-inch main will extend to the Heron's Glenn Development site via Smith Road and the other 16-inch main will extend to Indigo Lakes Development further up SR-33. The two 12-inch mains in Simon Brown Road will connect to the existing 12-inch main for a looped piping configuration so that water can circulate across the distribution system to the east in CR 565. Pipe looping allows for bidirectional flow, promotes circulation, and aids to mitigate excessive water age in the water system.

Alternative 3 is recommended because it is the most cost-effective solution for expansion and provides redundancy and flexibility to the City to take water mains offline for maintenance and repair while minimizing service interruptions.

4.1.3 AMI Upgrades

Alternative 3 is the recommended alternative because it utilizes the existing water meters to integrate into a new radio frequency AMI infrastructure that makes it the most cost effective compared to Alternative 2 that would require replacement of the water meters. The AMI vendor will host the usage data, integrate with the City's billing system, and provide usage data to consumers to indicate the presence of leaks throughout the system.

The collection of information through the AMI system will help with City water conservation efforts. Meter data will be collected typically every 15-minutes and metrics provided by the AMI vendor services for utility operators and consumers about usage and potential leaks in the system.

4.1.4 SCADA System Upgrades

Under the recommended alternative, Alternative 3 the SCADA system will be replaced entirely. This alternative will replace all existing control equipment at the plant and the water tank site and includes upgrading the entire radio network which will be utilized by both drinking water assets and wastewater assets. Replacing instrumentation at the same time as the communications upgrades will maximize system reliability with more modern components which are more likely to achieve a service life that extends through the planning period.

Alternative 3 components include a new licensed master radio system which will monitor the two existing remote stations, the Elizabeth Street tank and the Knight Street WTP's local equipment and more powerful antennas. The new master radio and antenna at the WTP and a repeater unit at the water tank will result in reduced communications failures during storm events and easier system expandability in the future. A new control panel, controller, instruments, and power supply will be installed at the existing Knight Street Plant and Elizabeth Tank site. A new master RTU will be installed at Knight Street WTP to read and write data to remote sites.

Dual operator interfaces with custom control screens will be installed at the plant offering immediate access to process controls and redundant data backup. Important cyber security features are also included in this option that will secure the City's controls network while allowing remote access for authorized service personnel.

4.2 Environmental Impacts of Recommended Facilities

The proposed water mains and water storage tank sit within previously disturbed areas and right-of-way. According to FEMA National Flood Hazard mapping tool, some proposed water mains are planned in existing right-of-way located in Zone A. Zone A is defined as areas subject to inundation by the one percent (1%) annual chance flood event, no base flood elevations determined. A small portion of the proposed water mains sit near wetlands. The wetlands are identified as freshwater ponds, freshwater emergent wetlands, and freshwater forested/shrub wetlands.

Impacts associated with the installation of equipment and structures will be located in previously disturbed areas and right-of-way. Impacts to flora, fauna, threatened or endangered plant and animal species, surface water bodies, prime agricultural lands, wetlands, or undisturbed natural areas will be avoided and no negative impacts to threatened, endangered, proposed, or candidate species are anticipated.

A list of threatened, endangered, proposed, and candidate species and designated critical habitats that may be present in or near the project area in Appendix D and were developed using the U.S. Fish and Wildlife Information for Planning and Consultation (IPaC) tool at [IPaC: Home \(fws.gov\)](https://www.fws.gov/ipac).

The proposed projects will result in improved water services, and thus positive impacts on human health and positive environmental effects on communities regardless of race and income.

4.3 Phasing and Cost Analysis

4.3.1 Project Phasing

The recommended plan is based on the full buildout growth population projection as presented previously in Figure 2-12. It is recommended that the presented plan be built in a phased approach of the recommended alternatives for Water Production and Treatment and Distribution Upgrades in order to make the plan more affordable to the City and its rate payers and to avoid overdesign by installing equipment that will age without being used and water quality issues related to high water age. Refer to Figure 3-3 and Figure 3-5 for an overview of the phasing components for the Water Production and Treatment and Distribution and Storage recommended alternatives.

Florida Department of Environmental Protection (FDEP) will not fund projects beyond the scope of reasonable growth. Therefore, the phasing timeline is based on meeting projected demand milestones to meet demands for a reasonable growth rate, of 4%, and a 7% growth rate to meet demands of projected population growth. The growth rate milestones are indicated in Figure 2-19 Water Demand Forecast.

4.3.1.1 Phase 1 – 4% Projected Growth Demands

Phase 1 includes the recommended alternative components to treat, produce, and distribute projected demand flows up to 4% growth based on the 7% growth rate and are listed in Table 4-1.

Table 4-1: Phase 1 Alternative Components

Alternative Category	Description
Water Production and Treatment	Midway WTP Rehabilitation
	New Knight Street WTP w/ 3 high service pumps
	Special Studies: Update CUP, LCRR, CCS
Distribution & Storage	New 20-inch Main from Knight Water Treatment to Simon Brown Road in SR-33; New 16-inch Transmission Main from SR-33 at Simon Brown Road to Heron's Glen and Langley Developments
	1 - 900k Gallon Elevated Storage Tank at Midway Avenue
SCADA	Full SCADA System Replacement
Water Meters	Radio Frequency AMI

4.3.1.2 Phase 2 – 7% Projected Growth Demands

Phase 2 includes the recommended alternative components to treat, produce, and distribute projected demand flows up to 7% growth and are listed in Table 4-2.

Table 4-2: Phase 2 Alternative Components

Alternative Category	Description
Water Production and Treatment	Add 1 - high service pump at the Knight St WTP
Distribution & Storage	New 12-inch Main from SR-33 to Villa City in Simon Brown Road
	1 - 900k Gallon Elevated Storage Tank at Elizabeth Street Site

4.3.2 Conceptual Level Projected Cost

The conceptual level Opinion of Probable Cost (OPC) for the overall recommended plan is \$45.6M in 2021 dollars and is summarized in Table 4-3. Cost details are presented in Appendix A.

Table 4-3: Conceptual Level Cost Estimate Summary – Recommended Plan

Alternative Category	Construction Base Cost	10% - Construction Contingency	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$5,479,000	\$548,000	\$6,027,000	\$1,385,000	\$181,000	\$7,593,000
Distribution & Storage	\$28,099,000	\$2,810,000	\$30,909,000	\$5,564,000	\$928,000	\$37,401,000
SCADA	\$225,000	\$23,000	\$248,000	\$45,000	\$8,000	\$301,000
Water Meters	\$194,000	\$20,000	\$214,000	\$39,000	\$7,000	\$260,000
Selected Plan Total	\$33,997,000	\$3,401,000	\$37,398,000	\$7,033,000	\$1,124,000	\$45,555,000

1. Costs for special studies (Update CUP, LCCR, CCR) are include with the engineering costs for Water Production and Treatment.

As would be expected, costs increase during a phased approach due to the inefficiencies of construction over long periods of time, as well as escalation of costs over time. Escalated costs were applied to each of the phases based on the estimated mid-point construction year and a 3% escalation per year. Escalation was only applied to the construction costs. The assumed mid-point construction year is presented in Table 4-4. The conceptual level cost estimates for each phase are summarized in Table 4-5 and Table 4-6.

Table 4-4: Phasing Midpoint Construction

Phase	Mid-Point Construction Year
Phase 1	2025
Phase 2	2029

Table 4-5: Phase 1 Conceptual Level Cost Estimate Summary – Recommended Plan

Alternative Category	Construction Base Cost	10% - Construction Contingency	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$5,385,000	\$539,000	\$5,924,000	\$1,367,000	\$178,000	\$7,469,000
Distribution & Storage	\$21,909,000	\$2,191,000	\$24,100,000	\$4,338,000	\$723,000	\$29,161,000
SCADA	\$225,000	\$23,000	\$248,000	\$45,000	\$8,000	\$301,000
Water Meters	\$194,000	\$20,000	\$214,000	\$39,000	\$7,000	\$260,000
Phase 1 Total Cost ²	\$27,713,000	\$2,773,000	\$30,486,000	\$5,789,000	\$916,000	\$37,191,000

1. Costs for special studies (Update CUP, LCCR, CCR) are included with the engineering costs for Water Production and Treatment.

2. Phase 1 total costs are presented in 2021 dollars.

Table 4-6: Phase 2 Conceptual Level Cost Estimate Summary – Recommended Plan

Alternative Category	Construction Base Cost	10% - Construction Contingency	Total Construction Cost	18% - Engineering and Inspection ¹	3% - Legal, Fiscal, and Administrative	Total Project Cost
Water Production and Treatment	\$94,000	\$10,000	\$104,000	\$19,000	\$4,000	\$127,000
Distribution & Storage	\$6,190,000	\$619,000	\$6,809,000	\$1,226,000	\$205,000	\$8,240,000
SCADA	\$0	\$0	\$0	\$0	\$0	\$0
Water Meters	\$0	\$0	\$0	\$0	\$0	\$0
Phase 2 Total Cost ²	\$6,284,000	\$629,000	\$6,913,000	\$1,245,000	\$209,000	\$8,367,000

1. Costs for special studies (Update CUP, LCCR, CCR) are include with the engineering costs for Water Production and Treatment.

2. Phase 2 total costs are presented in 2021 dollars.

4.4 Consistency with Comprehensive Plan

The recommendations resulting from this study are consistent with both the City's and the County's local Comprehensive Plans.

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5. IMPLEMENTATION AND COMPLIANCE

5.1 Public Meeting

A public meeting was held _____, 2021 after advertising in the Daily _____. Resolution _____ to approve this Drinking Water Facilities Plan and submit to the FDEP passed at the meeting. A copy of Resolution _____, the legal advertisement affidavit, and certified meeting minutes are provided in Appendix M.

5.2 Regulatory Agency Review

To qualify for a subsidized loan from the SRF, various government agencies must be satisfied with the way that the City is proposing to address their water system challenges. Copies of the Facilities Plan adopted by the City are being sent to the following government agencies for review and comments:

- Florida Department of Environmental Protection;
- Florida Department of Health;
- Saint John's River Water Management District;
- U.S. Environmental Protection Agency;
- East Central Florida Regional Planning Council; and
- Department of Community Affairs, State Clearing House.

5.3 Financial Planning

The FDEP SRF program is expected to be the financing source for the project. A capital financing plan (CFP) has been prepared to explain to the public and to the State Agency the financial impact on the users of the water system. The CFP is provided in Appendix I and demonstrates that water and sewer operating expenses; existing debt service obligations; and proposed project debt service associated with capital projects identified in this facility plan can be funded through current utility rates, existing approved annual increases, and water and sewer impact fees.

The CFP is based on the current utility rates (updated XXX) and the rate ordinance that the City adopted with a consumer price index (CPI) increase annually, as well as water and sewer impact fees. Utility rate documents are provided in Appendix K to support the CFP.

5.4 Project Implementation

The City of Mascotte has the sole responsibility and authority to implement the recommended facilities.

5.4.1 Implementation Schedule

The implementation schedule is estimated to follow the timeline below:

Design and Phase 1 Project

- November 2021 – Submit draft Facilities Plan to FDEP & other government agencies
- January 2021 - Prepare Facility Planning documentation
- February 2022 – Hold public meeting on the Facilities Plan and Capital Financing Plan;
- February 2022 – Publication of Department’s environmental information document in the Florida Administrative Weekly;
- February 2022 – Submit Request for Inclusion (RFI) to FDEP (Tallahassee) for design funding;
- March 2022 – End of 30-day comment period for the environmental information document approval of planning documents;
- April 2022 – Submit loan application to FDEP (Tallahassee) for Design Phase;
- May 2022 – Resolution and council approval of FDEP loan agreements for design;
- June 2022 – Complete loan agreements for design phase and release contract for design;
- June 2022 – May 2023 – Project Design
- June 2023 - Submit plans and specifications to the FDEP (Tallahassee) and submit the construction permit application for Phase 1 to the FDEP (District Office);
- July 2023 – Notice of intent to permit construction of Phase 1 issued and project added to the priority list;
- July 2023– Submit Request for Inclusion (RFI) for addition of the Phase 1 construction to FDEP’s project priority list;
- August 2023 – Hearing to add Phase 1 to the Fundable portion of the priority list;
- August 2023 – Submit loan application for Phase 1 to FDEP (Tallahassee) for construction phase;
- September 2023 – Resolution and council approval of FDEP loan agreements for construction of Phase 1;
- October 2023 – Complete Phase 1 loan agreements for construction phase;
- October 2023 – Advertise for Phase 1 bids;
- December 2023 – Open construction Phase 1 bids;
- February 2024 – Award Phase 1 contract;
- April 2024 – Start Phase 1 project construction;
- October 2025 – Complete construction of the Phase 1 project;
- January 2026 – Certify operation performance of the project and close out the Phase 1 project; and
- July 2026 – Begin SRF loan repayments to FDEP for Phase 1.

Phase 2 Project

- March 2027 - Submit the construction permit application for Phase 2 to the FDEP (District Office);

- April 2027 – Notice of intent to permit construction of Phase 2 issued and project added to the priority list;
- April 2027 – Submit Request for Inclusion (RFI) for addition of the Phase 2 construction to FDEP's project priority list;
- May 2027 – Hearing to add Phase 2 to the Fundable portion of the priority list;
- May 2027 – Submit loan application for Phase 2 to FDEP (Tallahassee) for construction phase;
- June 2027 – Resolution and council approval of FDEP loan agreements for construction of Phase 2;
- July 2027 – Complete Phase 2 loan agreements for construction phase;
- July 2027 – Advertise for Phase 2 bids;
- September 2027 – Open construction Phase 2 bids;
- November 2027 – Award Phase 2 contract;
- January 2028 – Start Phase 2 project construction;
- January 2030 – Complete construction of the Phase 2 project;
- April 2030 – Certify operation performance of the project and close out the Phase 2 project; and
- October 2030 – Begin SRF loan repayments to FDEP for Phase 2.

5.5 Compliance

1. The selected alternatives will allow the City to meet the compliance for FDEP drinking water standards with, since these do not require unknown treatment and or distribution process and or strategies.
2. The selected alternatives will allow the City to meet the reliability requirements as per Chapter 62-555, Florida Administrative Code (F.A.C.).
3. Environmental aspects of the proposed facilities are based on generally acceptable engineering criteria and assumed by W&C to be satisfactory.
4. The recommended facilities are consistent with the City of Mascotte's Comprehensive Plan.

APPENDIX A: COST INFORMATION ON SELECTED ALTERNATIVE

Water Production and Treatment Facilities Improvements

Description	Cost
Midway Avenue WTP Rehabilitation	
High Service Pumps	\$150,000
Pump housing	\$80,000
Well Rehabilitation	\$50,000
Chlorine Gas	\$13,000
I&M and Corrosion Control Treatment	\$7,000
Ground Storage Tank	\$100,000
Site Work	\$188,000
Standby Genset	\$188,000
Electrical	\$233,000
SCADA Upgrades	\$30,000
<i>Midway Ave WTP Rehabilitation Subtotal</i>	<i>\$1,040,000</i>
New Knight Street WTP	
High Service Pumps	\$375,000
New WTP Building	\$929,000
Chlorine Disinfection	\$811,000
I&M and Corrosion Control Treatment	\$10,000
Ground Storage Tank	\$938,000
Site Work	\$313,000
Electrical	\$1,013,000
SCADA	\$50,000
<i>New Knight St WTP Subtotal</i>	<i>\$4,439,000</i>
<i>Subtotal</i>	<i>\$5,479,000</i>
Construction Contingency (10%)	\$548,000
Total Construction Cost	\$6,027,000
Engineering and Inspection (18%)	\$1,085,000
Special Studies	
Update CUP	\$100,000
LCRR	\$150,000
Corrosion Control Study	\$50,000
<i>Special Studies Subtotal</i>	<i>\$300,000</i>
Total Cost-Plus Cost of Special Studies	\$7,348,000
Legal, Fiscal and Administrative (3%)	\$181,000
Project Total:	\$7,593,000

Water Distribution System Upgrades

Description	Cost
Transmission Mains	
New 20-inch Main from Knight Water Treatment to Simon Brown Road in SR-33	\$8,250,000
New 16-inch Transmission Main from SR-33 at Simon Brown Road to Heron's Glen and Langley Developments	\$4,969,000
New 12-inch Main from SR-33 to Villa City in Simon Brown Road	\$2,500,000
<i>Transmission Mains Subtotal</i>	\$15,719,000
Storage Facilities	
Elevated Storage Tanks (2 x 900k gal)	\$12,380,000
<i>Storage Facilities Subtotal</i>	\$12,380,000
<i>Construction Subtotal</i>	\$28,099,000
Construction Contingency (10%)	\$2,810,000
Total Construction Cost	\$30,909,000
Engineering and Inspection (18%)	\$5,564,000
Legal, Fiscal and Administrative (3%)	\$928,000
Project Total:	\$37,401,000

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Automated Metering Infrastructure Upgrades

Description	Cost
Set Up Fee	\$6,000
On-Site Training	\$3,000
1/2" x 50' Coax Antenna Cable w/ Connectors	\$2,000
R900 Gateway RF Antenna	\$2,000
UPS Outdoor Power Supply	\$10,000
R900 Gateway V4 W/Cellular Modem	\$43,000
7/8" x 170' Coax Antenna Cable W/ Connectors	\$3,000
Antenna Towers/Poles Installation	\$125,000
<i>Radio Frequency AMI Upgrade Subtotal</i>	<i>\$194,000</i>
Construction Contingency (10%)	\$20,000
Total Construction Cost	\$214,000
Engineering and Inspection (18%)	\$39,000
Legal, Fiscal and Administrative (3%)	\$7,000
Project Total:	\$260,000

SCADA Upgrades

Description	Cost
Knight Street WTP Replacement	
FCC License, Viper Radios	\$5,000.00
Flow Meter	\$7,000.00
Antenna Install	\$24,000.00
Pressure Transducer	\$6,000.00
Electrical	\$3,000.00
PLC Programming	\$5,000.00
Start-up	\$14,000.00
HMI Programming	\$20,000.00
FAT	\$14,000.00
<i>Knight Street WTP Subtotal</i>	<i>\$98,000.00</i>
Operator SCADA Terminals, Control Screens	
SCADA Computer	\$4,000.00
VTScada	\$17,000.00
TAPI modem	\$1,000.00
HMI Programming	\$13,000.00
Start-up	\$4,000.00
Installation	\$4,000.00
FAT	\$1,000.00
<i>SCADA Computer Subtotal</i>	<i>\$44,000.00</i>
Master RTU	
RTU Panel	\$24,000.00
Radio	\$1,000.00
Electrical	\$2,000.00

Start-up	\$7,000.00
Installation	\$3,000.00
FAT	\$1,000.00
<i>MasterRTU Subtotal</i>	<i>\$38,000.00</i>
Cybersecurity - Firewall, Managed Routers, Historian Server	
Firewall	\$2,000.00
Switches	\$1,000.00
Router	\$2,000.00
SCADA server/historian	\$3,000.00
Start-up	\$7,000.00
Installation	\$3,000.00
FAT	\$1,000.00
<i>Cybersecurity Subtotal</i>	<i>\$19,000.00</i>
Elizabeth Street Tank	
Remote	\$7,000.00
Transducer	\$3,000.00
Master Antenna on Tank	\$2,000.00
Electrical	\$2,000.00
Antennae Installation	\$6,000.00
PLC Programming	\$2,000.00
Start-up	\$2,000.00
Installation	\$2,000.00
FAT	\$2,000.00
<i>Elizabeth Street Tank Subtotal</i>	<i>\$26,000.00</i>
<i>Subtotal</i>	<i>\$225,000</i>
Construction Contingency (10%)	\$23,000
Total Construction Cost	\$248,000
Engineering and Inspection (18%)	\$45,000
Legal, Fiscal and Administrative (3%)	\$7,000
Project Total:	\$300,000

APPENDIX B: MASCOTTE WATER SYSTEM HYDRAULIC MODEL SIMULATION

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1. HYDRAULIC MODEL DEVELOPMENT & EVALUATION

In order to better analyze the water distribution system, identify projects, and model future scenarios, a water distribution system hydraulic model was developed by Woodard and Curran (W&C) for the City of Mascotte. The following sections outline the model development and analyses performed.

1.1 Previous Model Development

Mascotte’s hydraulic computer model was previously developed in 2017 by BESH. The model had been created for a specific purpose to evaluate scenarios at the Midway Avenue facility and was not a comprehensive distribution system model.

Mascotte’s previous hydraulic computer model pipes were designated as “pipes”, pipe intersections as “junctions”, and supply sources as “reservoirs”. Pumps were used to transfer water from the reservoirs to the distribution system. Each of these model components has properties or attributes that correspond to the actual physical properties of the distribution system facilities. The data used to develop the computer model included pipe characteristics (diameter, installation year, length and friction coefficient C-value), junction characteristics (elevation and demand), and pump characteristics (pump curves and operational controls).

1.2 Hydraulic Model Updates

For the new hydraulic model, many of the element characteristics including pipe diameter, length, C-value and junction elevation were imported from the previous model. Using information provided by the City of Mascotte, the model was updated to reflect existing infrastructure, demands, tank fluctuations, and physical characteristics in the system.

One reservoir, one tank, two well pumps, and three high service pumps were added to the hydraulic mode to represent the Knight Street Water Treatment Plant (GSWTP). Additionally, one tank was added to represent the Elizabeth Street Tank. Characteristics such as dimensions, operating levels, and pump curves were compiled from information provided by the City and incorporated into the hydraulic model. Storage facility characteristics were obtained from tank record drawings and vendor drawings. Pump curves were obtained from vendors using the pump manufacturer and design information provided by the City. Using the pump curves provided, it was assumed that Wells B and C are single stage with a design head of 28 feet, and that impeller sizes are 7.437-inches for Well B and 8.063-inches for Well C. Ground elevations were added using information from Google Earth.

The updated hydraulic model contains 486 junctions and 603 pipe segments, making up approximately 37 miles of water distribution piping. All of the distribution piping in the model is polyvinyl chloride (PVC). The hydraulic model also includes two tanks and five pumps. **Error! Reference source not found.** presents the total length of pipe in each diameter.

Table 1: Modeled Pipe Diameter and Length

Pipe Diameter (inches)	Approximate Length (miles)
6	18
8	9
10	3
12	7
Total	37

1.2.1 Pipe Condition Calibration

The estimated Hazen-Williams Coefficient, or C-value, was used to define the relative capacity of the water mains. According to the Hazen-Williams formula, the lower the C-value, the lower the carrying capacity of a pipe. The typical C-value for new PVC pipes is approximately 150 and remains close to that value over the lifetime of the pipe. Pipes with a C-value of 135 have a flow capacity of 90% of a newer pipe with a C-value of 150.

The deposition of sediment and or scaling and precipitation (usually calcium/magnesium carbonate type) on the interior of mains is the chief cause of reduced carrying capacity of water pipelines. The result is increased friction and a corresponding resistance to flow and a reduction in pressure. Other factors that could reduce flow and pressure in a piping system are partially closed valves or fully closed valves resulting in disconnected water mains that have not been discovered yet. To obtain an accurate representation of the distribution system, it was necessary to adjust model parameters, specifically C-values, to match results of field testing.

Flow testing was conducted in May of 2021 by the City at nine locations throughout the distribution system capturing both 6-inch and 8-inch water mains. Flow test results were compared to simulated available fire flow in the hydraulic model and C-Factors were adjusted as needed to achieve a result within 5% of the flow testing data. In order to achieve this, the following C-values were adjusted:

- The 6-inch pipes surrounding the Midway Avenue well area (Sunset Heights) were lowered to 60
- The 8-inch pipe in E Meyers Blvd was lowered to 40
- The 8-inch pipe in North Sunset Ave was lowered to 80
- The 8-inch pipe in Palmetto Road and Underpass Road was lowered to 100
- The 6-inch and 8-inch pipes in the Dukes Lake neighborhood were lowered to 60
- The 12-inch pipe between Midway Avenue and Ridgemoor Drive was lowered to 40

1.2.2 Model Demands

The existing average and maximum day demand was calculated using meter data between 2019 and 2020. Water demands were allocated to the nearest junction of each customer in the model via geolocation. Then, model demands were inflated to match the 2021 water production provided by the City. A daily diurnal pattern was developed using hourly tank level fluctuations and production data for an average day in September 2020 and maximum demand day in April 2021 provided by the City. Diurnal curves for both average and maximum day demands are displayed below in Figure 1 and Figure 2.

Figure 1: Average Day Diurnal Curve

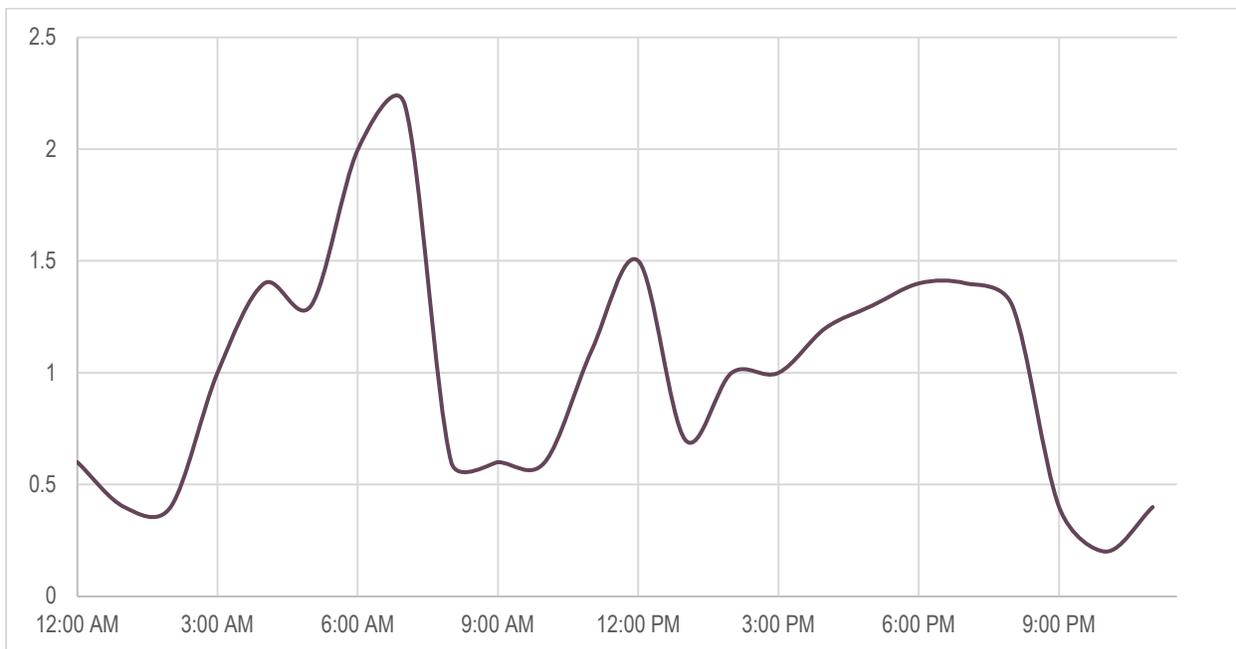
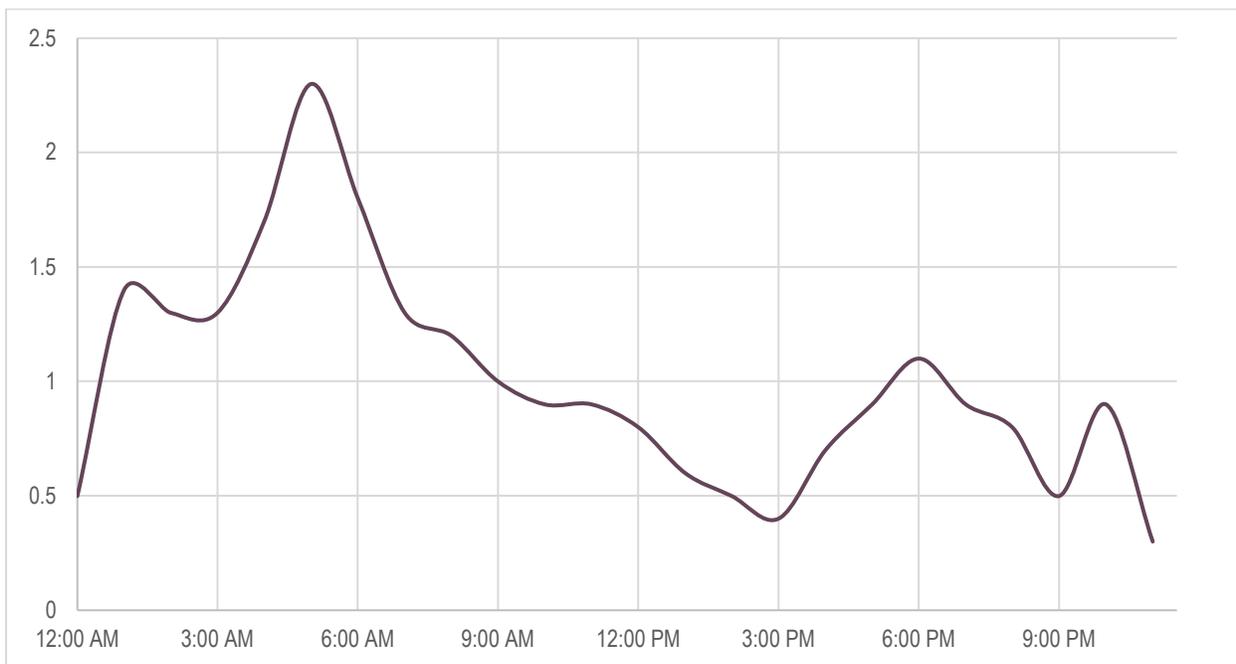


Figure 2: Maximum Day Diurnal Curve



1.2.3 Model Scenarios

The following scenarios were created for performing hydraulic model analysis:

Average Day Demand – Normal operating conditions exist with current average water demands (0.8 MGD). The average day diurnal curve was applied to all system demands.

Maximum Day Demand – Normal operating conditions exist with current average water demands (1.2 MGD). The maximum day diurnal curve was applied to all system demands.

The hydraulic model utilized a 72-hour Extended Period Simulation (EPS) analysis to evaluate variations in demand, pumping rate, tank levels, available fire flows, and or pressures that occur during each simulated scenario. The peak hour usage was evaluated by observing the highest flow produced throughout the maximum day demand EPS scenario. Existing tank setpoints for the Elizabeth Street Tank are based on a pressure gauge located on the tank inlet/outlet pipe and are as follows:

- Pumps Off: 77 psi
- Lead Pump On: 75 psi
- Lag Pump 1 On: 70 psi
- Lag Pump 2 On: 65 psi

The Knight Street Tank setpoints are based on tank level and are as follows:

- Pumps Off: 17.8 feet
- Lead Pump On: 16 feet
- Lad Pump On: 15 feet

The resultant approximate typical tank operating levels in the model for the Knight Street Tank are between 13 and 18 feet, and for the Elizabeth Street Tank are between 4 and 32 feet. Model predicted tank levels and pump flows under normal operating conditions are shown in Figure 3 and Figure 4 for an average demand day, and in Figure 5 and

Figure 6 for a maximum demand day.

Figure 3: Average Demand Day Tank Fluctuations

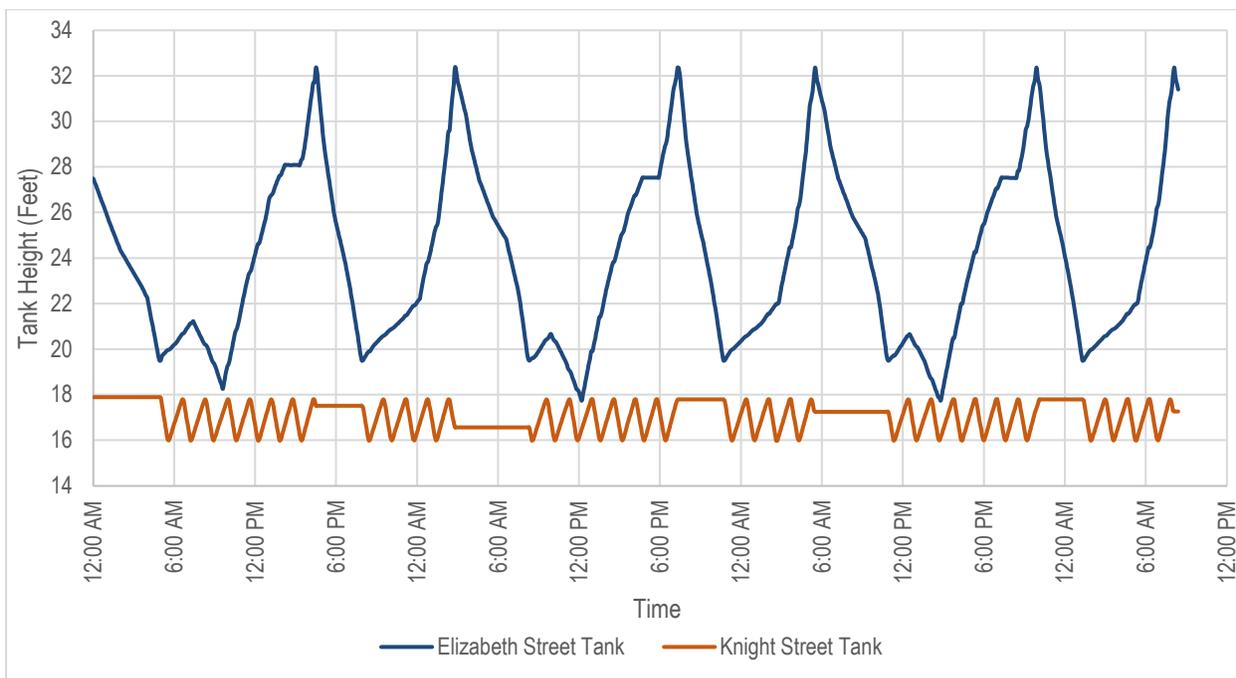


Figure 4: Average Demand Day Pump Flows

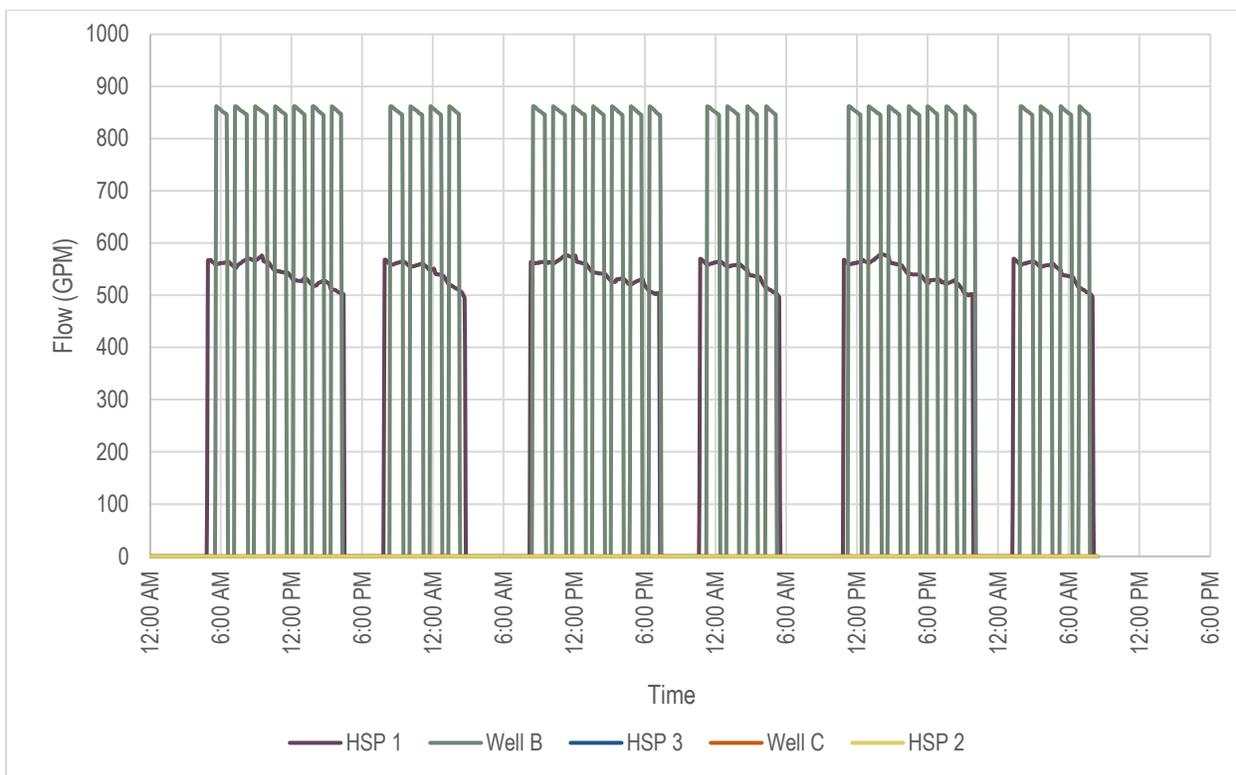


Figure 5: Maximum Demand Day Tank Fluctuations

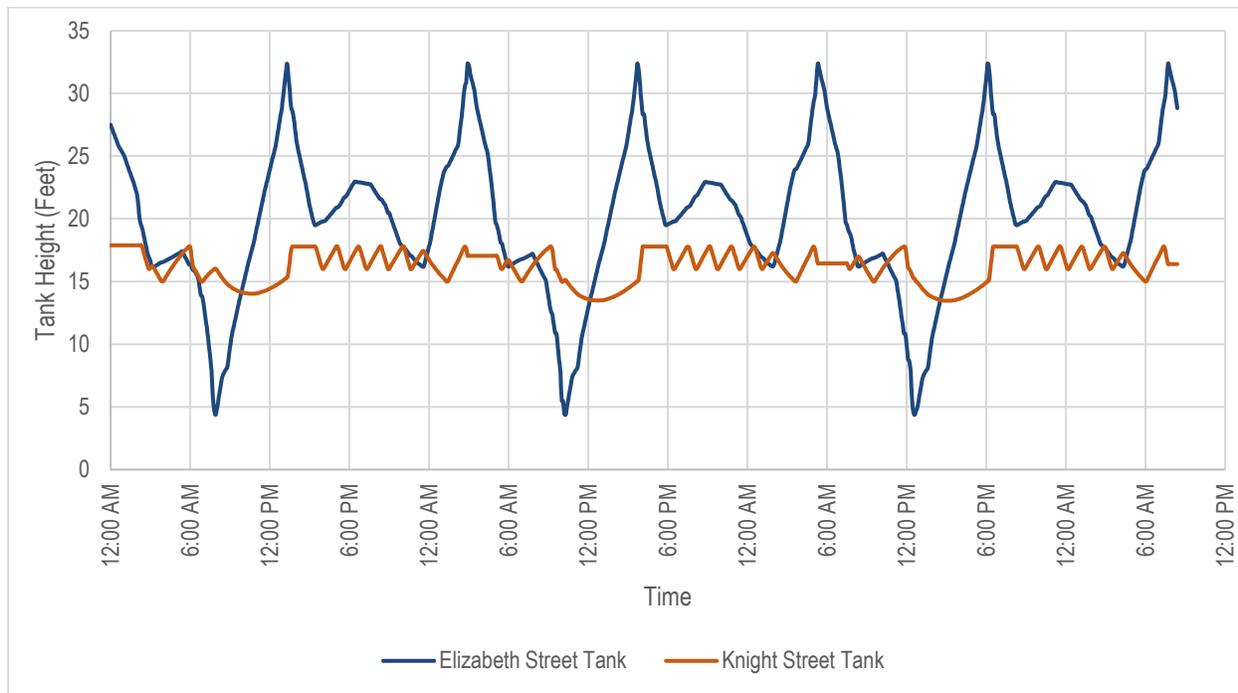
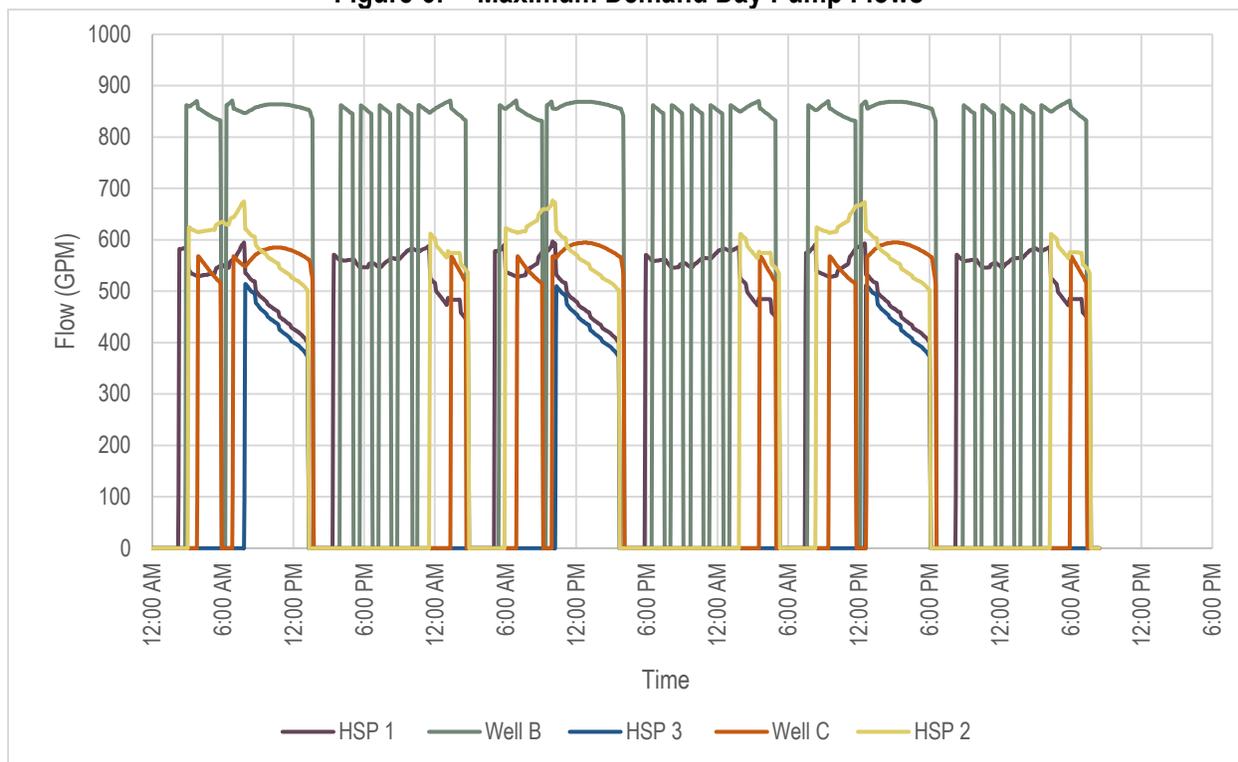


Figure 6: Maximum Demand Day Pump Flows



1.3 Model Evaluation of Existing Conditions

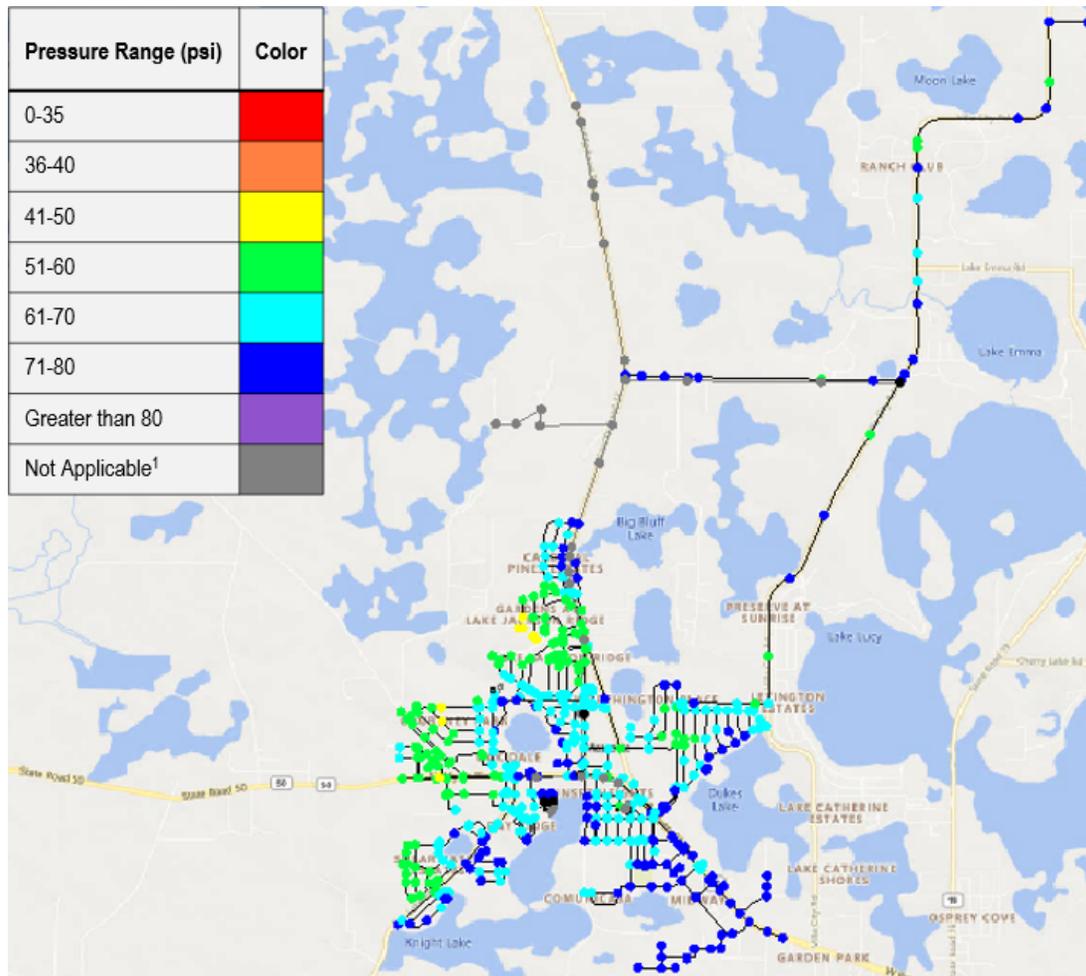
Typical and recommended operating standards, such as those listed by the American Water Works Association (AWWA), are used to estimate that an adequate level of service is available to all customers at all times. These criteria were used to evaluate the results obtained from the hydraulic model. Additionally, the City's target system conditions were considered. If modeled criteria were not within the desired operating standards, proposed improvements were also evaluated to determine whether they can improve the City's ability to provide high quality water service to customers.

1.3.1 System Pressure

The AWWA recommends maintaining a minimum pressure above 20 psi under normal operating conditions, while the 10 States Recommended Standards for Water Works recommends a normal working pressure of approximately 60-80 psi and no less than 35 psi. The City has a target minimum distribution pressure of 40 psi.

In both average and maximum demand day scenarios, model predicted water pressure was above 40 psi and below 87 psi for all junctions for the duration of the scenario. According to the diurnal curve shown in Section 1.2.2, the peak hour for a maximum demand day is 6:00 AM. Figure 7 below shows the model-predicted system pressures at peak hour.

Figure 7: Maximum Day Peak Hour Model Pressures



1. Junction was not active for this scenario (ex: possible future work)

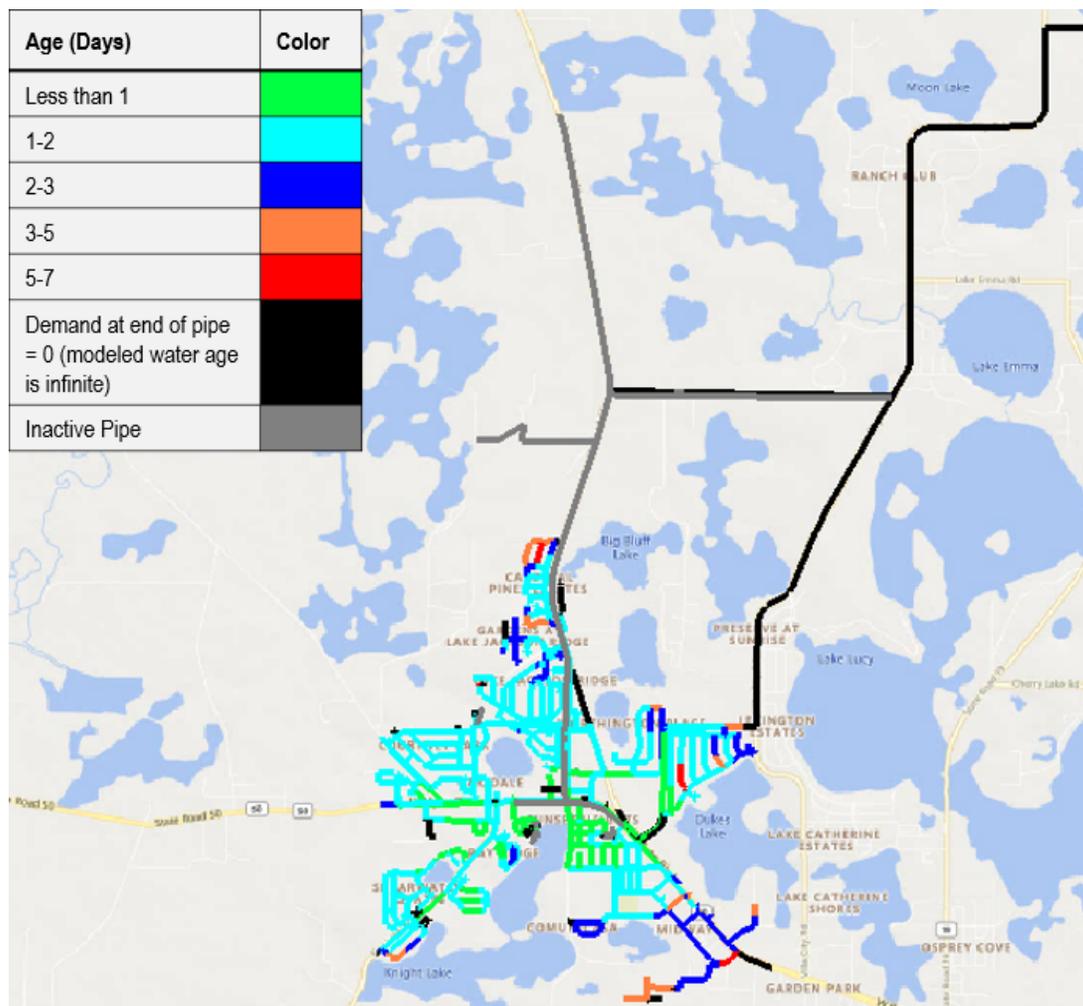
As can be seen in Figure 7, the lowest pressures in the system occur in the Gardens at Lake Jackson Ridge area as well as in Betty Lane and Ashley Road. The modeled scenarios indicate that the water system can maintain system wide pressure above 40 psi during current peak hour conditions.

1.3.2 Water Quality

In order to assess water quality, Woodard & Curran modeled water age over a 72-hour period for both average and maximum day demand scenarios. According to the American Water Works Association, water age can be correlated with bacterial growth and the formation of disinfection byproducts. Water age should be evaluated alongside residual chlorine and DBP concentrations to maintain high water quality in the distribution system. Design criteria are system-specific and there is no ideal water age for all systems, however in general a lower water age results in better water quality. The typical average water age in United States (US) utilities according to the Water Industry Database is 1.3 days and typical maximum water age is 3 days, while some systems can have water ages as high as 24 days.

Water age was modeled on an average demand day. Model predicted water ages for each pipe segment are displayed in Figure 8 below.

Figure 8: Average Day Demand Water Age



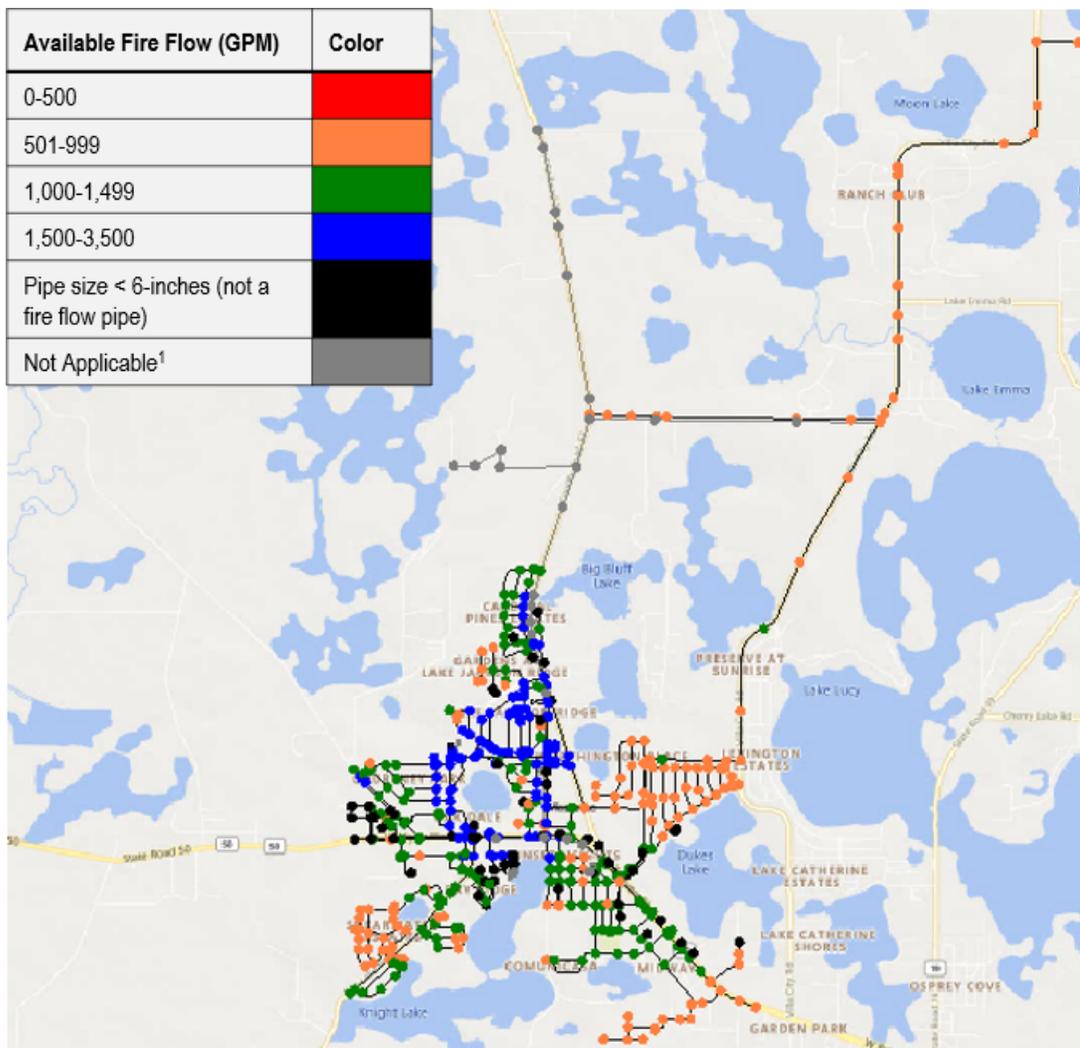
The model analysis predicted that certain areas of the City have higher maximum water age than the average for US utilities, with the highest water ages exceeding five days in the following areas:

- Cardinal Winds Lane of Cardinal Pines Estates
- Western Hills Lane between Brookline Hills Drive and Ridgemoor Drive
- The intersection of Arlington Road and Anderson Ave

1.3.3 Fire Protection

The ability to provide required sufficient and sustained water flows and pressures during a fire emergency is a key goal for all water providers. The AWWA recommends that fire flows be evaluated for maximum day demands instead of average day demand to ensure sufficient flow is available during high usage periods. Necessary fire flows developed by the Insurance Services Office (ISO) for specific areas in the system are used as the standard. In areas without a recommended available fire flow from the ISO, hydrants with less than 500 gpm of available fire flow were considered deficient.

Figure 9: Maximum Day Available Fire Flow in Gallons Per Minute



1. Junction was not active for this scenario (ex: possible future work)

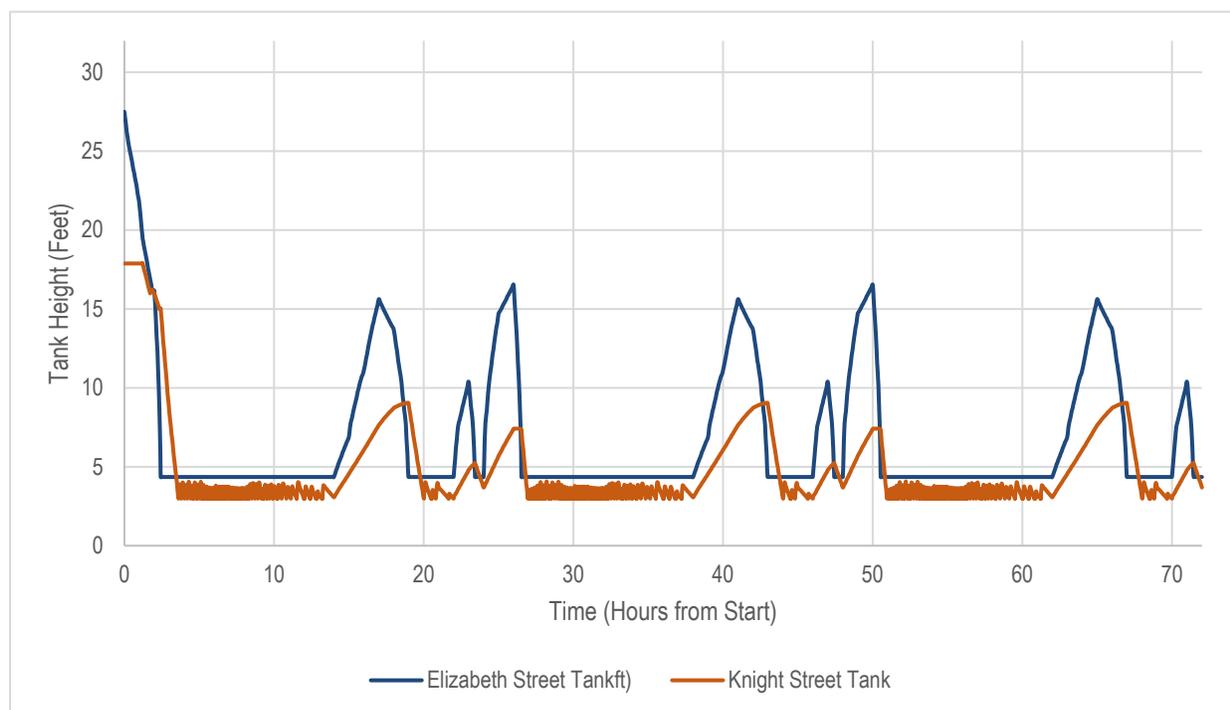
All system fire hydrants are located on water mains sized 6-inches or larger. There are numerous small diameter mains (less than 6-inch) in the hydraulic model that have been removed from the analysis (displayed in black in Figure 9) since these mains will not be used to fight fires.

The model predicted that all junctions have more than 500 GPM of available fire flow. The lowest available fire flows occurred in the northeast, southwest, and southeast extents of the City, which had less than 1,000 GPM of available flow. Other individual junctions throughout the City had available flows in this range, but had nearby water mains with greater available flow that could be used in the event of a fire.

1.3.4 Ability to Recover from High Flow Events

A high flow event was simulated in the hydraulic model on a maximum demand day with all tanks full at the time of the event. A high flow event could be a result of a water main break or a fire event and was simulated by applying an additional 1500 GPM of demand to a single junction located on the 6-inch water main on Elizabeth Avenue near North Carol Avenue. Model simulated pressures fell below 20 psi after two and a half hours, at which time the Elizabeth Street tank became empty. Both tanks were able to fill during periods of low domestic usage, however the levels were not able to be maintained throughout the simulation, as shown in Figure 10.

Figure 10: 1500 GPM Flow Event Tank Level Fluctuations



These model predicted results are an indication that the City has limited ability to maintain system pressures during high flow events on a maximum demand day. Additional water supply and storage could lessen the impacts of a high flow event.

1.3.5 Criticality and Redundancy

The City's distribution system is dependent on the operation of both the well pumps and at least two of the high service pumps to provide water service to customers on a maximum demand day. On an average demand day, water service can be provided with just one well pump and one high service pump.

The hydraulic model predicted that if the City is unable to produce water due to failure of the well pumps and/or the water treatment plant, and system tanks are full at the time of failure, system storage can sustain pressures above 40 psi for approximately five hours on a maximum demand day and thirteen hours on an average demand day, after which system pressures rapidly fall below 20 psi. This time could be increased with additional elevated storage volume.

1.4 Model Evaluation of Alternatives

In order to evaluate project alternatives, distribution system and treatment upgrades were added to the hydraulic model. The upgrades included the addition of new distribution piping, tanks, pump curves, and pipe characteristics for upgraded water mains as shown in Figures 3-1, 3-2, 3-3, 3-4, and 3-5.

Demands were added to the model to reflect projected development demands with both 4% (partial) and 7% (full) growth for the locations in Figure 2-1. Proposed alternative distribution, storage, treatment, and source water improvements were evaluated to determine if future water needs could be met. To limit risks of high water age and underutilized infrastructure that could result from installing all improvements at once, Distribution and Storage and Treatment and Source Water Alternatives 3 were segmented into two phases. The first phase includes the following infrastructure improvements to be completed before 4% growth occurs:

- Installation of one cylindrical ground storage tank with 500,000 gallons storage at the KSWTP
- Installation of one elevated storage tank with 900,000 gallons storage at the Midway Avenue WTP
- Installation of two new pumps with a design flow of 100 gpm each at the Midway Avenue WTP
- Installation of three new pumps with a design flow of 1,150 gpm each at the KSWTP

The second phase includes the following additional improvements to be completed before 7% growth occurs:

- Installation of one elevated storage tank with 900,000 gallons storage at the Elizabeth Street site
- Installation of one additional pump with a design flow of 1,150 gpm at the KSWTP

The following scenarios were run in the model under projected average and maximum day demands:

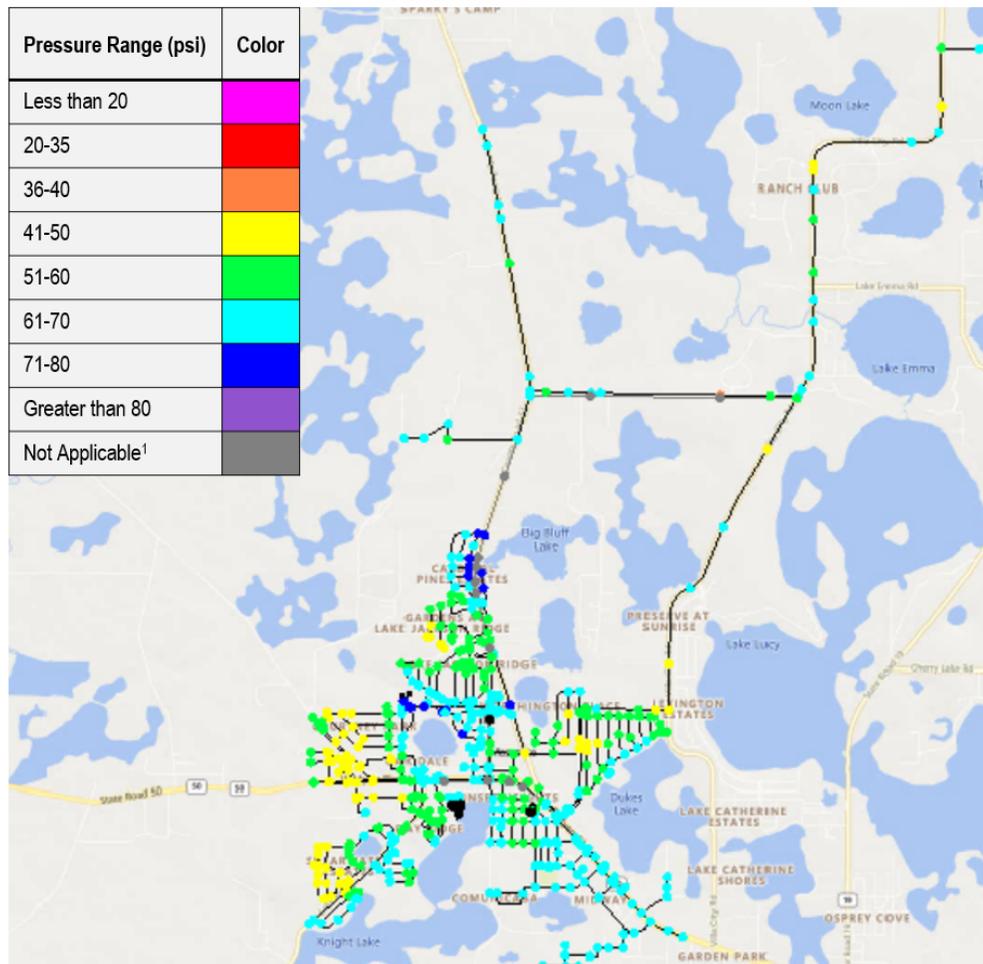
1. Distribution & Storage Alternative 2
 - a. 4% Projected Growth, Phase 1 of Treatment & Source Water Alternative 3
 - b. 7% Projected Growth, Phase 2 of Treatment & Source Water Alternative 3
2. Distribution & Storage Alternative 3
 - a. 4% Projected Growth, Phase 1 of Treatment & Source Water Alternative 3
 - b. 7% Projected Growth, Phase 2 of Treatment & Source Water Alternative 3

1.4.1 Distribution & Storage Alternative 2

In distribution & storage alternative 2, the piping between the KSWTP and the intersection of Route 33 and Simon Brown Road was upsized to 36-inches, and new 16-inch piping was added to the northwest portion of the City as displayed in Figure 3-4.

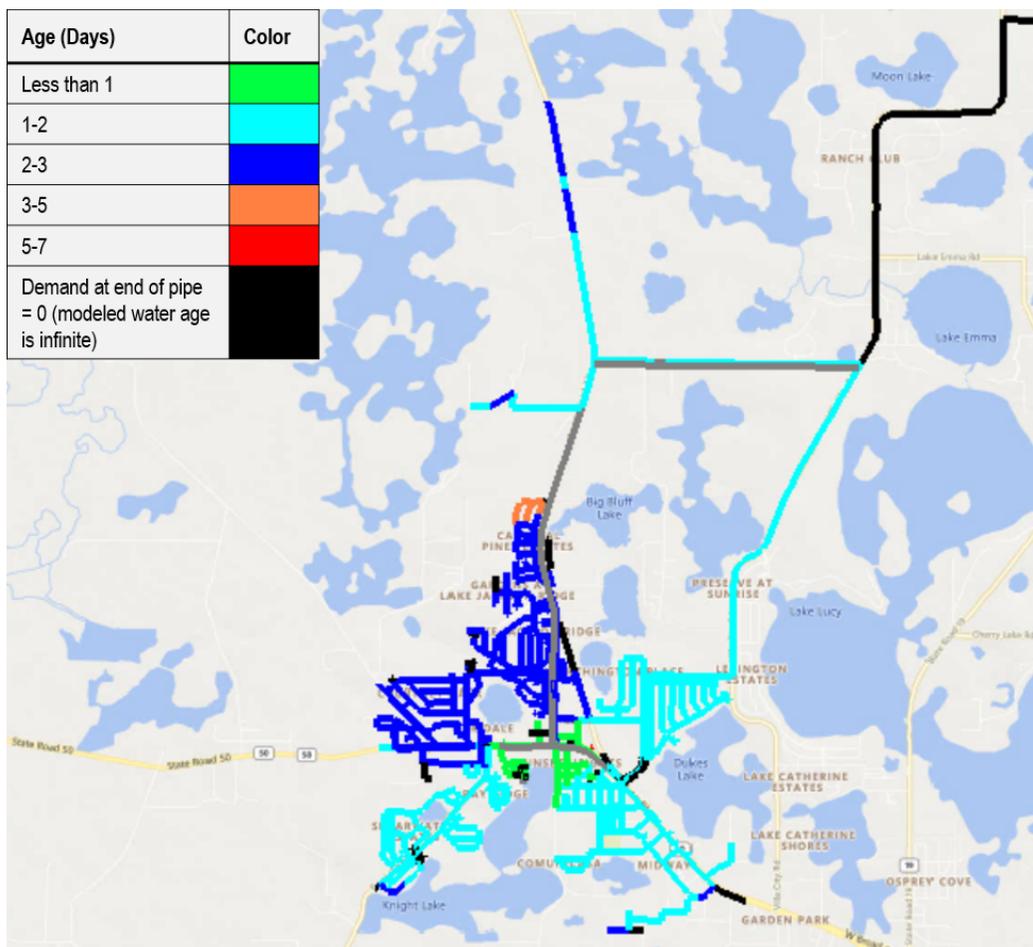
The model predicted that upgrades associated with distribution alternative 2 and phase 1 of treatment and source water alternative 3 were effective in helping to maintain system pressures above 40 psi at peak hour on a maximum demand day with 4% growth. Additionally, pressures above 35 psi were maintained on a maximum demand day with 7% growth when phase 2 of treatment and source water alternative 3 was implemented. Figure 11 below shows the peak hour pressures during a maximum demand day with 7% growth applied to projected demands.

Figure 11: Alternative 2 - 7% Growth Peak Hour Pressures



Alternative 2 was also assessed for water age in the distribution system with average day demands. Once 7% growth has occurred and phase 2 improvements are implemented, water ages are predicted to be overall higher than the existing average day demand water age as discussed in Section 1.3.2. Many pipes were predicted to experience between two and three days of water age, although no water ages greater than five days were predicted to occur. Phase 2 water ages with 7% growth are shown in Figure 12.

Figure 12: Alternative 2 – 7% Growth Water Age with Phase 2 Improvements



Water age can be improved by making additional connections to dead-end streets with limited connectivity to the distribution system.

1.4.2 Distribution Alternative 3

In distribution alternative 3, the piping between the KSWTP and the American Legion Road was upsized to 16-inches, new 20-inch piping was added between Meyers Blvd and the northern portion of the City, new 16-inch piping was added to the northern portion of the City, and new 12-inch piping was added in Simon Brown Road as displayed in Figure 3-5.

With all of the distribution, storage, treatment, and source water improvements in place, the model was used to assess predicted pressures and fire flows with 7% projected maximum demand day growth. Peak hour pressures are provided in Figure 13 and available fire flows are provided in Figure 14.

Figure 13: Alternative 3 - 7% Growth Peak Hour Pressures

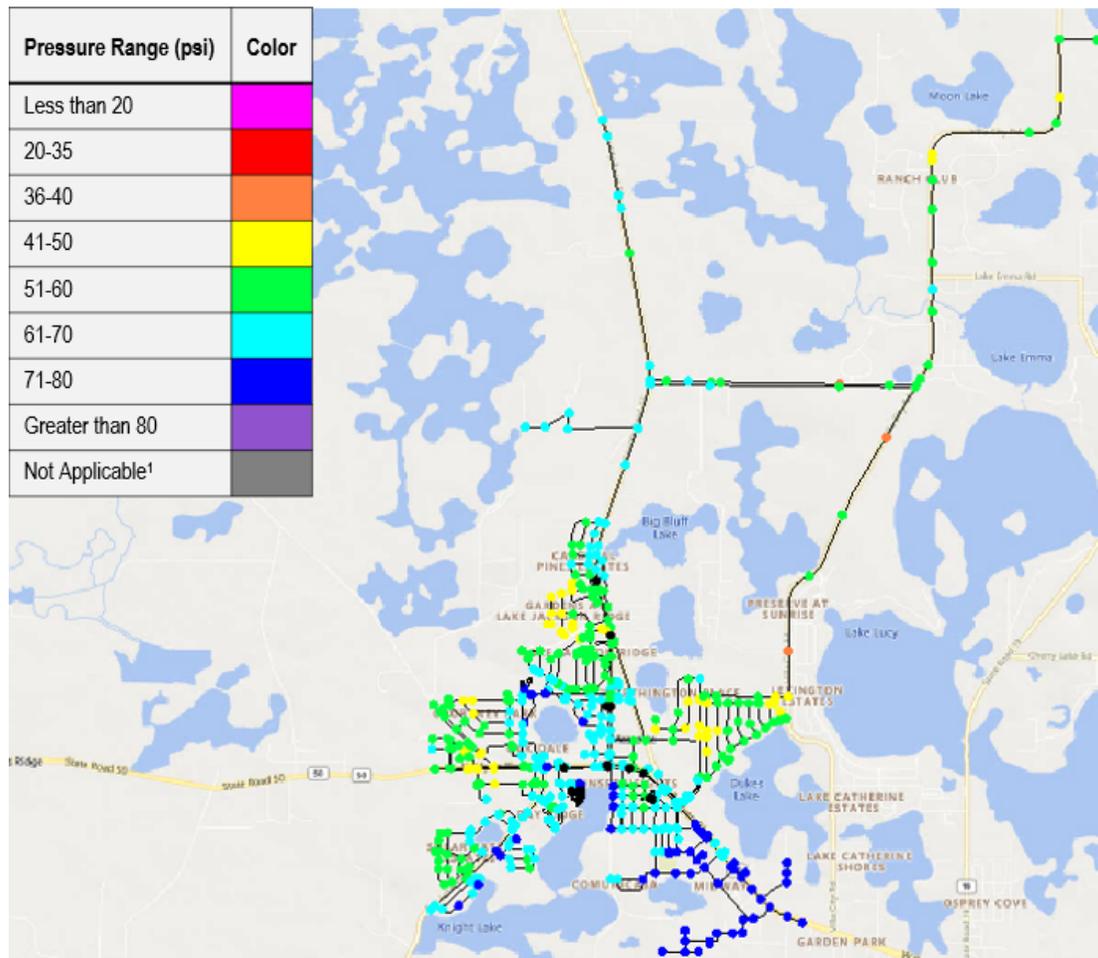
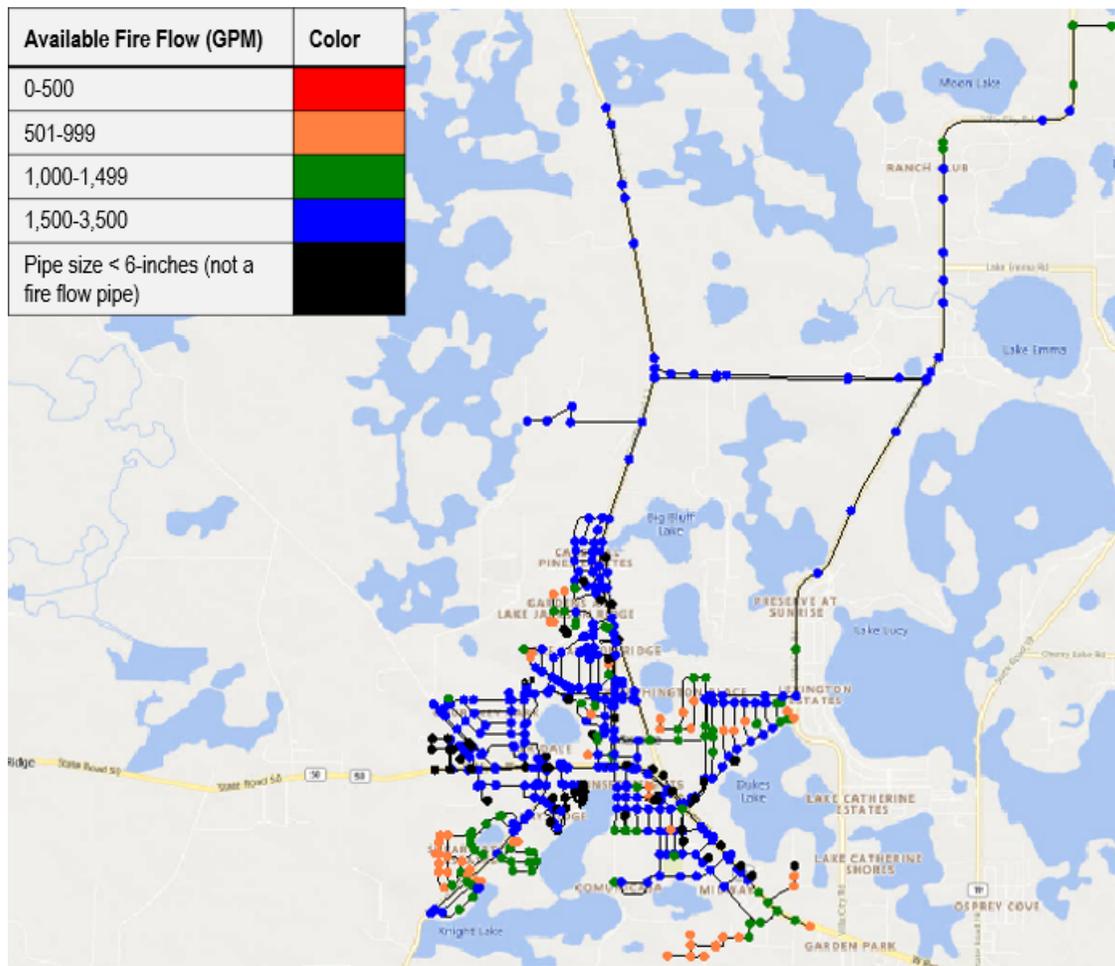


Figure 14: Alternative 3 - 7% Growth Available Fire Flows



The model predicted that peak hour pressures could be maintained above 40 psi for all junctions except those servicing the future Langley development, which have pressures greater than 35 psi but less than 40 psi. Available fire flows throughout the system were predicted to be greater than 500 gpm, with most junctions having greater than 1,500 gpm. Some areas, such as Downing Street, Park Road, Sora Street, and Merlin Ave have greater than 500 gpm but less than 1,000 gpm of available flow. Available fire flow in these areas could benefit from additional connections to nearby pipes with higher available fire flows.

The hydraulic model was also used to predict water ages in the event that phase 2 treatment and source water improvements are made with only 4% growth in projected average day demands, shown in Figure 15. These water ages were then compared to predicted water ages with phase 1 treatment and source water improvements are made with 4% growth, shown in Figure 16.

Figure 15: Alternative 3 – 4% Growth Water Age with Phase 2 Improvements

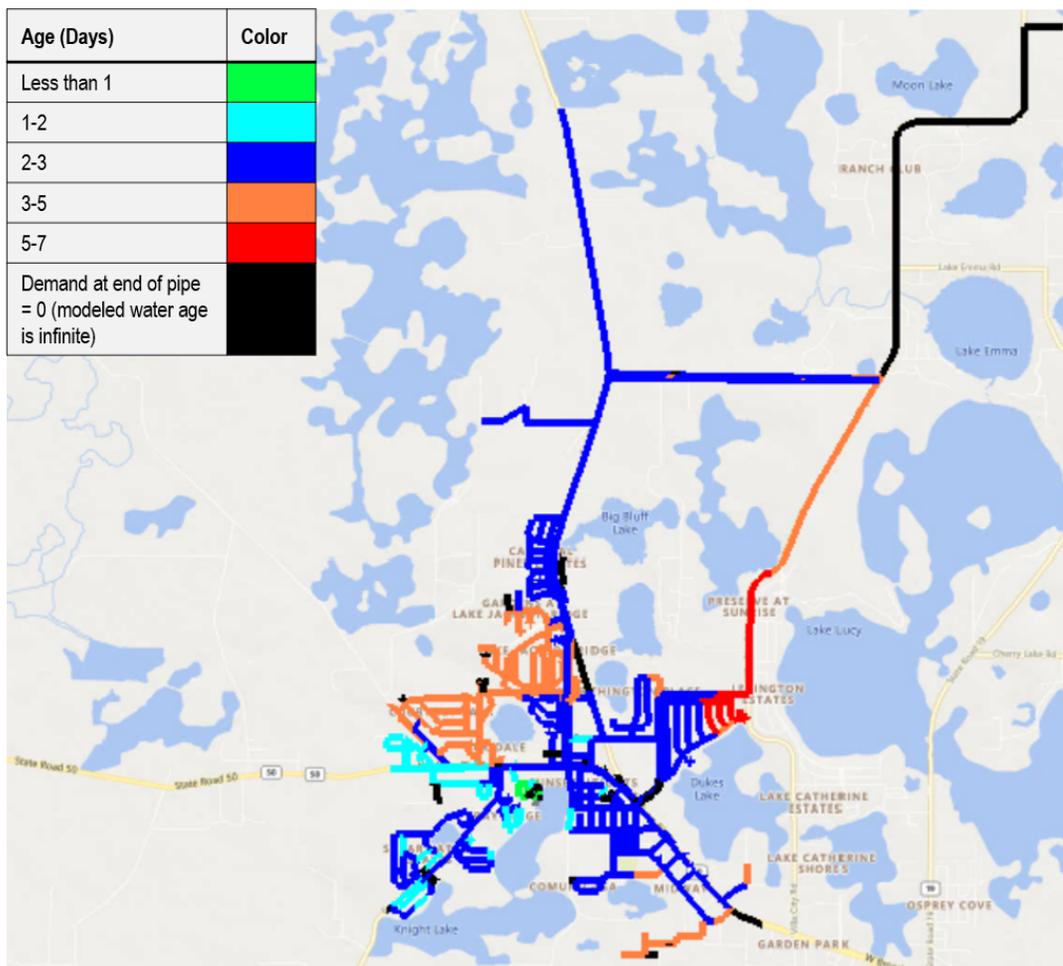
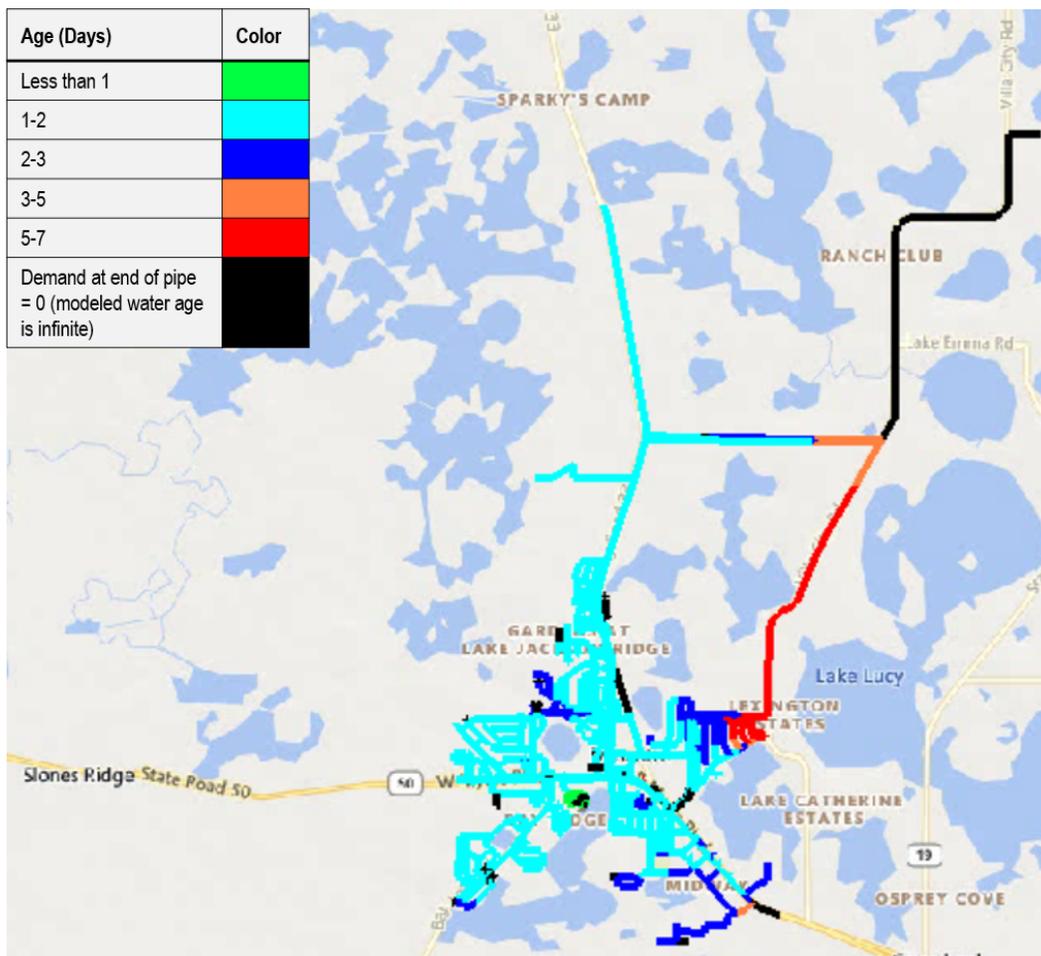


Figure 16: Alternative 3 – 4% Growth Water Age with Phase 1 Improvements



A comparison of Figure 15 and Figure 16 reveals that the phasing approach alleviates some of the possible high water ages (greater than three days) that could occur if phase 2 treatment and source water improvements are made before 7% growth occurs. Once demands have grown 7% and phase 2 improvements are in place, water ages were predicted as shown in Figure 17.

Figure 17: Alternative 3 – 7% Growth Water Age with Phase 2 Improvements

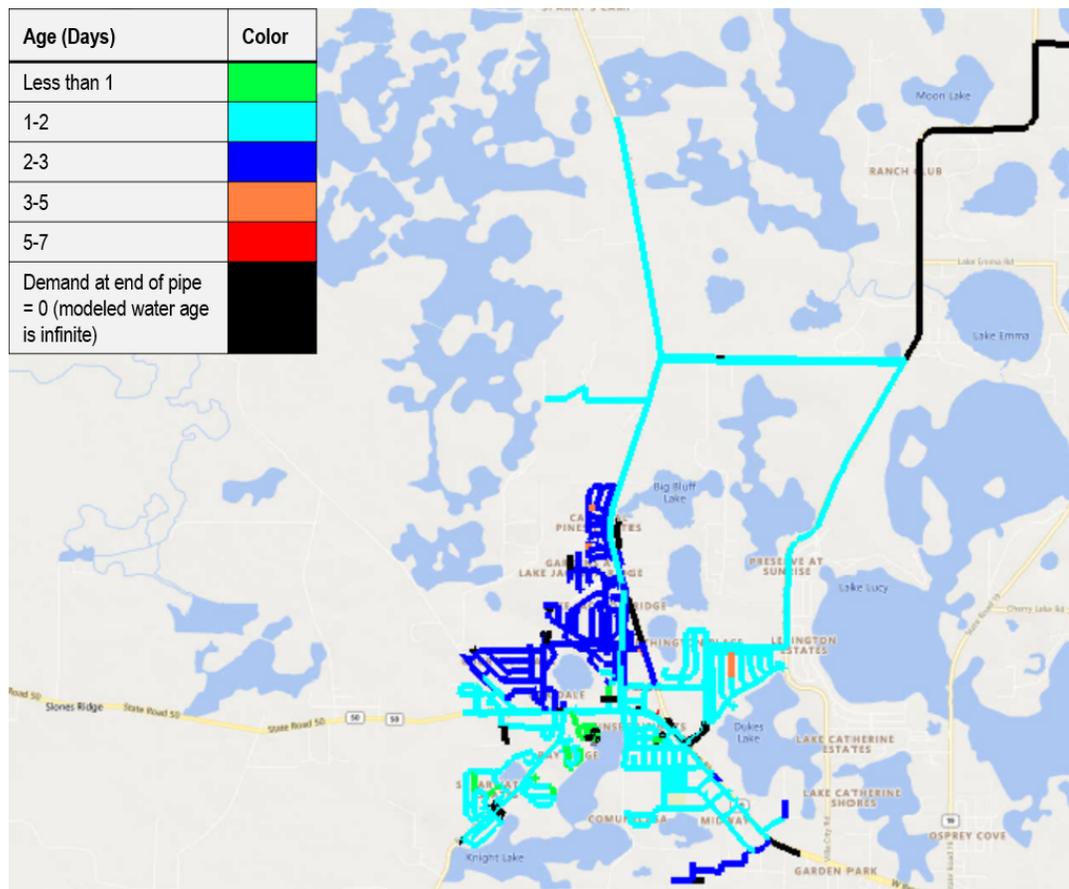


Figure 17 reveals that model predicted water ages with 7% growth and phase 2 treatment and source water improvements in place are less than five days system-wide, with the majority of water mains having less than three days of water age. Additionally, model predicted water ages are generally lower with alternative 3 distribution and storage improvements compared to alternative 2 distribution and storage improvements.

The hydraulic model analysis indicates that distribution and storage alternatives 2 and 3 are effective at maintaining water system goals regarding pressure and water age, and that alternative three was predicted to have improved peak hour pressures and water age when compared to alternative 2. Additionally, alternative 3 was shown to provide adequate fire flow capabilities, with greater than 1,500 gpm of available flow at most junctions predicted while maintaining system pressures above 40 psi. Finally, a phased approach of introducing treatment and source water alternative 3 will help to mitigate water ages above five days occurring throughout the system.



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COMMITMENT & INTEGRITY DRIVE RESULTS

APPENDIX C: 2020 SOURCE WATER ASSESSMENT & PROTECTION PROGRAM RESULTS

DRAFT



City of Mascotte

Comprehensive Plan

Goals, Objectives and Policies

**Amended May 2, 2016
Effective June 13, 2016
Ordinance No. 2016-03-543
and
Amended Jan. 17, 2017
Effective February 27, 2017
Ordinance No. 2016-12-550**

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ELEMENT A - FUTURE LAND USE

Goal A1: Future Land Use. The City shall maintain a coordinated distribution of land uses to assist in stimulating the economic conditions in the City and proactively plan for timely progressive development within the urban boundaries through the year 2035.

***Objective A1-1: Land Use Categories.** The City shall maintain a range of future land use categories to ensure the allocation of coordinated land uses, allow the protection of natural and historic resources, and maximize economic development opportunities in the City.*

Policy A1-1.1: Category Identification. The City hereby adopts the following future land use categories, which shall be depicted on the adopted Future Land Use Map. Objectives A1-3 to A1-17 contain the purpose of each future land use designation and the allowable density and intensity for each.

- Agriculture
- Rural Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Downtown Mixed-Use
- Community Mixed-Use
- Rural Neighborhood Mixed-Use
- Commercial
- Industrial
- Public/Semi-Public
- Recreation and Open Space
- Conservation
- Green Swamp Land Use Designations (as specified in Goal A4)

Policy A1-1.2: Density/Intensity. Unless otherwise noted in this comprehensive plan, the density and intensity figures described in this Future Land Use Element shall apply to gross land area, including wetlands and/or surface waters and required open space. This Policy, however, does not apply to land that lies within the Green Swamp Area of Critical State Concern.

Policy A1-1.3: Open Space. Open Space shall be defined as a portion of the gross land area dedicated to the public, a homeowner's or property owner's association, or the owner of individual small lot developments, unencumbered by any road or other impervious surface, and open from the ground to the sky, to include unfenced dry stormwater retention ponds which are designed as site amenities, buffer areas, and recreation areas. In addition, up to 25% of the required open space for any one project may be comprised of wetland areas and/or surface waters. This Policy, however, does not apply to land that lies within the Green Swamp Area of Critical State Concern.

Policy A1-1.4: Land Development Code. The City shall maintain an adopted matrix within the Land Development Code (LDC) specifying which zoning districts implement each future land use category. The LDC shall further define the allowable uses, densities, and intensities in each zoning district.

Objective A1-2: Land Use Compatibility. Future development must be consistent with the adopted Future Land Use Map and existing incompatible uses shall not be allowed to expand and shall be eliminated, when feasible.

Policy A1-2.1: Inconsistencies. Proposed land use amendments which are inconsistent with the character of the community or inconsistent with adjacent future land uses shall not be approved by the City.

Policy A1-2.2: Redevelopment/Demolition. The City's LDC shall continue to contain provisions that prohibit the repair or rehabilitation of an inconsistent structure that is abandoned or damaged (even if by natural causes) beyond fifty (50) percent of its appraised value and shall require demolition of the structure. Redevelopment of the property will only be allowed if it is consistent with the Future Land Use Map.

Policy A1-2.3: Adequate Services. No future land use plan amendments or changes shall be approved unless adequate public facilities and services, including water supply, are available or will be available to meet projected growth demands.

Objective A1-3: Agriculture. The City shall designate land for Agriculture.

Policy A1-3.1: Purpose of Agriculture Future Land Use Designation. This designation is intended to provide opportunities for agricultural activities and rural residential development to be located on the fringes of the urban areas.

Policy A1-3.2: General Uses. Agriculture-designated areas may include uses such as vegetable farms, livestock ranches, fruit groves, plant nurseries and silvicultural activities, as well as kennels, farm equipment storage and sales, and other more intensive uses based upon location criteria. This designation will also allow for necessary supporting services such as utilities and parklands, and civic facilities.

Policy A1-3.3: Location of Agriculture Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Agriculture future land use designation and the type of development allowed:

- Raising livestock and commercial farming activities shall not be allowed in the downtown area or adjacent to established residential neighborhoods.
- Agricultural lands should be served primarily by major roads that do not traverse residential neighborhoods.
- Agricultural activities that involve livestock and commercial farming should not be permitted to locate along roadways that serve residential developments that are greater than 1 dwelling unit per acre.
- More intensive agricultural uses, such as kennels and livestock veterinarians, wood chipping, fruit packaging, etc., which create noise, glare or odor that may impact adjacent properties, must provide a buffer and setback large enough to prevent the nuisance from impacting the adjacent properties.
- Agricultural uses should generally be discouraged from locating adjacent to professional office and light retail uses, except for retail and office uses that support the agricultural industry, such as feed and seed stores, hardware, tractor stores, etc.

- Alternative roadways (truck routes) should be proposed to serve agricultural future land use designations if any type of production is proposed that actively requires a truck distribution network for either exporting or importing of goods.
- Annexed properties that do not meet the standards above, may require additional buffering techniques per the Land Development Code, and will not be permitted to expand agricultural activities that would have a negative impact on adjacent uses.

Policy A1-3.4: Density and Intensity. The maximum residential density for land designated Agriculture shall not exceed one dwelling unit per five acres (1 du/5 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.10 and an impervious surface area ratio of 0.10.

Policy A1-3.5: Holding Category. The Agriculture future land use category may be used as a holding category for annexed lands that are anticipated for suburban or urban development in the future. These properties would not necessarily be eligible for an agricultural zoning district because of location performance standards. Therefore, they may retain the County zoning designation until their land use classification is changed. A land use category amendment will be required prior to development of more intensive uses.

Objective A1-4: *Rural Residential. The City shall designate land for Rural Residential.*

Policy A1-4.1: Purpose of Rural Residential Future Land Use Designation. This designation is intended to serve as a transition category between agriculture lands and the more urban residential future land use designations.

Policy A1-4.2: General Uses. Typical uses allowed in Rural Residential include single family detached dwellings and accessory uses, agricultural uses intended to serve the needs of the land owners as opposed to commercial agricultural activities, equestrian stables, and other similar uses. This category also provides for conservation of natural resources by allowing clustering of residential development.

Policy A1-4.3: Development within Rural Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Rural Residential future land use designation and the type of development allowed:

- Intensive livestock and commercial farming are not encouraged in this land use category. Only horse stables and similar public or private equestrian recreational uses are encouraged in rural residential land use categories.
 - Recreational uses, both active and passive, are highly encouraged in rural residential areas.
 - Primary and secondary educational uses may locate in the rural residential category if adequate public facilities and access are available.
 - The rural land use designation shall encourage clustering of residential development to protect natural resources and open space.
 - Commercial uses, other than stables and non-intensive nurseries, are not allowed in rural residential categories.
 - On-site wastewater disposal systems (septic tanks or septic system drain fields) will not be permitted for any site that does not have soils that are suitable to accommodate the tanks and protect the environment.

- Rural development in the Rural Residential future land use category will be required to provide potable water and, may be required to provide dry lines or connections to the City's sanitary sewer system as it becomes available.
- If package plants for sewer are proposed, they will be constructed to City standards, deeded to the City for maintenance and designed to be eventually looped into the City's system.

Policy A1-4.4: Density and Intensity. The residential density for land designated Rural Residential shall be a maximum of one dwelling unit per one acre (1 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.3.

Objective A1-5: *Low-Density Residential. The City shall designate land for Low-Density Residential.*

Policy A1-5.1: Purpose of Low-Density Residential Future Land Use Designation. This designation is intended to accommodate uses ranging from the large single-family lots found in the rural residential category to low density multifamily developments.

Policy A1-5.2: General Uses. The Low Density Residential designation allows low density single family and multi-family units such as duplexes, triplexes, quadplexes, or townhomes and accessory dwelling units.

Policy A1-5.3: Location of Low-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Low-Density Residential future land use designation:

- Low density residential uses should not be located abutting State Road 50 in the downtown CRA.
- Low density residential should be located in a manner that encourages a transition between rural residential lands to more urban land use classifications that allow uses such as offices, medium density residential and light retail uses.

Policy A1-5.4: Development within Low-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Low-Density Residential future land use designation:

- The City shall establish standards in the Land Development Code to ensure that non-residential uses are not allowed to locate in the Low-Density Residential Land Use Designation, unless the residential uses are protected from encroachment and negative impacts.
- Conversions of low density residential dwelling units into commercial uses are not allowed unless the site has the appropriate zoning for the proposed use, and the following standards are applied to ensure the protection of established neighborhoods and the feasibility of the proposed conversion:
 - The roadways, utilities and access to the property must be adequate to support the proposed change.
 - Adequate private or public parking must be provided for the proposed use of the property, including the standards of the American Disabilities Act.
 - Appropriate buffering will be required adjacent to existing residences.
 - The scale and design of the structure and signage must be consistent with the character of the neighborhood.

- Any proposed low density development will be required to provide potable water and may be required to provide dry lines and connections to the City's sanitary sewer service.
- If package plants for either water or sewer are proposed, they will be constructed to City standards, deeded to the City for maintenance, and designed to be eventually looped into the City's public service network.
- Culs-de-sac are discouraged in the City because they interfere with connectivity and increase traffic congestion on collector roads.
- Grid street networks are highly encouraged to serve residential developments and provide connectivity throughout the City.
- Gated communities (residential or mixed use) are discouraged because of the limitations their design creates for road connectivity.
- Parks, public open spaces, community centers and/or other public realm gathering spaces are required to be strategically located in residential developments to encourage social activity and recreation for the citizens.
- Cohesive streetscape design, signage, landscape architecture and streetscape furniture are encouraged to create an identity for new neighborhoods in the City.

Policy A1-5.5: Density and Intensity. The residential density for land designated Low-Density Residential shall be a maximum of four dwelling units per one acre (4 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-6: Medium-Density Residential. *The City shall designate land for Medium-Density Residential.*

Policy A1-6.1: Purpose of Medium-Density Residential Future Land Use Designation. This designation provides for a range of housing types in a medium density setting.

Policy A1-6.2: General Uses. Typical uses may include single family detached, zero lot line, duplexes, triplexes, quadplexes, garage apartments, villas, cluster housing, townhouses, mobile homes, modular/manufactured homes and small apartment complexes at medium densities. Accessory dwelling units are allowed in this designation as well.

Policy A1-6.3: Location of Medium-Density Residential Future Land Designation. The following criteria shall be used for determining appropriate locations for the Medium-Density Residential future land use designation:

- Medium density residential uses are primarily encouraged within the downtown area, as well as in mixed use planned communities.
- The medium density residential category serves as a transition between low density residential uses and retail/office/high density uses.

Policy A1-6.4: Development within Medium-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Medium-Density Residential Future Land Use Designation:

- Appropriate performance standards shall be adopted for medium density residential zoning districts to reduce impacts on adjacent low density residential uses.
- Lower densities shall be located along the perimeter adjacent to lower density development.

- Direct access to collector or arterial roads shall be required for medium density residential developments, unless located within a mixed use planned unit development.
- Provision of central potable water service is required.
- Provision of wastewater service is required for all medium density residential developments that exceed 4 dwelling units an acre.

Policy A1-6.5: Density and Intensity: The residential density for land designated Medium-Density Residential shall be a maximum of eight dwelling units per one acre (8 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-7: High-Density Residential. *The City shall designate land for High-Density Residential.*

Policy A1-7.1: Purpose of High-Density Residential Future Land Use Designation. This designation also provides for a wide range of housing types, but at higher densities than other residential categories.

Policy A1-7.2: General Uses. This designation allows for small multi-family complexes in addition to very dense single family dwelling subdivisions, such as zero lot line. Typical uses may include single family dwellings, duplexes, triplexes, quadplexes, villas, cluster housing, townhouses, mobile homes, manufactured homes and small apartment complexes.

Policy A1-7.3: Location of High-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the High-Density Residential future land use designation:

- High density is primarily encouraged within the downtown area, particularly along State Road 50 and County Road 33, as well as in mixed use planned communities.
- High density residential uses are to be used as transitional areas between medium density residential uses and retail, office and light industrial uses.
- Proximity of one mile to existing or designated commercial areas or employment centers shall be required for high density residential.

Policy A1-7.4: Development within High-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the High-Density Residential future land use designation:

- Lower densities shall be located along the perimeter adjacent to lower density development.
- Building heights must be stepped down if adjacent to sites with a lower intensity and density future land use designation.
- Direct access to collector or arterial roads shall be required for high density residential developments, unless located within a mixed use planned unit development.
- Provision of central potable water and wastewater is required for all high density residential development.

Policy A1-7.5: Density and Intensity: The residential density for land designated High-Density Residential shall be a maximum of twelve dwelling units per one acre (12 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-8: Downtown Mixed-Use. *The City shall designate land for Downtown Mixed-Use.*

Policy A1-8.1: Purpose of the Downtown Mixed-Use Future Land Use Designation. The Downtown Mixed-Use future land use designation is intended to accommodate a variety of uses in a compact mixed-use development setting appropriate for the downtown/CRA area. The intensity/density of the development and location of land uses within the downtown mixed use category will vary depending upon the compatibility of land uses, internally within the site and with surrounding uses.

Policy A1-8.2: General Uses. The Downtown Mixed-Use Future Land Use Designation permits low, medium and high density residential; commercial uses (retail and office); light industrial; educational facilities; recreation facilities and compatible public facilities.

Policy A1-8.3: Location of the Downtown Mixed-Use Future Land Use Designation. The Downtown Mixed-Use Land Use Designation will be allowed only in the downtown Community Redevelopment Area (CRA). Other future land use designations may be utilized within the CRA, as appropriate.

Policy A1-8.4: Development within the Downtown Mixed-Use Future Land Use Designation. The City shall adopt detailed standards in the land development code to direct the location of more intensive developments to activity center nodes, allowing a mix of uses and higher densities and intensities at those nodes. The areas between nodes may be developed with single uses at lower densities and intensities. The following general criteria shall be used for determining appropriate development within the Downtown Mixed-Use Future Land Use Designation:

- Activity center nodes shall be located along arterials and collectors, must be two (2) acres in size or greater. Residential uses within those nodes shall not occupy more than 75% of the total floor area of each development.
- The Downtown Mixed-Use Planned Unit Development (PUD-DM) zoning district is available, but not required, for development within the Downtown Mixed-Use land use designation.
- The Land Development Code shall maintain performance standards for the location and the types of uses that will be allowed in the Downtown Mixed-Use land use designation.
- The City shall encourage a compact and walkable living environment and workplace in the Downtown Mixed-Use land use designation.
- This designation shall allow an assortment of building types to be developed at a pedestrian scale for satisfying residential and non-residential needs.
- Low density residential uses will not be allowed adjacent to State Road 50.
- Private stormwater ponds shall be designed as amenities and to provide buffering when appropriate.
- New development shall use a grid pattern for efficient traffic circulation with at least two points of access and clustering homes away from natural resources.
- All large scale new developments over five (5) acres in size within the Downtown Mixed-Use will be required to provide unified architectural and streetscape themes.

- Redevelopment and new development shall be encouraged to create a balanced transportation system that accommodates pedestrians and bicyclists, as well as motorists.
- Strip commercial development shall be discouraged in the Downtown Mixed-Use.
- Mixed use buildings will be highly encouraged in this category.
- The City shall coordinate proposed future land use amendments and rezoning in the Downtown Mixed-Use with the Community Redevelopment Agency.

Policy A1-8.5: Density and Intensity. The residential density for land designated Downtown Mixed-Use shall be a maximum of twelve dwelling units per one acre (12 du/1 ac). Mixed-use developments at activity nodes shall have a *minimum* density of four dwelling units per acre (4 du/ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 4.00 and an impervious surface area ratio of 0.90.

Objective A1-9: *Community Mixed-Use. The City shall designate land for Community Mixed-Use.*

Policy A1-9.1: Purpose of Community Mixed-Use Future Land Use Designation. The purpose of the Community Mixed-Use future land use designation is to establish mixed-use neighborhoods with a diversity of housing types within walking distance from a village center.

Policy A1-9.2: General Uses. The Community Mixed-Use future land use designation permits low, medium and high density residential; commercial uses (retail and office); limited light industrial; educational facilities; recreation facilities and compatible public facilities. The intensity/density of the development, location of land use, and allowed uses within the mixed-use category will vary depending upon compatibility of land uses, internally within the site and with surrounding uses.

Policy A1-9.3: Location of Community Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Community Mixed-Use future land use designation:

- Community mixed use lands shall be located adjacent to arterial or collector streets.
- Residential developments shall be required to provide at least two points of access and to provide shared access easements or roadways connecting to adjacent subdivisions.

Policy A1-9.4: Development within Community Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Community Mixed-Use future land use designation:

- The community mixed use land use is primarily intended to establish residential neighborhoods that have services within walking distance.
- A mixture of residential, retail, offices, civic and recreation shall be encouraged in the community mixed-use category.
- A diversity of housing types including single family detached, condos, duplexes, quadplexes, townhouses, and apartments may be encouraged if compatible with adjacent developments.
- The community mixed-use future land use category encourages the development of town or village centers that are sized to serve the needs of residents living within a one-quarter mile distance from the village center.

- The commercial (office and retail) component of a mixed-use community shall be limited to a maximum of twenty-five (25%) percent of the net area of the site.
- A maximum of 10,000 square feet of commercial and office use will be allowed unless a market study is prepared to demonstrate that the demand exists to accommodate additional non-residential use.
- No stand-alone commercial zoning shall be allowed along corridors and at intersections unless part of a town center or village center.
- The Community Mixed-Use Planned Unit Development District (PUD-CM) zoning district is the only district allowed for the development of mixed-use communities within the community mixed use land use category. Other zoning districts may be used for single use developments.
- The PUD rezoning application and Developers Agreement shall demonstrate the mitigation of impact on the City's ability to service the proposed development, and provide an explanation of how the proposed compact design will reduce demand on services.
- The intended character of a proposed mixed-use development shall be established at the time of rezoning to PUD. The Developer's Agreement shall specify the building styles or themes to be used throughout the development.
- The Developer's Agreement shall specify how the design of the less intensive uses will blend into the community with any more intensive uses proposed in the development program.
- Any amendment to the development program that adds a new type of development in an approved PUD will require an amendment to the Developer's Agreement to demonstrate how the character of the design of the new proposed use will integrate into the mixed-use community.
- Low density residential is appropriate in a community that provides a variety of mixed development such as residential, retail and office; as well as a variety of housing types including townhouses, condos and higher density apartments, as long as the design of the more urban uses is sensitive to the low-density character.
- Unified architectural and streetscape themes shall be required for all developments within the Community Mixed-Use category.

Policy A1-9.5: Density and Intensity. The residential density for land designated Community Mixed-Use shall be a maximum of eight dwelling units per one acre (8 du/1 ac). The *minimum* density for mixed-use developments shall be one dwelling unit per one acre (1 du/1 ac). The maximum intensity shall not exceed a floor area ratio of 0.35 (3.0 within a Village or Town center) and an impervious surface area ratio of 0.80. If a compact walkable community is proposed with mixed use buildings located in a central Town or Village center, then the floor area ratio for non-residential uses may be allowed to increase to a maximum of 3.0 within said Town or Village center.

Policy A1-9.6: Development greater than five acres in size may include a mix of residential and non-residential uses. Residential uses shall be a minimum of 75% (by land area), and a maximum of 100% (by land area). Non-residential uses shall be a minimum of 0% (by land area) and a maximum of 25% (by land area).

Objective A1-10: Rural Neighborhood Mixed-Use. *The City shall designate land for Rural Neighborhood Mixed-Use.*

Policy A1-10.1: Purpose of Rural Neighborhood Mixed-Use Future Land Use Designation. The purpose of this land use is to encourage mixed-use developments that accommodate a greater amount of open space and are designed to allow residents to work and live in closer proximity. The variety of uses should be placed in such configuration as to encourage pedestrian accessibility. By accomplishing this, vehicle trips will be greatly reduced and greenhouse gas emissions will also be reduced.

Policy A1-10.2: General Uses. This category includes a mixture of commercial, residential, office and public/semi-public uses.

Policy A1-10.3: Location of Rural Neighborhood Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Rural Neighborhood Mixed-Use future land use designation:

- The City desires to reduce dependence on automobile travel and, therefore, vehicle miles traveled (VMT). Accordingly, the City of Mascotte shall be required to develop and implement a program designed to ensure that an adequate number of jobs per residential unit exists.
- The objective is to (1) reduce VMT and (2) establish and measure over time the jobs/housing balance so as to provide a framework for determining the number of jobs created and to measure the internal capture of trips and to ensure that, to the fullest extent possible, provides for alternative modes of transportation to and from work and recreation places.

Policy A1-10.4: Development within the Rural Neighborhood Mixed-Use Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Rural Neighborhood Mixed-Use future land use designation:

- This category includes land used for a mixture of commercial, residential, office and public/semi-public uses. Included in this category are multi-use planned developments which support commercial, residential, office and public/semi-public uses.
- Residential development will include adequate onsite facilities for residents including open space, recreational amenities and parking facilities.
- Residential developments shall contain a diversity of attached and detached housing types and lot sizes.
- The commercial component is intended to provide for the day to day needs of the immediate neighborhood and shall be within walking distance from the neighborhood unless unusual site constraints prevail.
- Commercial uses to be distributed within the development are encouraged. A majority of commercial floor area will be highway or highway access. The balance of the commercial development will be internal to the project or as specified by the applicable overlay zone.
- Integration of commercial and office uses in the same building is encouraged. Some integration of residential uses with commercial and office in the same building is required if located within an overlay zone.
- Any proposed development utilizing the Rural Neighborhood Mixed Use designation must be designed with attention paid to the creation of a recreational trails system and transit

orientation. All efforts must be made to connect to any adjacent trails and accommodate any transit system.

Policy A1-10.5: The density and intensity of development within Rural Neighborhood Mixed-Use Future Land Use Designation shall be as follows:

- Development must include a minimum of 25% (by land area) open space. All undeveloped uplands, all recreation facilities, pedestrian plazas, dry retention ponds that are designed as amenities, and the land above the design water elevation on wet retention ponds count toward open space within Rural Neighborhood Mixed-Use.
- Residential density shall not exceed three dwelling units per net acre (3 du/1 ac), unless located within the Overlay Zones. Net acreage will mean the total land area less wetlands and/or surface waters within Rural Neighborhood Mixed-Use.
- Non-residential intensity shall not exceed a floor area ratio of 0.05 and an impervious surface ratio of 0.30, unless located within the following Overlay Zones.
 - One-Quarter Mile Overlay Zone. If any part of the development is located within one-quarter mile of an employment center or the intersection of arterial and/or collector roads as indicated on the Future Land Use Map or Comprehensive Plan Transportation Element, intensity within the stated radius may be maximized up to a floor area ratio of 0.20. Residential density within the stated radius will be a maximum of seven dwelling units per acre (7 du/1 ac). Integration of residential and commercial uses is required. A minimum of 75% of residential densities created by the Overlay Zone will be attached or integrated within commercial and office uses.
 - One-Half Mile Overlay Zone. If any part of the development is located more than one-quarter mile, and less than or equal to one-half mile, from an employment center or the intersection of arterial and/or collector roads as indicated on the Future Land Use Map or Comprehensive Plan Transportation Element, intensity within the stated radius may be developed up to 50% of the maximum floor area ratio and impervious surface area ratio of the One-Quarter Mile Overlay Zone. Residential densities within the stated radius will be a maximum of five dwelling units per acre (5 du/1 ac). A minimum of 50% of residential units created by the Overlay Zone will be attached or integrated with commercial and office uses.
- Development quantities and intensities realized by application of Overlay Zone criteria shall be distributed throughout the development as follows:
 - A minimum of 75% of the commercial/office floor area shall be located adjacent to the highway or have direct highway access.
 - A minimum of 75% of attached residential units will be located within the One-Half Mile Overlay Zone.
 - The remaining 25% of the commercial/office floor area and 25% of the attached residential may be distributed through the remainder of the project using traditional planning principles.

Policy A1-10.6: Development shall include a minimum of three of the following four uses: residential, commercial sales/services, office, and public/semi-public. The maximum and minimum of each use (by land area) shall be as follows:

- Residential - Maximum 60%, Minimum 15%
- Commercial Sales/Services - Maximum 25%, Minimum 2%
- Office - Maximum 25%, Minimum 2%
- Public/Semi-Public - Maximum 25%, Minimum 2%

Objective A1-11: Commercial. *The City shall designate land for Commercial.*

Policy A1-11.1: Description of Commercial Future Land Use Designation. The Commercial Future Land Use Designation permits a variety of retail and office uses such as, medical facilities, shopping centers, restaurants, automobile service facilities, and other similar uses. Commercial land uses can be either light or heavy, but zoning for heavy commercial, such as auto sales and repair, will be limited based upon location criteria.

Policy A1-11.2: Location of Commercial Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Commercial Future Land Use Designation:

- All new development within the Commercial Future Land Use Designation shall be served by central sewer and water. If central sewer is not available and the project demand does not exceed 6,000 gallons per day, other interim sewer may be allowed upon authorization by the City.
- The amount of Commercial allowed along corridors and at intersections shall be limited to prevent urban sprawl.
- Development occurring in this designation must have direct access to collector or arterial roads or to service roads that maintain direct access to these roads.

Policy A1-11.3: Development within Commercial Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Commercial Future Land Use Designation:

- No residential uses, other than security or emergency sleep quarters shall be allowed in commercial designated areas.
- Commercial areas shall encourage employment centers for various uses.

Policy A1-11.4: The non-residential intensity for land designated Commercial shall not exceed a floor area ratio of 0.50 and an impervious surface area ratio of 0.90.

Objective A1-12: Industrial. *The City shall designate land for Industrial.*

Policy A1-12.1: Description of Industrial Future Land Use Designation. The Industrial Future Land Use Designation includes both light and heavy industrial uses. Industrial uses are typically connected with manufacturing, assembly, processing or storage of products. Allowed industrial uses include warehousing, wholesaling, limited retail, heavy equipment repair, private utility facilities, limited assembly, processing, motor vehicle impoundment facilities, construction offices, adult entertainment, and storage areas. This designation is intended to provide land for those uses that may emit noise or air pollution, significant truck traffic and be otherwise incompatible with residential areas.

Policy A1-12.2: Location of Industrial Future Land Use Designation. The following criteria shall be used in determining the appropriate locations for the Industrial Future Land Use Designation:

- Industrial uses shall not be located adjacent to residential development without appropriate opaque permanent buffers. Only non-manufacturing uses shall be placed adjacent to residential development.

Policy A1-12.3: Development within Industrial Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Industrial Future Land Use Designation:

- No residential uses, other than security or emergency sleep quarters, shall be allowed in industrial designated areas.
- The Land Development Code will contain performance standards for location criteria and intensity of light industrial versus heavy industrial uses.
- Adult entertainment establishments and sexually oriented businesses shall be strictly limited to lands designated “Industrial” on the Future Land Use Map. The City may adopt interlocal agreements with Lake County and other neighboring cities to jointly coordinate the location of adult entertainment establishments and sexually oriented businesses and prevent them from impacting residential neighborhoods.

Policy A1-12.4: The non-residential intensity for land designated Industrial shall not exceed a floor area ratio of 0.75 and an impervious surface area ratio of 0.90.

Objective A1-13: *Public/Semi-Public.* The City shall designate land for Public/Semi-Public uses.

Policy A1-13.1: Description of Public/Semi-Public Future Land Use Designation. The Public/Semi-Public Future Land Use Designation consists of public facilities and private non-for-profit uses. This category allows public structures or lands that are owned, leased, or operated by a government entity, such as civic and community centers, hospitals, libraries, police and fire stations, and government administration buildings. The not-for-profit and semi-public uses include churches, social services, cemeteries, nursing homes, emergency shelters, utilities and other similar uses. Additionally, education facilities are included within this category, such as public or private schools (primary or secondary), vocational and technical schools, and colleges and universities.

Policy A1-13.2: Development within the Public/Semi-Public Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Public/Semi-Public Future Land Use Category:

- Minor public utility facilities (telephone switching stations, lift stations, drainage infrastructure and ponds) shall be allowed in specified zoning districts including residential districts.
- Major public utility facilities (water and wastewater plants, landfills) shall require Public/Semi-Public land use categories.

Policy A1-13.3: The non-residential intensity for land designated Public/Semi-Public shall not exceed a floor area ratio of 0.45 and an impervious surface area ratio of 0.60.

Objective A1-14: *Recreation and Open Space.* The City shall designate land for Recreation and Open Space.

Policy A1-14.1: Description of Recreation and Open Space Future Land Use Designation. This land use category includes park and recreation facilities owned by the City; the category may also include private parks and golf courses; as well as recreation facilities located at area schools that are under lease to the City. Open space includes those areas deemed worthy of preservation; such as attractive tree stands or pastures, public open space, common open spaces in private developments and significant right-of-way buffers along major roadways and drainage systems. Private recreation within subdivisions and common privately owned open space are not required to have this land use designation and may be located as accessory uses within residential categories. Similarly, private recreation uses that are open to the public for

a fee, such as bowling alleys, skate rinks, etc. may also be allowed in the commercial land use category and mixed use categories.

Policy A1-14.2: Development within Recreation and Open Space Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Recreation and Open Space Future Land Use Designation:

- Public or private lands may be designated as recreation and open space.
- If development of recreation facilities occurs in this land use category, it should be for a public benefit.
- Private parkland does not have to be designated as Recreation and Open Space on the Future Land Use Map.
- If the facility is resourced based, the maximum amount of the site should be retained for open space to enjoy the resource. Only those recreation facilities that will allow interaction and enjoyment of the resource should be encouraged, such as boardwalks and picnic tables.
- If the facility is not resourced-based, a maximum of 25% impervious area shall be allowed for parking and buildings in areas designated as Recreation and Open Space land use to ensure the maximum protection of the open space, proper development and future public use and benefit.
- Greenways should be designated Recreation and Open space land use category and shall be encouraged to connect to the City's existing and proposed open space, conservation areas and parks.

Policy A1-14.3: The non-residential intensity for land designated Recreation and Open Space shall not exceed a floor area ratio of 0.25 and an impervious surface area ratio of 0.50.

Objective A1-15: *Conservation. The City shall designate land for Conservation.*

Policy A1-15.1: Description of Conservation Future Land Use Designation. The Conservation Future Land Use Designation includes public lands that have been acquired and private land areas that have been reserved by mutual agreement with the property owner for the preservation and protection of the City's natural resources.

Policy A1-15.2: Location of Conservation Future Land Use Designation. The following criteria shall be used in determining the appropriate locations for the Conservation Future Land Use Designation:

- Any properties that contain very steep sloping topography subject to soil erosion, wildlife habitat areas, hydric solids/wetlands, special vegetative communities, floodplains, and other areas subject to environmental constraints are potentially suitable to be designated as Conservation.
- The actual boundaries for conservation lands should be delineated by a professional environmental analysis.
- Only passive recreation facilities shall be allowed in conservation areas.

Policy A1-15.3: No development, other than passive recreation, shall be allowed in the Conservation Future Land Use Designation. If the passive recreation includes a caretaker residence, the residential density shall not exceed one dwelling unit per twenty-five acres (1 du/25 ac).

Objective A1-16: *Green Swamp Area of Critical State Concern. Lands within the Green Swamp Area of Critical State Concern shall be designated as such, with regulating polices that are specific for the Green Swamp as specified in Goal A4.*

Objective A1-17: *Site-Specific Approved Density or Intensity. The City of Mascotte has determined that specific sites shall have a maximum number of dwelling units and/or impervious surface area.*

Policy A1-17.1: For the parcels listed below (and as designated on the Future Land Use Map), the City shall ensure that the density and intensity of developments allowed within those designations will not exceed the projected residential and commercial needs shown in the table below.

Parcel	Original Developer Parcel ID	Approx. Area (acres)	Future Land Use Designation	Maximum Dwelling Units	Maximum Commercial and Office Floor Space (sf)
A	Whidden/Langley 312125030510700000 012224000200000200 012224000200000400 012224010603300000 012224010603300001 022224000100000100 362124000300001700 352124000100000500 012224000300001300 352124000400001900 012224010603600001 262124000400000600	841.14	Community Mixed Use	2500	200,000
B	Ellis 352124000400001800	38.73	Community Mixed Use	150	0
C	BL Land Investments 332124000400000103 342124000300000602 342124000300000900 032224000200000600 032224000100002200	186.49	Low Density Residential	540	0
D	Weber/Flagship 042224000100001500 032224000200000800 012224020101200001	244.96	Community Mixed Use	999	0
E	Providence/Fakih 012224020103700000 012224020103900000 012224020105300000	114.84	Community Mixed Use	350	100,000
F	Banyan Construction 112224020000900000 112224000400002000 112224000100000400	112	Low Density Residential	228	0

Goal A2: Quality of Life. To effectively manage the land use pattern in the City to enhance the quality of life for its citizens; promote economic vitality; protect historic and natural resources; and, accommodate population and development growth in an environmentally acceptable manner through the year 2035.

Objective A2-1: Open Space. *Open space shall be provided for the enjoyment of all citizens.*

Policy A2-1.1: All residential, commercial, industrial and mixed use land use categories will be required to provide a minimum of 25% of the gross land area as open space.

Policy A2-1.2: If a land use category other than Recreation and Open Space contains parkland for private or public use then the subject parkland may contribute toward the required open space for the development.

Policy A2-1.3: The combination of development within the downtown Community Redevelopment Area shall be required to provide 25% open space overall, and a tracking system will be established by the City.

Policy A2-1.4: Recreation and open space within the downtown Community Redevelopment Area may be allowed to increase the impervious surface and reduce the open space requirements for plazas that are provided for recreation to the general public.

Policy A2-1.5: No more than twenty-five percent (25%) of the open space requirement can be fulfilled with wetlands and/or surface waters.

Policy A2-1.6: Developments of more than 25 dwelling units shall provide 250 square feet of outdoor recreational facilities per single family dwelling unit and 100 square feet per multifamily unit. Developments providing private recreational facilities (not open to the public) shall not be exempt from paying recreation impact fees, which are used to fund public recreation facilities.

Policy A2-1.7: Lakefront developments are encouraged to maintain the majority of the land around the lake as park land or common open space and to provide lake access, so that the lake is enjoyed by all the residents of the development.

Objective A2-2: Development Buffers. *Residential areas shall be buffered from adjacent roadways and intensive agricultural, commercial, and industrial land uses.*

Policy A2-2.1: The City shall encourage transitional uses between future land use categories that have different intensities/densities that may potentially have a negative impact on each other.

Policy A2-2.2: Buffering with berms, trees, wrought iron fences, brick walls, and other methods shall be included in the City's Land Development Code to protect various types of development from the impact of others.

Policy A2-2.3: The City shall maintain a landscape ordinance that requires adequate visual screening between incompatible uses.

Policy A2-2.4: The City shall maintain site design requirements and subdivision regulations in the Land Development Code which adequately address the impacts of new development on adjacent properties in all land use categories and zoning districts.

Policy A2-2.5: The City's Land Development Code shall limit signage and the glare from lighting which can be viewed from residential property and restrict the location of signs which interfere with traffic flow and sight distance.

Objective A2-3: Wetland Buffers and Setbacks. *Wetlands and/or surface waters shall be buffered from development. Buffers and Setbacks within the Green Swamp Area of Critical Concern may be greater than those specified within this Objective.*

Policy A2-3.1: The City shall require and enforce an undisturbed buffer, twenty-five (25) feet in width, adjacent to all wetlands and lakes. The area of wetlands in question shall include all contiguous wetlands located on the site and adjacent to the site. Buffers without native vegetation shall be revegetated with indigenous habitat to protect the quality of the adjacent isolated wetland, wetland system, lake, river or stream.

Policy A2-3.2: On-site wastewater disposal systems (septic tanks or septic drain fields) shall not be allowed within seventy-five (75) feet of a wetland and/or surface water.

Objective A2-4: Transportation/Land Use Compatibility. *The City will ensure that population densities, housing types, employment patterns, and land uses are consistent with the City's transportation network.*

Policy A2-4.1: Curb-cuts and points of access to the traffic circulation system shall be minimized.

Policy A2-4.2: Shared driveways and cross access between adjacent properties shall be encouraged.

Policy A2-4.3: Proposed transportation improvements shall be consistent with the land use patterns on the Future Land Use Map.

Policy A2-4.4: Land uses that generate high traffic counts shall be encouraged to locate adjacent to arterial roads.

Policy A2-4.5: The City shall require an adequate quantity of on-site parking to accommodate land uses and develop criteria for allowing off-site parking.

Policy A2-4.6: The City shall require new developments to provide safe and convenient on-site traffic flow.

Objective A2-5: Historic and Archeological Sites. *The City shall identify historic properties and structures within the City and to provide for protection of archaeological sites.*

Policy A2-5.1: The City will protect and preserve its historic sites and properties, buildings, artifacts, and objects of antiquity that have scientific or historic value, or are of interest to the public.

Policy A2-5.2: Development shall be prohibited which alters or damages any site or building determined to be historically significant that is designated on the register of historically significant property maintained by the State of Florida.

Policy A2-5.3: Where feasible, the City shall assure that there shall be no loss of historic resources on City-owned property.

Objective A2-6: Public Utilities. *The City will maintain regulations and procedures which will require provision of land for utility facilities necessary to support development and will limit land development activities when such land for utility facilities is not available, as specified in the following policies:*

Policy A2-6.1: Proposed development shall be reviewed in relation to existing and projected utility systems and any land needs of these systems; such as, water and sewer plants; reservation of road rights-of-way; transmission corridors for electric and other utilities; easements for maintenance; and, other requirements.

Policy A2-6.2: No development orders shall be issued unless it can be demonstrated that the land required by utility systems serving the City will be preserved.

Policy A2-6.3: Distribution electric substations shall be permitted in all land use categories and zoning districts within an electric utility's service territory, except those designated as conservation, preservation, or historic preservation on the future land use map or zoning map. The City shall comply with state law regarding standards, procedures, and regulations for approving site applications for distribution electric substations.

Policy A2-6.4: Wireless Telecommunications Facilities. The City shall regulate the location and construction of wireless telecommunication facilities to protect existing and future development from potential adverse impacts resulting from these facilities. Siting criteria and design requirements shall be consistent with state and federal law.

Objective A2-7: Public Schools. *The City shall implement standards for the siting of public schools to increase the quality of life and local educational opportunities for its citizens.*

Policy A2-7.1: Public schools shall be allowed in all future land use designations except conservation and industrial areas.

Policy A2-7.2: Public schools shall be listed in the Land Development Code as uses allowed in all zoning districts with the exception of the Conservation and Industrial zoning districts.

Policy A2-7.3: New school sites must not be adjacent to any noxious industrial uses or other property from which noise, vibration, odors, dust, toxic materials, traffic conditions or other disturbances that would have a negative impact.

Policy A2-7.4: New schools should minimize detrimental impacts on residential neighborhoods, hospitals, nursing homes and similar uses through proper site location, configuration, design layout, access, parking, traffic controls and buffers.

Policy A2-7.5: The size of new school facilities and land areas should satisfy the minimum standards established by the Lake County School Board, whenever possible.

Policy A2-7.6: Schools shall be located in close proximity to existing or anticipated concentrations of urban residential development.

Policy A2-7.7: New school sites should be well drained and education buildings should be located away from floodplains, wetlands, and other environmentally sensitive lands.

Policy A2-7.8: Education facilities should not have an adverse impact on historic or archaeological resources.

Policy A2-7.9: New school sites should have frontage on or direct access to a collector or arterial road and should have suitable ingress and egress for pedestrians, bicycles, cars, buses, service vehicles, and emergency vehicles.

Policy A2-7.10: To the extent possible, during pre-development program planning and school site selection activities, the City shall coordinate with the Lake County School Board to collocate public facilities, such as parks, libraries, and community centers, with schools.

Policy A2-7.11: Portions of new schools should be constructed to serve adequately as emergency shelters in case of natural disasters.

Policy A2-7.12: Schools will be developed consistent with the City's Comprehensive Plan and Land Development Code, as well as any mutual agreement between the City and the Lake County School Board.

Goal A3: Discourage Urban Sprawl and Encourage Redevelopment. The City will maintain regulations and procedures to limit the proliferation of urban sprawl and encourage redevelopment and revitalization of blighted areas through the year 2035.

Objective A3-1: Discourage Urban Sprawl. The City shall discourage urban sprawl by promoting development patterns that are planned and designed to do so.

Policy A3-1.1: The City shall promote economic growth and associated land development to geographic areas of the community in a manner that does not have an adverse impact on and protects natural resources and ecosystems.

Policy A3-1.2: The City shall promote the efficient and cost-effective provision or extension of public infrastructure and services.

Policy A3-1.3: The City shall promote walkable and connected communities and provides for compact development and a mix of uses at densities and intensities that will support a range of housing choices and a multimodal transportation system, including pedestrian, bicycle, and transit, if available.

Policy A3-1.4: The City shall promote conservation of water and energy.

Policy A3-1.5: The City shall promote agricultural areas and activities, including silviculture, and dormant, unique, and prime farmlands and soils.

Policy A3-1.6: The City shall promote the preservation of open space and natural lands and provides for public open space and recreation needs.

Policy A3-1.7: All proposed development in the City shall demonstrate that such development will be adequately served by public facilities.

Objective A3-2: Encourage Redevelopment. The City shall encourage growth and redevelopment within the Community Redevelopment Area.

Policy A3-2.1: The City will encourage development of a mixed use town center through infill and higher density and intensity development within the downtown Community Redevelopment Area.

Policy A3-2.2: The City will ensure the availability of services and facilities to accommodate development in the Downtown Mixed-Use land use designated areas.

Policy A3-2.3: The City shall pursue available federal, state, county and local funds for redevelopment for blighted or otherwise deteriorated areas as identified in the Mascotte Community Redevelopment Plan.

Goal A4: Green Swamp Area of Critical State Concern. The City of Mascotte shall protect the Green Swamp Area of Critical State Concern (“Green Swamp”) as designated by the State of Florida. This protection shall include the creation of future land use designations that are specific to the Green Swamp and application of specific Policies regulating land use and development in the Green Swamp.

***Objective A4-1:** Development within the Green Swamp shall be conducted in a manner that minimizes impacts to the Floridan Aquifer system, wetlands, and flood plains.*

Policy A4-1.1: Development within the Green Swamp shall be regulated by specific policies (included in this Goal), the remaining Future Land Use Element, and the other Elements within the City of Mascotte Comprehensive Plan. Where there is a conflict in policy, standard, or regulation, the more stringent shall apply.

Policy A4-1.2: Any application for any development, other than an application for a building permit for a single-family dwelling unit, shall include a “Green Swamp Development Assessment”. This assessment shall demonstrate how the proposed development is in compliance with this Goal and shall specifically address uses, open space, floodplain, wetlands, listed species, on-site sewage disposal, sediment and erosion control, stormwater management, and landscaping and irrigation. This assessment shall also demonstrate the manner in which the development application has considered the following:

- Minimize the adverse impacts of development on resources of the Floridan Aquifer, floodplain, and wetlands.
- Protect or improve the normal quantity, quality, and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern.
- Protect or improve the water available for aquifer recharge.
- Protect or improve the functions of the Green Swamp Potentiometric High of the Floridan Aquifer.
- Protect or improve the normal supply of ground and surface water
- Prevent further salt-water intrusion into the Floridan Aquifer.
- Protect or improve existing ground and surface-water quality.
- Protect or improve the water-retention capabilities of wetlands.
- Protect or improve the biological-filtering capabilities of wetlands.
- Protect or improve the natural flow regime of drainage basins.
- Protect or improve the design capacity of flood-detention areas and the water-management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.

***Objective A4-2:** Future Land Use Designations. Within one year from the adoption of this Goal, the City of Mascotte shall enact regulations, including zoning districts that are consistent with the Future Land Use Designations described below and land development code regulations that are consistent with the Comprehensive Plan, all of which are specific to the Green Swamp.*

Policy A4-2.1: The following Future Land Use Designations shall be allowed within the Green Swamp. No other future land use designations shall be assigned to parcels wholly or partially within the Green Swamp.

- Green Swamp Conservation
- Green Swamp Rural
- Green Swamp Neighborhood
- Green Swamp Site Specific
 - Parcel Number 17-22-24-0001-0000-3400, Parcel Number 17-22-24-0001-0000-0300 and Parcel Number 17-22-24-0001-0000-0600 only, commonly known as “Boykin Parcels”

Policy A4-2.2: The maximum allowable density, maximum allowable intensity (floor area ratio), and the minimum required open space for each of the future land use designations is summarized as follows:

Future Land Use Designation	Max. Allowable Density	Max. Allowable Floor Area Ratio	Min. Required Open Space
Green Swamp Conservation	1 du/10 ac	N/A	80%
Green Swamp Rural	1 du/5 ac	N/A	60%
Green Swamp Neighborhood	2 du/1 ac	N/A	40%
Green Swamp Site Specific	See Policy A4-2.7		

Densities shall be measured over the net land area, excluding floodplain and wetlands. Transfer of residential density from floodplain and wetlands to uplands on the same site within the Green Swamp shall be allowed in accordance with Policies A4-3.6 and A4-3.7.

Policy A4-2.3: Any parcels annexed by the City of Mascotte that are located within the Green Swamp shall be designated as Green Swamp Conservation or Green Swamp Rural unless the applicant applies for a different Green Swamp designation and demonstrates that the parcel meets the requirements for the requested Green Swamp designation, as follows:

- Only parcels that are, at the time of annexation, designated by Lake County as “Green Swamp Rural” may be designated by the City of Mascotte as “Green Swamp Rural.”
- The Green Swamp Neighborhood future land use designation may only be applied to parcels that are connected to municipal water and municipal sanitary sewer utilities.

Policy A4-2.4: The Green Swamp Conservation future land designation, with a maximum density of one dwelling unit per ten acres (1 du/10 ac) and a minimum of eighty percent (80%) open space, provides for limited rural uses:

- Agriculture and forestry
- Rural single-family residential
- Passive private or passive institutional parks and recreation lands
- Non-commercial equestrian-related uses

Policy A4-2.5: The Green Swamp Rural future land use designation, with a maximum density of one dwelling unit per five acres (1 du/5 ac) and a minimum of sixty percent (60%) open space, provides for limited rural uses:

- Agriculture and forestry
- Rural single-family residential
- Passive private and passive institutional parks and recreation lands

- Non-commercial equestrian-related uses

Policy A4-2.6: The Green Swamp Neighborhood future land use designation is only appropriate for parcels on the northernmost area of the Green Swamp where there are sufficient interconnected uplands for development and it is economically feasible to extend municipal water and municipal sanitary sewer utilities to said parcels. The maximum density shall be two dwelling units per acre (2 du/1 ac) and the minimum open space shall be forty percent (40%). All development within Green Swamp Neighborhood must be connected to municipal water and sanitary sewer utilities. On-site sewage disposal systems are prohibited. Uses within Green Swamp Neighborhood shall be limited to the following:

- Low-density single-family residential
- Passive parks and recreation (private use only; only as a component of a low-density single-family residential planned unit development)
- Equestrian-related uses (non-commercial; only as a component of a low-density single-family residential planned unit development)

The following criteria shall be used for determining the appropriate locations and shall be used in consideration of any development application for property designated as Green Swamp Neighborhood:

- Any parcel designated as Green Swamp Neighborhood that is to be developed shall have direct access to State Road 50, Bay Lake Road (County Road 565 South), or Mascotte Empire Road.
- No parcel that is located south of the centerline of Brantley Road and the southernmost (westerly) segment of Carter Jones Road, or the easterly or westerly extension of each thereof, shall be designated as Green Swamp Neighborhood.
- The Land Development Code may require that development of any parcel of property designated as Green Swamp Neighborhood that would include non-residential uses (parks or equestrian-related uses) must be approved by the City of Mascotte through the City's Planned Unit Development process.
- Perimeter buffering shall be required around any new development. Buffers must be a minimum of fifty feet (50 ft.) in depth along any dedicated road right-of-way and a minimum of one hundred feet (100 ft.) in depth along any parcels adjoining the development. Buffering may be included in the calculation of open space.

Policy A4-2.7: Green Swamp Site Specific. Parcel Number 17-22-24-0001-0000-3400, Parcel Number 17-22-24-0001-0000-0300 and Parcel Number 17-22-24-0001-0000-0600, as defined by the Lake County Property Appraiser (commonly known as "Boykin Parcels"), are designated as Green Swamp Site Specific, and the following site-specific policies shall apply:

- Development applications may be approved on the parcels if the parcels are not connected to municipal water and municipal sanitary sewer utilities.
- Any development shall include a minimum of forty percent (40%) open space as defined in this Goal.
 - Open space does not include parking or any other impervious surfaces.
 - No materials shall be stored in the open space.
 - The combined open space requirement for all three Boykin Parcels is 440,827 square feet. This open space may be provided in one area or may be distributed across the

Boykin Parcels. Buffer, as required in this Policy, may be included in the calculation of open space.

- Prior to construction of additional buildings, a survey shall be prepared indicating the location and amount of open space.
- The open space identified on the Boykin Parcels will be indicated by stakes or some other permanent identifying barrier to ensure that it remains undisturbed.
- The total gross floor area of all buildings and structures, including conditioned space, unconditioned space, canopies, and overhangs, shall not exceed 8,000 square feet combined on the Boykin Parcels until such time that the parcels are connected to municipal water and municipal sanitary sewer utilities.
- Perimeter buffering shall be required around any new development. Buffers must be a minimum of twenty-five feet (25 ft.) in depth along any dedicated road right-of-way and a minimum of fifty feet (50 ft.) in depth along any parcels adjoining the development. Appropriate buffers may include opaque fencing, walls, landscaping, or other appropriate buffer to reduce visibility, noise, and particulate matter. Buffering may be included in the calculation of open space.
- Wholesale and retail sales on the Boykin Parcels shall be limited to the following materials: clean soil; clean sand, gravel, and stone; limerock; and clean, processed debris such as wood, concrete, and asphalt millings. The natural materials listed above shall not be extracted from the Boykin Parcels.
- Asphalt millings shall be placed on an impervious surface and shall have secondary containment to ensure that stormwater run-off is retained within the impervious surface and is treated prior to any discharge.
- Office uses shall be allowed on the Boykin Parcels; however, office uses shall be limited to the property owner's primary business located on site.
- Storage, maintenance, and repair of vehicles shall be allowed on the Boykin Parcels; however, storage, maintenance, and repair shall be limited to vehicles and equipment used for the property owner's business located on site.
- Processing and storage of materials may be allowed on the Boykin Parcels; however, processing and storage of materials shall be limited to the materials that are for sale as part of the property owner's business located on site. Materials shall not be stored in open space.
- Refuse containers shall be limited to a maximum of fifty cubic yards (50 yds.). The existing aboveground diesel fuel storage tank shall be limited to a maximum capacity of five thousand gallons (5000 gal). No more than one aboveground storage tank shall be allowed. Underground storage tanks shall be prohibited.
- Any development application shall demonstrate that sufficient land area has been identified for existing on-site sewage disposal systems (septic systems) and the placement of any new on-site sewage disposal system (as required by the Lake County Department of Health). In addition, sufficient land area shall be reserved for the replacement of existing and required on-site sewage disposal systems.
- Property owners shall be required to connect to municipal water utility within 180 days of written notification from the City that water utilities are available, as defined by the City's Code.

- Property owners shall be required to connect to the municipal sanitary sewer utility within 180 days of written notification, and, pursuant to Fla. Stat. §381.00655, that sanitary sewer service is available as defined by the City's Codes.
- All other Objectives and Policies regulating land use and development within the Green Swamp not inconsistent with these site-specific policies shall apply to these parcels, including, but not limited to, prohibited uses, floodplain, wetlands, stormwater management, and inspection of on-site sewage disposal systems (septic systems).

Objective A4-3: *Within one year from the adoption of this Goal, the City of Mascotte shall enact land development code regulations that impose specific restrictions on any construction activity, development, and land use within the Green Swamp Area of Critical State Concern and implement the following Policies.*

Policy A4-3.1: Development. Single-family residential lots shall be clustered in any development, with the remaining land to be used for open space. The clustering of single-family residential lots shall be located on the least-sensitive land areas of the entire development parcel.

Policy A4-3.2: Access. Any parcel approved for development by the City shall have frontage on a city-maintained, county-maintained, or state-maintained roadway. Building permits may be issued for parcels that do not have frontage on said roadways if the parcel was created prior to the adoption of the 1991 Lake County Comprehensive Plan.

Policy A4-3.3: Prohibited Uses. The following activities are specifically prohibited within the Green Swamp:

- Mining, borrow pits, or any other resource extraction (including sand mining, peat mining, limerock mining, and phosphate mining)
- Solid waste management facilities (landfills, transfer stations, drop-off facilities, or material recovery facilities)
- Wastewater treatment plants and wastewater spray fields (when wastewater has not been treated to advanced wastewater treatment standards)
- Spreading of sludges
- Golf courses
- Dry cleaning plants
- Petroleum pipelines, petroleum-related industries, and fuel wholesalers
- Chemical manufacturers and distributors
- Fertilizer manufacturers and distributors
- Underground storage tanks

Policy A4-3.4: NPDES Permits. With the exception of general construction activities, facilities engaged in industrial activities that require a National Pollution Discharge and Elimination System (NPDES) Permit for Stormwater Associated with Industrial Activities (Chapter 40, CFR Part 122) shall not be permitted within the Green Swamp.

Policy A4-3.5: Open Space. Development within the Green Swamp shall include open space as required by the Future Land Use Designation. Open space within the Green Swamp is defined as a portion of the gross land area that remains unencumbered by any building, canopy, roadway, pavement, or other impervious surfaces and remains open from the ground to the sky.

Floodplain and wetlands may be included in the calculation of open space. Surface waters shall not be included in the calculation of open space. Stormwater management ponds, other stormwater management improvements, and on-site sewage disposal systems may be located within the designated open space.

Policy A4-3.6: Floodplain. Development within the one-hundred year floodplain (or known as “flood hazard area”; defined as that area that lies within Zone A or Zone AE as delineated by the FEMA Flood Insurance Rate Map) shall be limited as follows:

- For parcels that include land both outside the floodplain and within the floodplain, no development shall be allowed within the floodplain.
- Residential densities may be transferred from the land area within the floodplain to the land area outside the floodplain at a rate of one dwelling unit per ten acres (1 du/10 ac). There shall be no transfer of non-residential intensity.
- For parcels that are entirely within the floodplain and that were created prior to the adoption of the 1991 Lake County Comprehensive Plan, the maximum residential density shall be one dwelling unit per ten acres (1 du/10 ac). Non-residential development shall be prohibited on parcels that are entirely within the floodplain.
- For any proposed subdivision or development that includes more than five acres (5 ac) within the floodplain, a flood study shall be performed in accordance with FEMA Guidelines and Specifications for Flood Hazard Mapping Partners. The construction of a single-family residence shall be exempt from this requirement. A single-family residential subdivision that is less than ten lots shall also be exempt from this requirement.

Policy A4-3.7: Wetlands. Development within, adjacent to, or near wetlands shall be limited as follows:

- No new development shall be located within fifty feet (50 ft.) of the furthest upland extent of any wetlands or water body.
- No development shall be allowed within wetlands.
- Wetland impacts shall only be allowed when providing access to a parcel will result in unavoidable wetlands impacts and the denial of said impacts would result in a taking. Impacts shall be properly mitigated through the appropriate agency with jurisdiction.
- Residential densities may be transferred from the land area within wetlands to the land area outside wetlands at a rate of one dwelling unit per twenty acres (1 du/20 ac). There shall be no transfer of non-residential intensity. Land area within wetlands shall not be included in the calculation of floor area ratio.
- For parcels that are entirely within wetlands and that were created prior to the 1991 Lake County Comprehensive Plan, the maximum residential density shall be one dwelling unit per twenty acres (1 du/20 ac), and only one dwelling unit shall be allowed on any parcel. Non-residential development shall be prohibited on parcels that are entirely within wetlands.
- Wetlands and upland buffers shall be maintained in their natural and unaltered state. However, controlled burns, selective thinning, and ecosystem restoration and maintenance are permissible activities within the wetlands and upland buffers, provided they are performed in accordance with current Silvicultural Best Management Practices published by the Division of Forestry. Any isolated wetlands of less than one acre shall be exempt from these requirements.

Policy A4-3.8: Protection of Listed Species. Any new development application within the Green Swamp shall include a field study for listed species (flora or fauna identified as endangered, threatened, or special concern by the US Fish and Wildlife Service and/or the Florida Fish and Wildlife Commission). If it is determined that listed species are located on the parcel, a habitat management plan shall be prepared and implemented as part of the development. Said management habitat plan shall be reviewed and approved by the US Fish and Wildlife Service and/or the Florida Fish and Wildlife Commission.

Policy A4-3.9: Containment. Any land use within the Green Swamp that proposes to store and/or sell materials such as sand, peat, soil, and/or rock, or similar new or recycled materials, must provide adequate containment and storage. Land uses that propose to store products such as petroleum-based materials, metals or metallic materials, asphalt, paints, or other similar materials, must provide an impervious base for the materials and curbing as required so that there is no discharge of run-off or contact water from the materials. Vehicle or equipment repair areas must provide an enclosed space or an impervious base with secondary containment as required so that there is no discharge of any liquids to groundwater.

Policy A4-3.10: On-Site Sewage Disposal System (Septic Systems). The City shall adopt an onsite sewage treatment and disposal system evaluation and assessment program for onsite sewage disposal systems which exist or that are constructed within the Green Swamp that meets the following regulations, to the extent such regulations do not deviate from the requirements of § 381.00651(3) and (6):

- No new on-site sewage disposal system (septic system), or any component thereof, including, but not limited to, septic tanks, dosing tanks, and drainfields, shall be located within one hundred feet (100 ft.) of the furthest upland extent of any wetlands or water bodies.
- At least once every five (5) years, every parcel owner with one or more on-site sewage disposal system within the Green Swamp shall have all septic tanks cleaned and inspected in accordance with the requirements of the Lake County Department of Health. The City of Mascotte shall coordinate with the Department of Health to require that the septic tank be cleaned, that the mound, drainfield, septic tank, and other components of the on-site sewage disposal system shall be in good working order and in compliance with the standards of Chapter 64, FAC, and the standards described herein. As necessary, a fee to be paid by parcel owners shall be assessed to cover the costs of administering this program. The parcel owner shall make all repairs that are necessary to bring the septic tank system in compliance with all the requirements herein.

Policy A4-3.11: Sediment and Erosion Control. General construction activities are permitted within the Green Swamp. All development permits shall be conditioned upon an applicant obtaining all necessary state and federal permits before commencement of development.

Policy A4-3.12: Stormwater Management. Within the Green Swamp, stormwater management systems shall meet the following requirements:

- Stormwater quality best management practices shall be required to treat the greater runoff volume from either the first one inch (1 in.) of rainfall over the entire parcel (less floodplain and wetlands) or the first two and one-half inches (2-1/2 in.) of rainfall over the impervious surfaces.
- Stormwater management systems located within areas that have soils designated as Hydrologic Soil Group "A" (HSG A) must specifically retain and infiltrate the run-off from

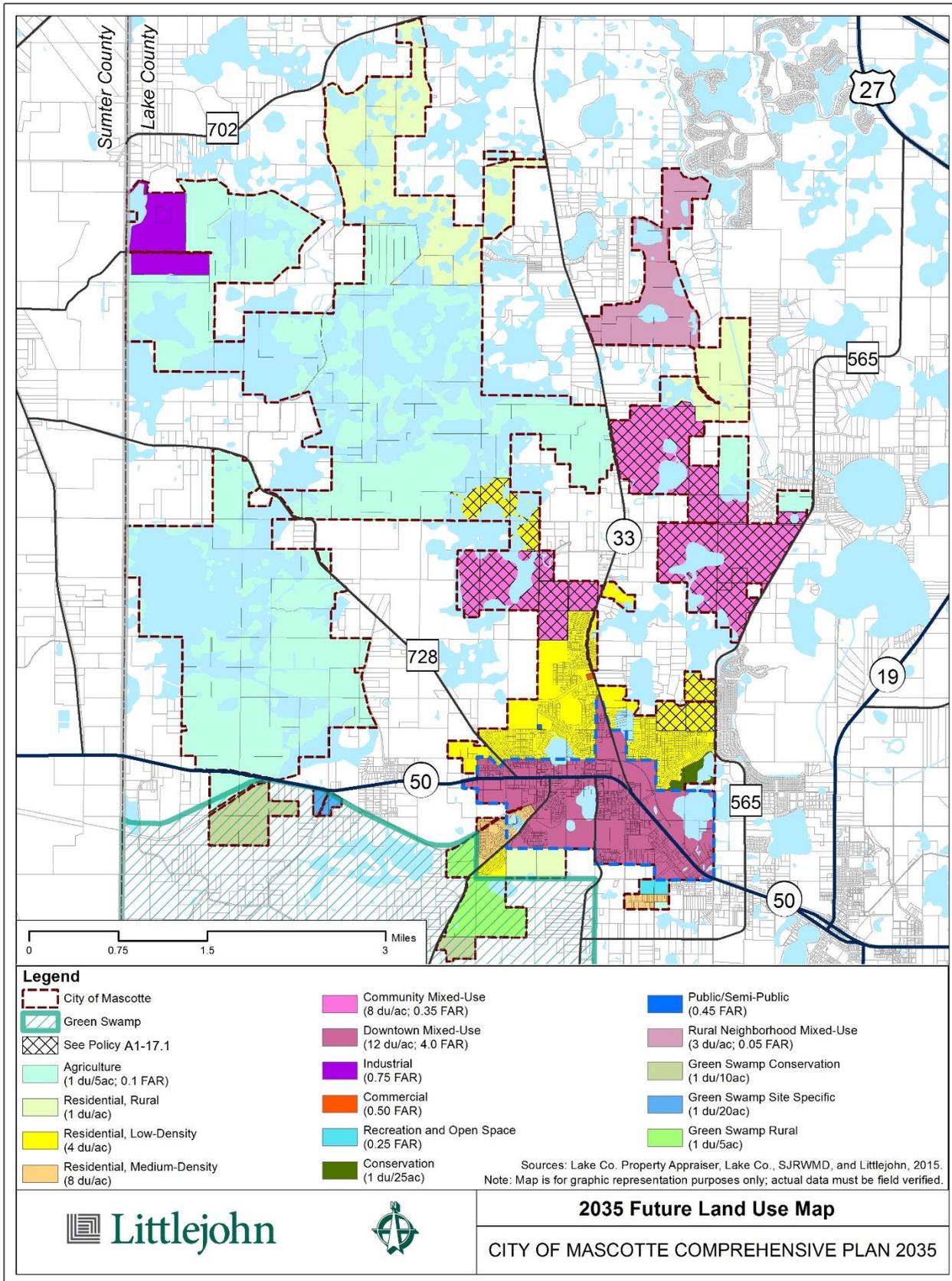
either the first three inches (3 in.) of rainfall or the mean-annual, 24-hour rainfall event, whichever is greater, over directly-connected impervious surfaces.

- Runoff volume discharged from impervious surfaces within non-residential developments must be treated through a filtering or cleansing device or other best management practice that specifically removes a minimum of sixty percent (60%) of oils and greases from the stormwater discharge.
- Residential developments shall designate a specific entity that is responsible for the maintenance and operation of the stormwater management system for the development.
- Each owner of a non-residential parcel shall be responsible for the maintenance and operation of the stormwater management system on that parcel.

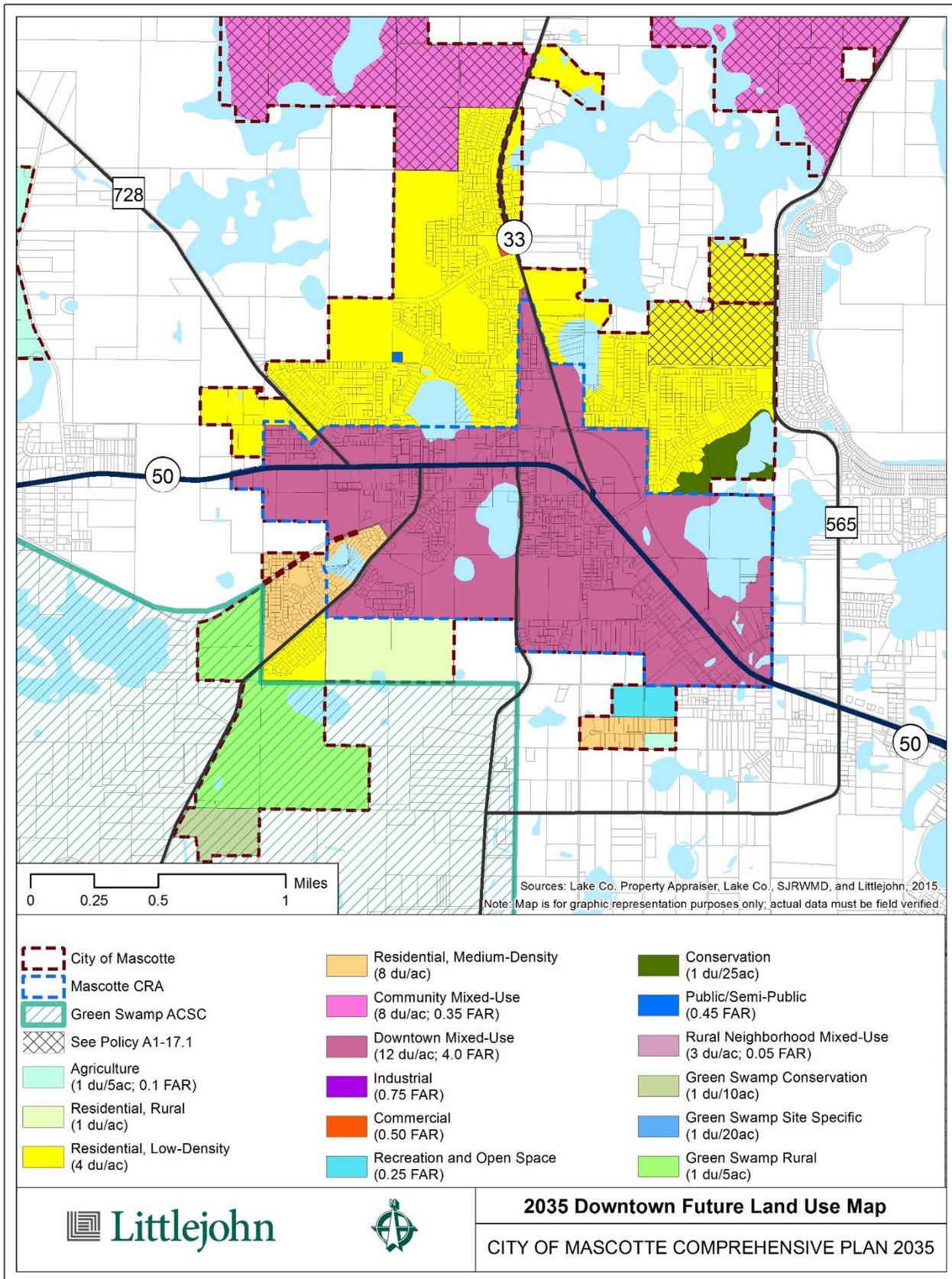
Policy A4-3.13: Irrigation and Landscaping. Within the Green Swamp, the irrigated area of any parcel shall be limited as follows:

- The irrigated area of any single-family lot shall not exceed ten thousand square feet (10,000 sf).
- The irrigated area of any non-residential developments shall not exceed the size of the building footprint of the primary building.
- Irrigation of agricultural uses shall be regulated by the appropriate water management district.
- For non-agricultural uses, fertilizer may be applied no more than four times per year and may not be applied during the months of June, July, August, and September.

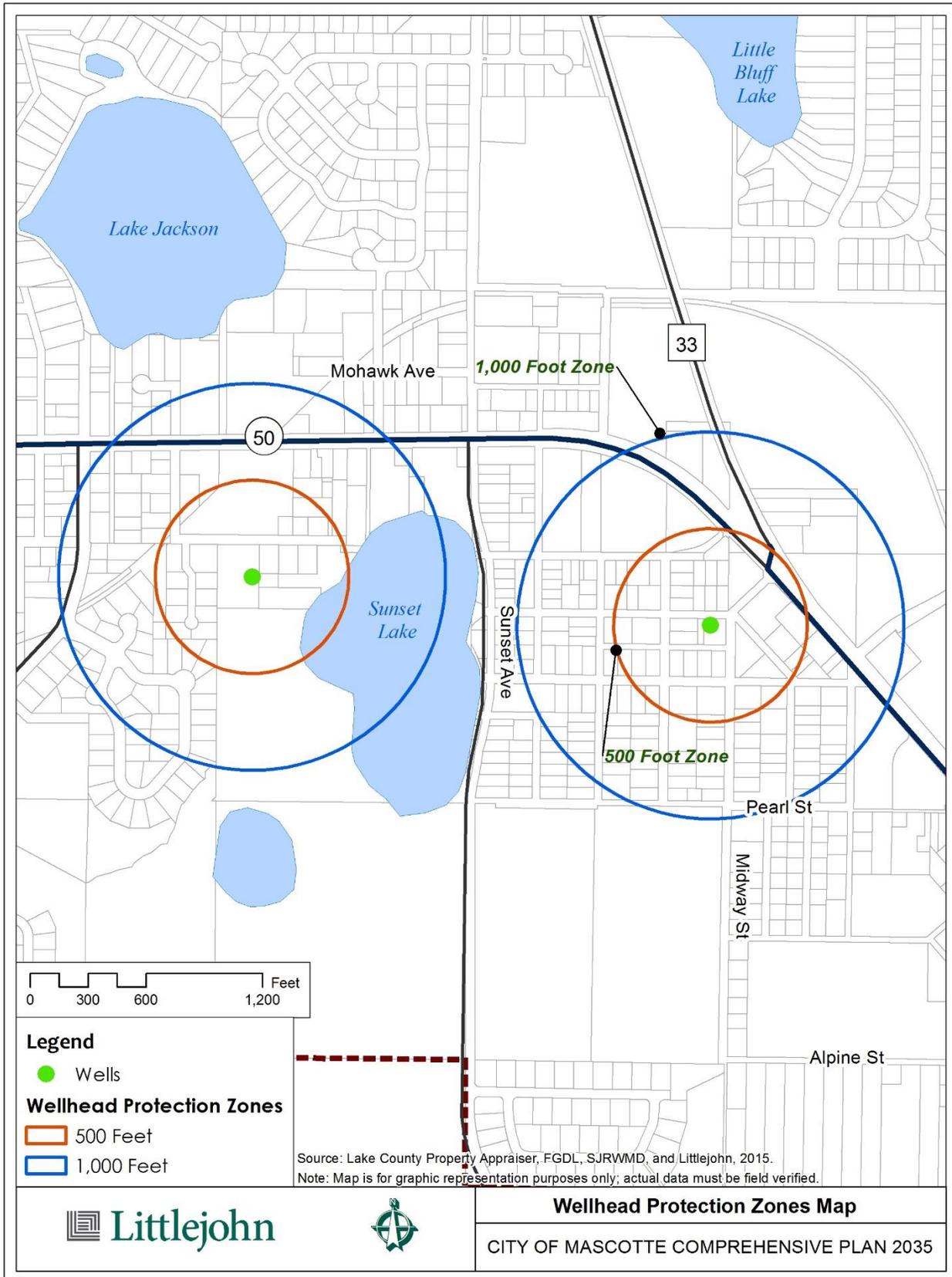
MAP A - 1: FUTURE LAND USE MAP



MAP A - 2: FUTURE LAND USE MAP - DOWNTOWN AREA



MAP A - 3: WELLHEAD PROTECTION ZONES



ELEMENT B - HOUSING

Goal B1: Provision of Housing. To ensure an adequate supply of a wide range of housing types, at various levels of affordability, to accommodate the needs of the residents of Mascotte through the year 2035.

Objective B1-1: Housing Supply. *Assist the private sector to provide approximately 573 new dwelling units of various types, sizes, and costs by 2025, plus an additional 722 units between 2025 and 2035 necessary to house the City's anticipated population through the planning horizon. The City shall create an environment that allows the private sector to provide both the number of housing units and the type of housing units required for the expected growth of the City, including affordable housing, multi-family housing, and housing for seniors.*

Policy B1-1.1: The City's Future Land Use Map shall include adequate amounts of lands to accommodate the projected housing growth.

Policy B1-1.2: Ensure that necessary infrastructure capacity for the new dwelling units, population, and the secondary non-residential development expected from an increase in the housing stock and population.

Policy B1-1.3: The City shall regularly review ordinances, codes, regulations, and the permitting process to eliminate excessive requirements and to encourage private sector participation in meeting housing needs, including affordable housing needs.

Policy B1-1.4: The City shall, through the Land Development Code, encourage the development/redevelopment of housing that will integrate divergent choices of housing across all neighborhoods.

Policy B1-1.5: The City shall regularly review the regulatory and permitting process to determine whether there is a need to streamline the process.

Policy B1-1.6: The City shall continue to assist developers of residential dwelling units by providing technical and administrative support regarding permitting and regulations to maintain a housing production capacity level sufficient to meet the demand. Technical assistance includes, but is not limited to, assistance meeting the development review requirements of the City and other regulatory agencies; referral to appropriate agencies for information and assistance in meeting infrastructure standards and requirements imposed by the City; and provision of data regarding housing needs and conditions.

Policy B1-1.7: The City shall allow mobile home parks in certain residential zoning districts where adequate public facilities and services are available. Mobile home parks should be located adjacent to areas with a comparable density of development or near small-scale convenience or neighborhood commercial activity, in areas accessible to arterial and collector roads; and they should be located within reasonable proximity to community facilities.

Policy B1-1.8: The City shall allow manufactured homes in residentially zoned areas, provided that such housing is compatible with surrounding development and meets applicable building code regulations.

Policy B1-1.9: The City shall utilize Crime Prevention through Environmental Design (CPTED) principles in order to increase the safety of housing developments.

Policy B1-1.10: The City shall continue providing adequate supporting infrastructure, i.e. paved streets, drainage, potable water, and sanitary sewer when available, throughout the City to enhance and complement the housing stock.

Policy B1-1.11: The City shall cooperate with private and non-profit participants involved in the housing production and housing renovation.

Policy B1-1.12: The City shall maintain a database of building permit activity, and shall organize it efficiently to keep information on new housing units, conversions and demolitions by type, and tenure characteristics.

Objective B1-2: Relocation. *The City shall coordinate with the appropriate agencies to offer relocation assistance to city residents who are displaced by Federal, State, or local government programs and projects. The displacing agency shall be responsible for providing assistance, which includes, but is not limited to, financial means and methods.*

Policy B1-2.1: When residents are displaced by City actions, though public development or redevelopment, the City shall attempt to ensure the residents are able to relocate to standard, affordable housing.

Policy B1-2.2: The City shall require that zoning or structure use changes be evaluated as to their impact on citizens residing in the structure and the area.

Policy B1-2.3: The City shall coordinate with appropriate agencies to prepare plans of action regarding relocation of residents, before programs are enacted that will create displaced households. Such plans shall include, but are not limited to, the following:

- Timing of the relocation,
- Assessment of the need for the program which will displace households,
- Costs associated with the displacement of such households, and
- An assessment of the household's needs and the impact of the relocation on the household, including:
 - Location and the effect of a new neighborhood location on the household's distance to job, schools, and social activities, and
 - The adequacy of public transit, if applicable at the time, to serve the displaced household.

Objective B1-3: Affordable Housing. *The City shall encourage and assist the private sector in the provision of safe, clean, and affordable housing for special needs populations of the City, particularly the low and moderate-income households.*

Policy B1-3.1: The City shall review and revise its Land Development Code to remove constraints on the development of affordable housing projects, where such constraints are not supported by a valid concern for the health, safety, or welfare of the community.

Policy B1-3.2: The City shall provide technical assistance to non-profit agencies to plan and develop and renovate affordable housing. Technical assistance includes, but is not limited to, assistance with meeting the development review requirements of the City and of other regulatory bodies, referral to appropriate agencies (including City agencies and other agencies) for information and assistance in meeting infrastructure standards and requirements.

Policy B1-3.3: The City shall pursue public-private partnerships with non-profit agencies to assist very low and low-income families with the maintenance of and renovations to existing owner-occupied housing.

Policy B1-3.4: On a case-by-case basis, the City shall evaluate all infrastructure charges and fees to determine whether adjustments can be made for affordable housing projects or projects that include an affordable housing component. The City should also encourage the County to assist in this effort as the provision of housing needs benefits the larger area as well as the City itself.

Policy B1-3.5: Promote the refurbishment of existing housing structures by providing incentives and/or credits to homeowners for "sweat equity" rehabilitation within neighborhoods

in need, by defining the criteria for such incentives and/or credits in the City's Land Development Code.

Policy B1-3.6: Promote mixed uses, which include provisions for a wide variety of housing types and prices, in large developments (greater than 50 residential units).

Policy B1-3.7: Continue allowing a wide range of housing types, such as cluster homes, single-family attached, zero lot line homes, through the Land Development Code.

Policy B1-3.8: To support affordable housing, Community Redevelopment Area funds shall be made available for programs and incentives aimed at the creation and renovation of new affordable and multi-family units.

Policy B1-3.9: Efficiently plan and operate utility systems to provide for cost effective service operations.

Objective B1-4: Special Needs Households. *The City shall ensure that adequate sites in residential areas are available for special needs populations, such as the elderly and disabled.*

Policy B1-4.1: The City shall include in the Land Development Code adequate standards for the location of community residential homes, including group homes, in residential areas in accordance with applicable Florida Statutes.

Policy B1-4.2: The City shall utilize the development review process to review any proposed projects or City Code amendments that impact housing for special need populations.

Policy B1-4.3: The City shall continue to support organizations that assist elderly and handicapped citizens in finding decent, accessible, and affordable housing. Such support may include technical assistance and alternative design standards and code requirements.

Policy B1-4.4: The City shall continue to ensure compliance with Federal and State laws on accessibility.

Policy B1-4.5: In an effort to address problems of housing for lower income elderly residents and other households with special housing needs, the City shall allow for the placement of retirement communities and elderly care facilities in areas of residential character as long as they are designed in a manner that is compatible with the character of the neighborhood.

Policy B1-4.6: The City shall adopt, as needed, Land Development Code revisions that allow the development of innovative retirement housing including adaptive construction techniques, "Granny Cottages", and accessory apartments.

Policy B1-4.7: The City shall support programs that address elderly housing policies through the area Council on Aging, and State and Federal efforts.

Policy B1-4.8: The City shall maintain a working relationship with the State of Florida Agency for Health Care Administration (AHCA), Lake County Health agencies, and organizations with an interest in the housing of disadvantaged populations, including consideration of subsidy programs offered by these agencies.

Goal B2: Preservation. Encourage the preservation of decent, safe and sanitary housing for the present and future residents of Mascotte.

Objective B2-1: Housing Units. *The City shall continue to assist in extending the life of the existing housing stock, to stabilize neighborhoods and create community pride.*

Policy B2-1.1: The City shall encourage the renovation of substandard housing units.

Policy B2-1.2: The City shall consider applying for housing rehabilitation grant funds and subsidy programs such as:

- Community Development Block Grant (CDBG) funds administered by the U.S. Department of Housing and Urban Development, through Lake County.
- Florida Neighborhood Housing Services grant administered by the Florida Department of Community Affairs. (Chapter 420.429, F.S.).
- Florida Small Cities CDBG Program Funds administered by the Florida Department of Community Affairs. (Chapter 290.0401- 290.049. F.S.).

Policy B2-1.3: The City shall encourage low-income residents to apply for housing rehabilitation assistance individually or through the programs managed by the County.

Policy B2-1.4: The City shall continue implementing code enforcement activities to reduce the amount of substandard housing and preserve the available housing stock.

Policy B2-1.5: The City shall condemn and require demolition of those units which are determined by the Building Official to not be suitable for rehabilitation by public, private, or "sweat equity" means. This policy is to be initiated with caution and proper consideration when applied to units which are owner-occupied and when condemnation would cause undue hardship to the residents of the structure.

Objective B2-2: Neighborhoods. *The City shall promote housing opportunities for new households in already established neighborhoods and ensure the stabilization of all neighborhoods through the following policies, when applicable.*

Policy B2-2.1: Identify neighborhoods that are in need of rehabilitation or are experiencing instability based on any and all of, but not limited to, the following criteria:

- Proliferation of crime,
- A large percentage of substandard housing units,
- Fragmentation of land uses, and
- Poor or deteriorating infrastructure, including water, drainage, traffic and pedestrian systems.

Policy B2-2.2: The City shall consider neighborhood plans and programs, which strive to reduce or eliminate destabilizing neighborhood conditions, and include in such plans and programs activities which include, but are not limited to, greater levels of code enforcement, implementing neighborhood watch programs, "Safe Neighborhoods" programs, and Community Development Block Grant programs.

Policy B2-2.3: Provide for a high level of resident and owner participation in any plan or program implemented for the purpose of improving and/or stabilizing neighborhoods.

Policy B2-2.4: Investigate funding sources for these plans and programs, which may include but are not limited to, special taxing districts, "Safe Neighborhoods Act" funding, and Community Development Block Grant Funding.

Policy B2-2.5: Promote and support home ownership within older neighborhoods by providing incentives and/or credits to home owners for "sweat equity" rehabilitation within targeted neighborhoods.

Policy B2-2.6: The City shall continue enforcing the regulations prohibiting the expansion of non-compatible uses within residential neighborhoods.

Policy B2-2.7: The City shall require buffering and screening of residential neighborhoods from nearby incompatible uses by using landscape buffer yards or transitional uses.

Objective B2-3: Historic Preservation. *The City shall preserve and protect historically significant structures and sites, in accordance with the provisions of this plan.*

Policy B2-3.1: The City shall pursue available grants and alternative funding to expand the local knowledge and awareness of existing historic and archaeological sites and structures.

Policy B2-3.2: The City shall annually request an updated list of historical site, properties, and buildings from the Division of Historical Resources, Master Site File.

Policy B2-3.3: The City shall consider the need to create a historic preservation ordinance and a local register of historic places.

Policy B2-3.4: The City shall continue to encourage property owners to rehabilitate and renovate their historically significant structures by supplying them with technical assistance and information regarding any available state and federal grants.

Policy B2-3.5: The City shall assist property owners of historically significant housing in submitting their properties for inclusion in local or National registers.

Objective B2-4: Infill. *The City shall promote infill development by supporting alternative development standards where necessary and feasible.*

Policy B2-4.1: The City shall develop a vacant residential parcel map and database utilizing, if possible, the Lake County Property Appraiser's Office as a base. Such a system should include the size, location, physical characteristics, utilities, zoning, and ownership data.

Policy B2-4.2: The City shall make available the vacant land database and map to interested developers and/or builders.

ELEMENT C - CAPITAL IMPROVEMENTS

Goal C1: Provide attainable fiscal means to ensure the timely and necessary installation and maintenance of public facilities needed to meet the demands of residents and business establishments within the city limits of Mascotte through the year 2020.

Objective C1-1: Capital Improvement Schedule. To ensure that the necessary facilities and infrastructure will be in place to meet Levels of Service established within the Comprehensive Plan, the City shall formally adopt the Capital Improvement Schedule as shown in the following table:

Five-Year Capital Improvements Schedule

Items by Department	Funding Source	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Public Works						
Street Resurfacing Projects	Impact Fees	\$50,000	\$50,000			
Street Resurfacing Projects	Other			\$50,000	\$50,000	\$50,000
Asphalt Rejuvenation Program	Impact Fees	\$20,000	\$20,000			
Asphalt Rejuvenation Program	Discretionary			\$20,000	\$20,000	\$20,000
Sidewalk Program	Impact Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Replace Trucks	Discretionary		\$30,000	\$30,000	\$30,000	
Parks & Recreation						
Upgrade Playground: Civic Center	Discretionary	\$30,000				
Upgrade Playground: Communicasa	Discretionary			\$30,000		
Upgrade Playground: Mascotte Recreational Complex	Discretionary					\$30,000
Water						
Reroof Knight St WTP	Current Revenues	\$15,000				
Replace Generator: Knight St WTP	Discretionary		\$215,000			
Lower Floridan Well	Other				\$500,000	
Upper Floridan Aquifer Monitoring Well	Current Revenues					\$9,100
Replace Trucks	Current Revenues	\$30,000	\$30,000	\$30,000	\$30,000	
Backhoe Replacement	Current Revenues			\$60,000		
Sewer						
Portable Generator	Current Revenues		\$30,000			
Leveraged Funds for CDBG	Discretionary	\$41,000				
New Truck	Current Revenues		\$30,000			
Stormwater Department						
Atlantic Avenue Flood Resolution	Current Revenues	\$40,300				
Palmwood Avenue Erosion Issue	Current Revenues		\$82,200			
MS4 Program	Current Revenues	\$4,000	\$2,600	\$1,400	\$1,400	

Policy C1-1.1: Capital projects shall be defined as those projects identified within the other elements of the Comprehensive Plan that are necessary to meet established levels of service, increase the capacity or efficiency of existing infrastructure, replace failing infrastructure or enhance facilities and infrastructure, and generally have a cost exceeding \$10,000.

Policy C1-1.2: Components of Capital Improvement Schedule. Capital projects for the following facilities and infrastructure shall be included and funded as part of the City's Capital Improvement Schedule:

- Transportation
- Stormwater Management (Drainage)
- Sanitary Sewer
- Solid Waste
- Potable Water
- Parks and Recreation

Policy C1-1.3: Priorities in Allocating Capital Improvements. When allocating priorities for scheduling and funding capital improvement needs identified within the Comprehensive Plan, the City shall assign the highest priority to capital improvement projects listed in the Five-Year Schedule of Improvements for purposes of eliminating existing deficiencies.

Policy C1-1.4: Criteria. Capital projects shall be prioritized according to the following criteria (in no particular order):

- Whether the project is necessary to meet established levels of service.
- Whether the project increases the efficiency of existing facilities or infrastructure.
- Whether the project represents a logical extension of facilities within the utility service area.
- Whether the project is coordinated with major projects of other agencies.
- Whether the project implements the policies of the Comprehensive Plan as they pertain to concurrency requirements.
- Whether the project eliminates a public hazard.

Policy C1-1.5: The City shall adopt a capital improvements schedule every year as part of the annual budgeting process.

Objective C1-2: Coordination with Other Agencies. The City shall coordinate with other State and Local Agencies in the planning, funding, and construction of Capital Improvements.

Policy C1-2.1: The City hereby adopts into the Capital Improvements Schedule, by reference, the Florida Department of Transportation “Five-Year Work Program”, as amended, and the Lake-Sumter Metropolitan Planning Organization “Transportation Improvements Program (TIP)”, as amended.

Policy C1-2.2: The City adopts into the Capital Improvements Schedule, by reference, the St. Johns River Water Management District “District Water Supply Plan”, as amended, and the City of Mascotte “Ten-Year Water Supply Plan”, as amended.

Policy C1-2.3: The City adopts into the Capital Improvements Schedule, by reference, the Lake County School District “District Facilities Work Program”, as amended.

Objective C1-3: Level of Service (LOS). *The City shall utilize level of service criteria defined in the various Elements of this Plan when determining the timing and funding of capital facilities.*

Policy C1-3.1: The minimum peak hour volume Level of Service (LOS) Standard for arterials and collectors roads shall be “C”.

Policy C1-3.2: The level of service for residential Sewer is 80 gallons per day per capita or 240 gallons per day per Equivalent Residential Unit (ERU).

Policy C1-3.3: The level of service for non-residential Sewer is 0.10 gallons per day per square foot of floor area.

Policy C1-3.4: The level of service for Solid Waste is 6.00 pounds per day per capita.

Policy C1-3.5: The level of service for Potable Water is 106 gallons day per capita.

Policy C1-3.6: The level of service for total Park acreage is 4 acres per 1,000 residents.

Policy C1-3.7: The level of service (LOS) standards for the drainage system facilities developed within the City of Mascotte are noted in the following table:

• Flood Protection	25 year, 24 hour event
• Open Channels and culverts external to development	25 year
• Open Channels and culverts internal to development	10 year
• Cross Drains	25 year
• Storm Sewers	10 year
• Major Detention/ Retention Structures	25 year (SJRWMD)
• Minor Detention/ Retention Structures	25 year
• Retention w/ Percolation or Detention w/ filtration	25 year

Policy C1-3.8: Compatibility. In coordination with other City departments, the City Manager shall evaluate land use amendments to determine the compatibility of those amendments with the adopted level of service standards and to ensure adequate funding is available when improvements are necessary pursuant to such land use amendments.

Policy C1-3.9: Thresholds. Capital projects shall use the following thresholds to target initiation and budgeting of construction and/or purchase of capital facilities to meet projected future needs based on adopted level of service (LOS) standards:

- Roadways - Volumes are at 90% of adopted LOS capacity (as long as projects do not conflict with the Long Range Transportation Plan adopted by the Lake-Sumter Metropolitan Planning Organization).
- Sewer - 75% of available capacity is being utilized.
- Water - 75% of available capacity is being utilized.
- Recreation and Open Space - Park lands when 95 % of available land area is utilized or when 90% of the population exists in areas in need of new park acreage.

Policy C1-3.10: Funding Sources. The City shall pursue adequate funding sources for the construction of capital projects identified in the Capital Improvement Schedule.

Policy C1-3.11: Adequate Funding. The following procedures shall be utilized to ensure adequate funding for transportation capital projects:

- The City shall continue to participate in Lake-Sumter Metropolitan Planning Organization activities to advocate for the consideration of transportation improvements within the City to be included in the Long-Range Transportation Plan.
- 100% of State revenue sharing motor fuels tax funds shall be reserved specifically for traffic related maintenance and capital improvements.

- 100% of net proceeds, after payment of existing bond obligations, of the Lake County Local Option Gasoline Tax shall be reserved specifically for traffic related maintenance and capital improvements.
- 100% of the total proceeds from the Lake County Local Option Sales Tax shall be reserved for traffic related capital improvements.
- Funds collected from the Transportation Impact Fee shall be reserved for transportation capital projects.

Policy C1-3.12: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for stormwater management (drainage) capital projects:

- 100% of the total proceeds from the Stormwater Utility Fund shall be reserved for stormwater management operating needs and capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.

Policy C1-3.13: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for sanitary sewer capital projects:

- Maintain a reserve account restricted for sanitary sewer related capital projects.
- A portion of funds collected from the Utility Enterprise Fund shall be reserved to complete sanitary sewer capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.
- Wastewater impact fees.

Policy C1-3.14: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for potable water capital projects:

- A portion of funds collected from the Infrastructure Surtax Fund shall be reserved to complete potable water capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.
- Water impact fees.

Policy C1-3.15: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for parks and recreation capital projects:

- Grants shall be pursued and used for the completion of parks and recreation capital projects.
- The Code of Ordinances shall continue to contain provisions for all new developments to provide parks and recreation lands and/or facilities and/or fees-in-lieu-of improvements.
- Park impact fees.

Objective C1-4: Capital Improvement Evaluation. All City capital projects shall be evaluated to determine if they meet the prioritization criteria and consistency with adopted level of service standards and/or public need.

Policy C1-4.1: Evaluation Criteria. Requests for capital projects shall be evaluated for their consistency with adopted level of service standards.

Policy C1-4.2: Inventory Hazards. The City shall continue to maintain an inventory of any existing hazards within the City by using the hazards analysis and hazards mitigation criteria established within the Lake County Comprehensive Emergency Management Plan and shall also identify any grant sources available to mitigate the hazards listed on the hazard inventory.

Policy C1-4.3: Capital Requests. Requests for capital projects shall be evaluated for their impact on the City budget.

Policy C1-4.4: Compatibility. All capital projects shall be reviewed as to their compatibility and timing in relation to capital projects being implemented or planned by Lake County, the Florida Department of Transportation, the St. Johns River Water Management District, the Lake County School District, the Lake-Sumter Metropolitan Planning Organization, the Florida Department of Environmental Protection, and/or any other government agency.

Policy C1-4.5: The City should use reasonable methods to track capital projects of any agency, which may be in conflict or may enhance the City's capital projects.

Policy C1-4.6: Debt Management. The City shall adopt procedures which address the management and utilization of debt for the purposes of capital project financing, and the City will use line of credit borrowing or bond anticipation notes for specific construction projects and issue revenue pledged debt at construction completion only if current funds do not provide adequate funding to pay for construction.

Objective C1-5: Repair and Replacement. All City departments shall prioritize capital projects to provide for the repair and/or replacement of identified facilities.

Policy C1-5.1: Department Priorities. As part of the annual budget process, all City departments shall identify and prioritize capital facilities in need of refurbishment or replacement and submit those facilities for funding in the Capital Improvement Schedule.

Objective C1-6: New Development. The City shall ensure that new developments share a proportionate share of the costs required to maintain adopted level of service standards, through the assessment of impact fees or developer contributions, dedications, or construction of capital facilities necessary to serve new development as required in other Elements of this Plan.

Policy C1-6.1: Evaluation of New Development Impacts. All development order applications shall be evaluated as to the impact of the development on capital facilities and the operation and maintenance of those facilities. The evaluation shall include, but not be limited to, the following:

- Expected capital costs, including the installation of new facilities required that are related to the development.
- Expected operation and maintenance costs associated with the new facilities required by the development.
- Anticipated revenues the development will contribute, including impact fees, user fees, and future taxes.

Policy C1-6.2: Developer's Agreements. When applicable, the City shall utilize developer's agreements to ensure the timely and appropriate installation of needed capital facilities to service new development. Such agreements will be executed under the City's constitutional home rule power and/or Chapter 163 Florida Statutes, following the procedures set forth in Florida Statutes.

Policy C1-6.3: Phased Development. To ensure adequate capacity allocations for all developments, the City may require any development to use developer's agreements and/or require development to be phased.

Policy C1-6.4: Proportionate Impact Fees. City shall continue to use impact fees for transportation, water, wastewater, parks, and police and fire to ensure new developments contribute their proportionate share of capital project funding necessary to service new development.

Policy C1-6.5: Developer Responsibilities. New developments shall be responsible for installing all internal water and sewer systems, traffic circulation systems, and internal

recreation/open space facilities within their development. In addition, connections of internal systems to the City's designated major water and sewer trunk systems and traffic circulation network shall be the financial responsibility of the developer.

Objective C1-7: Concurrency. *The City shall conduct a concurrency evaluation as part of the review of all proposed developments within the City of Mascotte for their impact upon the City's municipal services.*

Policy C1-7.1: The concurrency evaluation system shall measure the potential impact of any proposal for a development permit or order upon the established minimum acceptable levels of service for sanitary sewer, solid waste, drainage, potable water, parks and recreation, and transportation facilities, unless the development permit or order is exempt from the review requirements of this section. Transit and public transportation facilities are exempted from concurrency evaluation.

Policy C1-7.2: Concurrency evaluation shall be based on professionally-acceptable techniques, methodologies, and procedures.

Policy C1-7.3: No development permit or order which contains a specific plan of development, including densities and intensities of development, shall be issued unless adequate public facilities are available to serve the proposed development as determined by the concurrency evaluation.

Policy C1-7.4: Transportation improvements, as determined by the concurrency evaluation, required by proposed developments may be satisfied by the following methods:

- The developer in good faith offers to enter into a binding agreement to pay for or construct its proportionate share of required improvements in a manner consistent with Florida Statutes.
- The proportionate-share contribution or construction is sufficient to accomplish one or more mobility improvements that will benefit a regionally significant transportation facility.

The proportionate share process shall be implemented in the Land Development Code.

Policy C1-7.5: Land Acquisition. The City shall include any declared land acquisition, including land acquired for parks, recreation and open space, within the Capital Improvement Schedule.

Policy C1-7.6: Facilities Inventory and Reporting. The City Manager shall maintain an inventory of the available capacity within the roads, potable water, sanitary sewer, solid waste, and parks and recreation public facility categories

Policy C1-7.7: Each year, the City Manager shall prepare a report for the City Council containing the current capacity within each public facility category, including any encumbrances or deficiencies.

Policy C1-7.8: The annual report shall also identify any public facilities that will require improvements to maintain adopted levels of service and recommend a schedule of improvements to avoid any reduction in the approval of development orders.

Policy C1-7.9: Any identified transportation facility, including roadways, that requires improvements to maintain adopted levels of service shall be added to the Capital Improvement Schedule.

Policy C1-7.10: The City shall encourage development in areas that already include the necessary infrastructure, such as the following:

- Infill within the downtown core,
- Near existing, proposed, or potential transit and public transportation facilities, and

- In other areas where impacts would be de minimis.

ELEMENT D - TRANSPORTATION

Goal D1: Provide a safe, efficient and convenient transportation system for motorized and non-motorized users of the Mascotte transportation network through the year 2035.

Objective D1-1: *Level of Service. The City shall adopt and adhere to level of service standards for arterial and collector streets.*

Policy D1-1.1: The City shall use the most recent FDOT Generalized Peak Hour LOS criteria as general basis for the City's level of service standards.

Policy D1-1.2: The minimum peak hour volume Level of Service (LOS) Standard for arterials and collectors roads not on the State Highway System shall be "C". Roadways on the State Highway System shall follow the LOS standards set by FDOT.

Policy D1-1.3: A lower LOS may be acceptable immediately before or after special events where the impacts of such events on the roadway are infrequent.

Policy D1-1.4: The City anticipates that all roadways will meet the LOS standards through the year 2035. However, the City will continue to promote alternative transportation methods, particularly public transportation, in an effort to reduce vehicular travel on roadways.

Policy D1-1.5: As part of the Lake-Sumter Metropolitan Planning Organization Long Range Transportation Plan, the City shall support context sensitive improvements to State Road 50 (from County Road 33 west), County Road 565 North, and County Road 565 South.

Policy D1-1.6: The City shall independently monitor State Road 50 (from County Road 33 west to the city limits), County Road 33, and County Road 565 North to ensure no further Level of Service deterioration.

Policy D1-1.7: The City shall continue to implement the Midway Avenue relocation plan in cooperation with the Lake County School Board to provide better access to Mascotte Elementary Charter School.

Policy D1-1.8: The City shall continue to coordinate with the Lake-Sumter MPO regarding needed improvements to County Road 33, from State Road 50 to the Underpass Road.

Policy D1-1.9: The City shall continue to partner with local developers, Lake-Sumter Metropolitan Planning Organization, Lake County and other government agency to construct new corridors to relieve arterial and collector road congestion.

Objective D1-2: *Roadway Network. The City shall undertake measures designed to assist in the free flow of traffic along major roads and strive to maintain and improve the LOS on those roadways if at any time they operate at a lower LOS than the adopted standard.*

Policy D1-2.1: The City shall coordinate with Lake-Sumter Metropolitan Planning Organization on a traffic management system (signal synchronization) for all future signalization along State Road 50, from the west city limits to the east city limits.

Policy D1-2.2: The City shall coordinate with Lake County and the Florida Department of Transportation on all connections and access points of driveways and roads to county and state roadways, respectively.

Policy D1-2.3: The City shall maintain a record of traffic counts and traffic related accidents for all roadways in the City's network, and update those records on an annual basis.

Policy D1-2.4: The City shall continue to monitor all collector and arterial roadway access deficiencies, and shall devise methods to alleviate those deficiencies.

Policy D1-2.5: The City shall update their disaster preparedness plan by addressing evacuation procedures, the need for signage, and the availability and need of shelters.

Policy D1-2.6: The City shall coordinate with the development community to identify new east-west corridors to relieve congestion and provide improved connectivity within future development in the northern part of the city.

Objective D1-3: Future Land Use, Housing and Population. *The City shall coordinate the transportation system with the adopted Future Land Use Map series and shall ensure that existing and proposed population densities, housing and employment patterns, and land uses are consistent with the transportation modes and services proposed to serve these areas.*

Policy D1-3.1: The City shall review roadway improvements, new construction and roadway extensions proposed by other agencies for consistency with the Future Land Use Map series of the Comprehensive Plan.

Policy D1-3.2: Applications for future land use amendments to more intensive designations shall be accompanied by a traffic study analyzing the impacts of the development allowed by the new category on the citywide transportation system.

Policy D1-3.3: During the development review process, the City shall review all Future Land Use and zoning map amendments to determine the impact of the amendment on the LOS for all roadways directly and indirectly affected by the amendment.

Policy D1-3.4: The Transportation Element shall be reviewed and updated as needed with each annexation and amendment to the Future Land Use Element.

Objective D1-4: Intergovernmental Coordination. *The City transportation system shall be coordinated with the work plans and programs of Lake County, FDOT, the Florida Transportation Plan, the Florida Department of Environmental Protection, and the Lake-Sumter Metropolitan Planning Organization.*

Policy D1-4.1: The City shall coordinate its future transportation needs by attending, when necessary, public hearings on the FDOT's Five-Year Transportation Plan and the Lake-Sumter Metropolitan Planning Organization Long-Range Transportation Plan.

Policy D1-4.2: The City shall review subsequent versions of the FDOT Five-Year Transportation Plan and the Lake-Sumter Metropolitan Planning Organization Long-Range Transportation Plan, in order to update or modify this element, as necessary.

Policy D1-4.3: Utilization of County and State Numerical Indicators. The City shall use County and State numerical indicators for measuring the achievement of City mobility goals. Numerical Indicators shall include:

- Modal Splits;
- Annual Transit Trips Per Capita; and
- Automobile Occupancy Rates.

Objective D1-5: Rights-of-Way. *The City shall provide for the protection of existing and future right-of-way (ROW).*

Policy D1-5.1: The City shall develop a priority listing of needed ROW for the purpose of orderly and economical land acquisition.

Policy D1-5.2: The City shall compile and maintain a listing of existing and projected needs for ROW within the urban area.

Policy D1-5.3: The City shall require additional building setbacks for new construction on roadway corridors identified as needing additional ROW.

Policy D1-5.4: The City shall establish standards for donation/dedication of ROW by developers.

Policy D1-5.5: Corridors with inadequate ROW shall be inventoried and the City shall coordinate with Lake County for reservation of adequate ROW.

Policy D1-5.6: The City shall require that roadways be dedicated to the public when there is a compelling public interest for the roadways to connect with existing public roadways.

Policy D1-5.7: New subdivisions shall be required to “stub-out” to adjoining undeveloped lands to promote road connectivity, and to connect to existing roadways that are “stubbed-out” at their boundaries.

Policy D1-5.8: The City shall establish access management standards in the Land Development Code to ensure appropriate access to the City’s transportation system. Standards may include the requirement of joint-use driveways and/or cross access easements to access sites.

Policy D1-5.9: The City shall preserve the movement function of the major thoroughfare system by requiring development of parallel roads or cross access easements to connect developments as they are permitted along major roads.

Policy D1-5.10: To the extent feasible, new roadways shall be aligned with the existing street network and be designed to follow the same urban fabric that exists within the City.

Objective D1-6: Multi-modal System. The City shall promote alternative modes of transportation to provide a safe and efficient multi-modal system and to provide for a possible reduction of individual motor vehicle travel.

Policy D1-6.1: In cooperation with the Lake-Sumter Metropolitan Planning Organization, the City shall pursue the development and construction of a transit hub near State Road 50 and County Road 33. The City shall coordinate with the Central Florida Regional Transit Authority (Lynx) to establish fixed bus route service to and from the City.

Policy D1-6.2: All new major roadways shall be designed as complete transportation corridors incorporating bicycle and pedestrian features, and planning for transit features to start creating a true multi-modal system.

Policy D1-6.3: The City should provide adequate ROW and construct bicycle ways along corridors to be specified in the bicycle plan.

Policy D1-6.4: Sidewalks shall be mandatory on all new roadway construction.

Policy D1-6.5: New residential developments with densities of one or more dwelling units per acre shall provide sidewalks on both sides of every street.

Policy D1-6.6: The City shall improve existing sidewalks and other pedestrian facilities. Priority will be given to those pedestrian facilities in the downtown core, high pedestrian activity areas, projected heavy recreational use areas, and along roadways between residential areas and schools.

Policy D1-6.7: The City will encourage wider sidewalks in high pedestrian/bicycle traffic areas.

Policy D1-6.8: Sidewalks shall be constructed, concurrently with new development by the developer.

Policy D1-6.9: Intersections shall be made pedestrian-friendly by limiting the crossing width; use of adequate lighting; adequate timing for traffic signals; and the provision of facilities for persons with disabilities.

Policy D1-6.10: The City shall require developers to construct internal trails for developments greater than 50 residential units. Said trail systems shall connect to the Lake County trail system and be consistent, when feasible, with the adopted Lake County Master Trail Plan.

Policy D1-6.11: The City shall develop citywide standards for maximum number of parking spaces to encourage walking, bicycling, ridesharing, and shared parking, and to keep the impervious surface area to a minimum.

Policy D1-6.12: The City shall require that new development be compatible and further the achievement of the Transportation Element. Requirements for compatibility may include, but are not limited to:

- Locating parking to the side or behind the development to provide pedestrian accessibility of building entrances and walkways to the street, rather than separating the building from the street by parking.
- Providing clearly delineated pedestrian routes through parking lots to safely accommodate pedestrian and bicycle circulation.

Policy D1-6.13: The City shall include landscaping and streetscaping as roadway design components in order to enhance the aesthetic and safety of the road for all users.

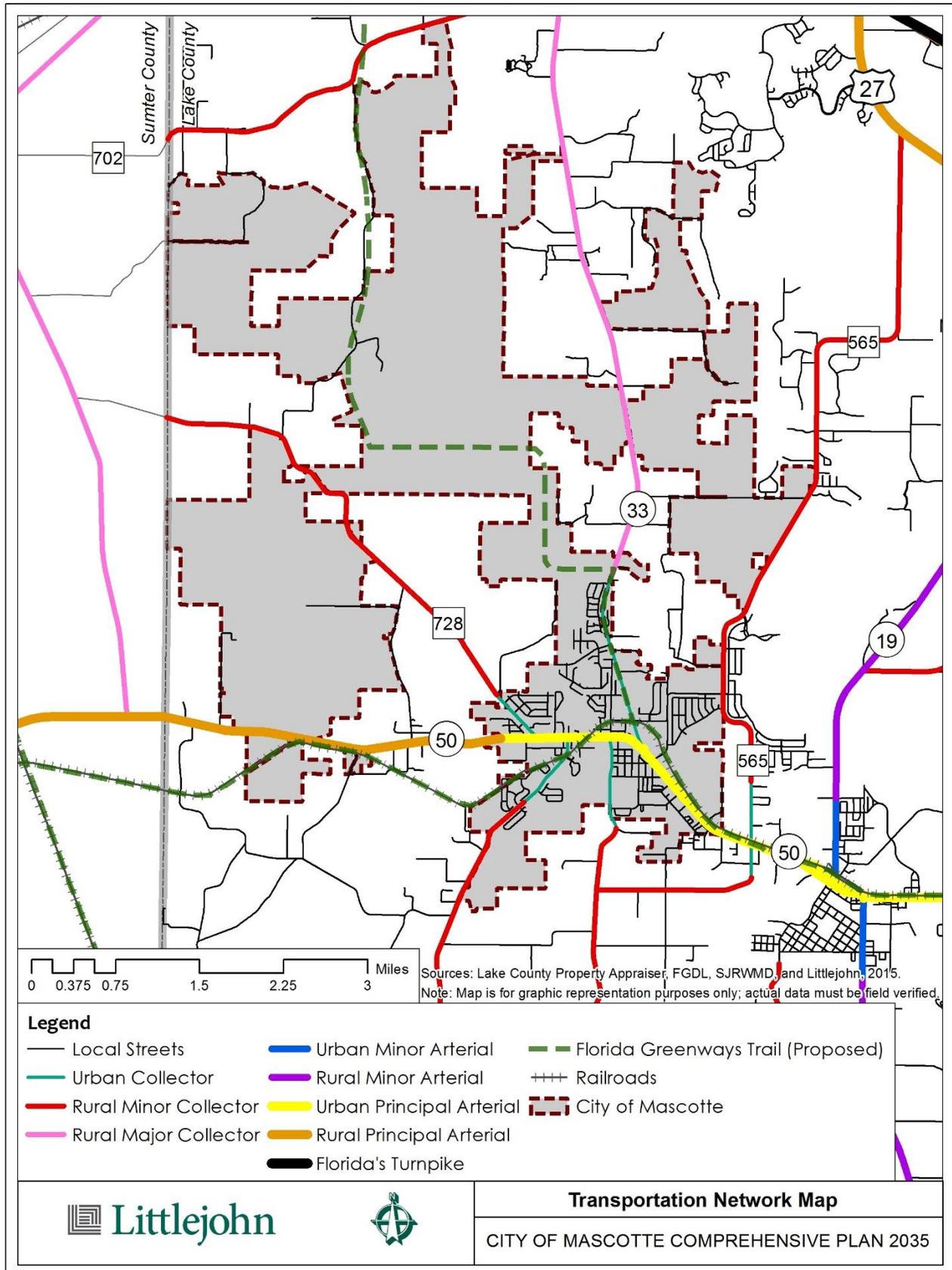
Policy D1-6.14: The City shall continue to pursue grant opportunities for median landscaping and road beautification.

Policy D1-6.15: Adequate pedestrian circulation and safety shall be considered as a required component of roadway system management, with implementation and required construction.

Policy D1-6.16: Way Finding. The City shall implement mechanisms to give direction and prevent confusion for all types of transportation system users.

Policy D1-6.17: Capital Improvements Schedule. The City shall implement a capital improvement plan, methods of funding, and fiscal controls for all major traffic and roadway projects.

MAP D - 1: FUTURE TRANSPORTATION NETWORK (2035)



ELEMENT E - PUBLIC FACILITIES

Goal E1: To plan for and assure an adequate supply of excellent quality potable water to meet the needs of all city residents and non-residential establishments within the City of Mascotte and within the City's service area through the year 2035.

***Objective E1-1: Maintain Level of Service.** Based upon adopted level of service standards, the City shall annually adopt programs and activities to correct existing deficiencies in the central potable water system.*

Policy E1-1.1: The City's Level of Service for potable water supply shall be 106 gallons per person per day.

Policy E1-1.2: When evaluating well capacity, the City shall use a peak factor of 200% of the average daily demand (ADD) in the calculation of the system's ability to meet the level of service standard.

Policy E1-1.3: When evaluating system high service pumping capacity, the City shall use a peak demand rate of 1.0 gpm per equivalent residential connection in the calculation of the system's ability to meet the level of service standard.

Policy E1-1.4: The City's central potable water system infrastructure shall be based on the following:

- Wellfield capacity shall be rated at the average daily demand and assuming the largest well-being out of service, as well as rated at maximum day demand with all wells operational,
- Water storage capacity should be at least 25 percent of the maximum day demand volume,
- High service pump capacity shall at least be equal to the peak hour demand or the maximum day demand plus largest fire flow, whichever is greater, and assuming the largest high service pump being out of service, and
- The backbone distribution system shall be designed for a minimum of forty (40) pounds per square inch (psi) delivery pressure.

Policy E1-1.5: The City will maintain its potable water treatment facilities in optimum condition by the implementation of a preventive maintenance program.

Policy E1-1.6: The City shall maintain a Potable Water System Master Plan, which shall be updated every five (5) years.

Policy E1-1.7: The City shall review water fee methodology and user rates annually during the budget process to ensure adequate funding for treatment, storage and distribution facilities.

Policy E1-1.8: The City shall develop a system of review of individual customer water meters to ensure proper readings of those meters.

Policy E1-1.9: The City shall institute a replacement or "change out" schedule for water meters in the field to ensure replacement at least every fifteen (15) years.

Policy E1-1.10: All improvements and/or additions to potable water facilities to correct deficiencies shall be compatible and adequate to meet the adopted level of service standards. These improvements and/or additions to potable water facilities shall comply, at a minimum, with standards recognized and approved by the Florida Department of Environmental Protection.

Objective E1-2: *Future Needs. Based upon population projections, the City shall ensure the supply and treatment of safe potable water to meet the adopted level of service standards.*

Policy E1-2.1: Based upon the adopted level of service the City will plan for replacement, expansion and extension of potable water facilities to meet future demands concurrent with new development.

Policy E1-2.2: The City will plan for adequate future treatment facilities, which at a minimum will meet all Federal and State drinking water criteria.

Policy E1-2.3: The City shall implement the capital improvement schedule for potable water facilities adopted in the Capital Improvements Element and the annual Capital Improvements Plan.

Policy E1-2.4: The City shall continue to monitor groundwater supply conditions in conjunction with the St. Johns River Water Management District, and in the event that additional water supplies are considered for development, the current District Water Supply Plan will be considered.

Policy E1-2.5: The City shall encourage and require the interconnection and looping of existing and proposed segments of the potable water distribution system as needed.

Objective E1-3: *Service Area Development. The City shall adopt a service area boundary for potable water and shall discourage leapfrog development and urban sprawl.*

Policy E1-3.1: The City's potable water service area shall be defined by the corporate limits of the City and those other areas located outside the corporate limits, which are established by the City's Chapter 180 Boundary and the Interlocal Service Boundary Agreement.

Policy E1-3.2: Before providing potable water service to properties located in unincorporated Lake County, the City shall require that the property owners receiving service execute and record an annexation agreement approved by the City Commission.

Policy E1-3.3: The City may provide wholesale potable water service to other cities and Lake County by written agreement.

Policy E1-3.4: The City shall be the provider of potable water to residents and non-residential establishments within the City's service area.

Policy E1-3.5: The City shall continue to maximize the use of the existing potable water treatment facilities connected to the central water system.

Policy E1-3.6: The City shall discourage urban sprawl through the following activities:

- The City shall require any new development within the City limits, regardless of the number of units or size of proposed development, to connect to the City's central potable water system for water service; and,
- The City will coordinate with Lake County to encourage that all new development within 1,000 feet of the City limits to connect to the central potable water system.
- The City shall only provide service to those areas included in the City's delineated utility service area;
- When reviewing applications for development orders within the City limits, the City shall consider impact on the environment, including the ability to be served by the City's existing water facilities.

Objective E1-4: Water Conservation. *The City shall maintain initiatives to conserve potable water resources, which ensure that existing level of service standards for potable water, do not fluctuate higher than twenty (20) gallons per person per day.*

Policy E1-4.1: Maintain an inverted water rate structure to ensure conservation of potable water and to provide an incentive for the use of treated wastewater for irrigation purposes should the City choose to implement a central sewer system.

Policy E1-4.2: Whenever possible and feasible, and in cooperation with the cities of Leesburg and Groveland through existing interlocal agreements, the City will establish and maintain a reclaimed wastewater effluent program whereby wastewater is treated to standards consistent with Florida Department of Environmental Protection (FDEP) requirements for “unrestricted public access” irrigation of private and public areas, so that potable water is not used for irrigation in areas where reclaimed water is available for such irrigation.

Policy E1-4.3: The City shall maintain specific requirements for the use of low consumption plumbing devices in the Code of Ordinances.

Policy E1-4.4: The City shall adhere to St. Johns River Water Management District emergency water shortage restrictions when mandated by the District.

Policy E1-4.5: The City shall require fifty (50) percent of the required landscaping area, as indicated in the Land Development Code, be drought tolerant plant materials.

Policy E1-4.6: The City shall maintain a leak detection program in order to discover and eliminate wasteful losses of potable water from the City’s central water supply and distribution system.

Policy E1-4.7: The City shall explore all financially feasible alternative water supply options that can be implemented by the City.

Policy E1-4.8: The City shall use all available lower quality sources of water in place of higher quality sources for landscape irrigation when technically, economically, and environmentally feasible.

Policy E1-4.9: The City shall participate in water conservation public information programs and shall encourage the use of water conserving plumbing fixtures and drought-resistant native vegetation for landscaping.

Policy E1-4.10: The City shall encourage the use of low impact development (LID) principles to minimize impacts to the nature environment and facilitate water conservation.

Goal E2: Provide adequate delivery and distribution of potable water to meet fire protection demand within the City of Mascotte and the City’s service area.

Objective E2-1: Fire Protection Capabilities. *The City shall continue to monitor, evaluate, repair and replace the existing water delivery and distribution system to ensure the system can deliver needed gallon per minute flows to meet fire protection demands.*

Policy E2-1.1: The City shall maintain an active water system and fire hydrant mapping and numbering program.

Policy E2-1.2: The City shall establish and maintain a hydraulic model of the City’s water distribution network such that the City’s water distribution system can be routinely analyzed with respect to fire flow delivery capabilities.

Policy E2-1.3: The City shall extend water distribution mains to areas within the City’s service area and provide adequate fire protection service to residents and non-residential

establishments located within the service area provided the residents/developers participate in the costs.

Policy E2-1.4: Fire flow levels of service shall be based upon delivery pressures of twenty (20) psi residual and minimum fire flows of 500 gpm for residential and 1,500 gpm for non-residential and multi-family developments.

Goal E3: Implement and promote stable working relationships with other governmental agencies to ensure protection of the quality and quantity of its water sources.

Objective E3-1: Intergovernmental Coordination. *The City shall coordinate with adjacent jurisdictions and applicable state and federal agencies to protect the quality and quantity of water sources.*

Policy E3-1.1: The City shall meet annually with adjacent governments, private utilities, and state and federal agencies to coordinate the provision of potable water series and service area boundaries.

Policy E3-1.2: The City shall coordinate with adjacent jurisdictions and applicable regional, state, and federal agencies to educate the community about conservation, suitable use, and protection of the quality and quantity of its water sources.

Policy E3-1.3: The City shall review and update the Water Supply Facilities Work Plan and supporting data and analysis within eighteen months of the update of the SJRWMD district water supply plan and will amend this element as necessary to incorporate any applicable policies.

Policy E3-1.4: The City shall issue no development orders or development permits with first consulting with the City of Mascotte's Public Services to determine whether adequate water supplies to serve the development will be available no later than the anticipated date of issuance by the City of a certificate of occupancy or equivalent. The City will also ensure that adequate water supplies and facilities are available and in place prior issuing a certificate of occupancy or its functional equivalent.

Policy E3-1.5: The City will participate in the development of updates to SJRWMD's water supply assessment and District Water Supply Plan and other water supply development-related initiatives facilitated by SJRWMD that affect the City.

Goal E4: To provide an effective system of wastewater collection, transmission, treatment, and disposal to meet the needs of all City residents and non-residential establishments within the City of Mascotte service area while protecting the environment and public health.

Objective E4-1: Maintain Level of Service. *Based upon adopted levels of service standards, the City shall annually adopt programs and activities to facilitate implementation of a wastewater utility to serve newer, higher density development as well as areas where septic systems are failing.*

Policy E4-1.1: Residential. The City's adopted level of service for sanitary sewer capacity shall be 80 gallons per capita per day or 240 gpd per ERU for residential development.

Policy E4-1.2: Non-residential. The City's adopted minimum level of service shall be 0.10 gallons per day per square foot of floor area for non-residential development.

Policy E4-1.3: When evaluating collection force main and lift station capacity, the City shall use a peak factor of 3.0 times the average daily flows (ADF).

Policy E4-1.4: All improvements and/or additions to sanitary sewer facilities shall be compatible and adequate to meet the adopted level of service standards.

Policy E4-1.5: All land use amendments shall require an analysis of the impact of such amendment on the adopted level of service standard and existing sanitary sewer facilities.

Policy E4-1.6: All expansions and other improvements of commercial and industrial uses that increase the demand on public infrastructure and require permitting shall comply with the adopted levels of services.

Policy E4-1.7: The City shall comply with bond covenants, if any, to ensure the maintenance and operations of facilities, and to provide recommendations for system maintenance and improvements.

Policy E4-1.8: The City shall encourage continuing education of operating staff to ensure proficiency with respect to optimization of sanitary sewer maintenance and operation processes.

Policy E4-1.9: Sanitary sewer facilities shall be replaced and existing deficiencies shall be corrected based upon the following priorities:

- Any project correcting an immediate threat to the health, safety, or welfare of the City's residents will receive priority over the expansion of a facility or the correction or replacement of a non-threatening facility.
- Any project that will correct an existing deficiency will receive priority over a project to expand the system.
- Projects that will result in the system exceeding the adopted level of service will be denied.

Objective E4-2: Sanitary Sewer System. *The City shall ensure that, when available, the City's sanitary sewer collection, conveyance, treatment, and disposal system is adequate to service the future land uses within the City's service area.*

Policy E4-2.1: The City shall, if available, provide sanitary sewer collection and conveyance services within the service area adopted as part of the Chapter 180 Service Boundary and the Interlocal Service Boundary Agreement. Wastewater treatment and disposal service shall be provided by the City of Leesburg and the City of Groveland through existing interlocal agreements. For purposes of this Comprehensive Plan, reference to "the City's sanitary sewer system," "central sewer system," and other similar terms means, collectively, wastewater treatment and disposal services provided to the City by the cities of Leesburg or Groveland and wastewater collection and conveyance services of the City of Mascotte.

Policy E4-2.2: The City shall, through existing interlocal agreements with the City of Leesburg and the City of Groveland, pursue the extension of sanitary sewer collection and conveyance systems within the service area.

Policy E4-2.3: In accordance with the Interlocal Service Boundary Agreement, the City shall notify the County of requested sewer service within unincorporated Lake County.

Policy E4-2.4: Regulations for sewer allocation vested rights and the period of vesting will be defined in the City's Code of Ordinances.

Policy E4-2.5: Following a determination of concurrency for sanitary sewer, and to ensure reserved capacity and adequate sanitary sewer facilities are in place prior to the impact of development, the City shall require payment of applicable sewer impact fees upon development approval prior to application for building permits.

Policy E4-2.6: For proposed new development, the City shall require either connection to the central sewer system based on the following criteria, or the installation of septic tanks.

- New residential subdivisions and commercial developments shall be required to connect to the City’s central sewer system when available. “Available” is defined by the City’s Code consistent with §§ 381.0065 and 381.00655, Florida Statutes. If the central sewer system is not available, septic tanks shall be installed, and dry lines may be required if the City and a developer enter into a development agreement requiring dry lines. Mandatory connection shall thereafter be required when the City sewer system is available.
- Individual properties will be required to connect when the City sewer system is available.

Policy E4-2.7: The City shall, when feasible, extend the sanitary sewer collection and conveyance system to provide service within the downtown core. The first priority shall be existing non-residential uses; the second priority shall be existing residential uses.

Policy E4-2.8: The City shall, when feasible, extend the sanitary sewer collection and conveyance system to previously-constructed residential developments that have “dry-line” systems installed.

Policy E4-2.9: The City shall coordinate the utility and transportation planning efforts to take advantage of the most economical construction and maintenance costs possible when installing, repairing and/or replacing utility lines, roads and sewers.

Policy E4-2.10: The City, in cooperation with the City of Leesburg and the City of Groveland through existing interlocal agreements, shall pursue the implementation of a reclaimed water system as deemed feasible.

Policy E4-2.11: In accordance with the Interlocal agreements, the City shall coordinate sewer connections, capacity needs, and future extensions with the cities of Groveland and Leesburg.

Objective E4-3: Maximize Existing Facilities. The City shall maximize the use of existing sanitary sewer facilities within its service area and shall promote compact efficient growth patterns.

Policy E4-3.1: The City shall seek to maximize the use of existing sanitary sewer infrastructure facilities in order to minimize urban sprawl by requiring new development to pay the total costs for the placement of infrastructure necessary to service the development, thus making infill development more cost effective.

Policy E4-3.2: The City’s Code of Ordinances shall incorporate means and methods to require connection to the City’s sanitary sewer system for existing development, once it becomes available, for those properties that lie within the service area.

Policy E4-3.3: When connection to the sanitary sewer system is feasible, the City will prohibit new development within the service area from utilizing septic tanks and prohibit the use of package wastewater treatment plants where central sewer service is available.

Policy E4-3.4: Within the City’s municipal boundaries, when existing central sanitary sewer service is determined to be unavailable to new development, the City may require the new development to extend the central sewer system at the developer’s expense to service subject property, subject to the following conditions:

- The connection between the new development and the existing sanitary sewer line must be along a legally dedicated right-of-way or recorded easement; and
- The existing line to be connected to must have available, unreserved capacity.

Policy E4-3.5: Maintain adequate sanitary sewer impact fees and user rates to ensure adequate funding for expansion, repair and/or replacement of collection and transmission systems.

Policy E4-3.6: The City shall review sewer user rates annually or as otherwise needed to ensure that the fees charged cover the cost of supplying the service.

Objective E4-4: Septic Tanks. *When feasible, the City shall mandate connection to the central sewer system, for any proposed new development and existing residences and non-residential establishments which are served by septic systems, and are deemed to be detrimental to the health, safety, and welfare of the general public.*

Policy E4-4.1: All septic tank systems shall be in compliance with Chapter 64E-6, Florida Administrative Code.

Policy E4-4.2: Development of new residential and non-residential projects on soils that are not suitable for septic tank systems will be required to provide central sanitary sewer systems.

Policy E4-4.3: The City shall coordinate with the Lake County Health Department to ensure that any development proposed in the City's service area will be required to connect to the City's sanitary sewer system when available at the times prescribed by the City's Code and pursuant to §§ 381.0065 and 381.00655, Florida Statutes. If the City's sanitary sewer system is not available, dry lines may be required if the City and a developer enter into a development agreement requiring dry lines.

Policy E4-4.4: The City will coordinate with the Lake County Health Department to require central sewer for developments in the City's service area that have soils unsuitable for septic tank systems.

Policy E4-4.5: The City will routinely coordinate information between the City and the Lake County Health Department and Lake County Building Department regarding failing septic tanks within the City and the City's service area.

Policy E4-4.6: The City shall monitor and keep a database of building permits requested for repair or replacement of existing septic tank and drain field systems within the City.

Goal E5: Provide a stormwater management system of appropriate capacity to protect public health, safety and welfare of the citizens of the City of Mascotte, and to meet current and future stormwater management demand, as well as decreasing inadequacies in the stormwater drainage system and water quality conditions.

Objective E5-1: Development Impacts. *The City shall protect natural resources and the existing municipal stormwater network from the impacts of development and construction.*

Policy E5-1.1: The City will continue collection of a stormwater utility fee to provide funding for the maintenance and operations of stormwater facilities within the City of Mascotte. The City shall review/update the stormwater utility fee every three to five years to accommodate current inflation and increased construction costs.

Policy E5-1.2: The City shall review detailed calculations for new projects prepared by a registered professional engineer which show that retention and detention will be accomplished to meet the adopted level of service, and that there will be no negative impacts to downstream water quality or quantity.

Policy E5-1.3: The City shall review the characteristics and limitations of soil types for new projects with regard to percolation and infiltration.

Policy E5-1.4: The City shall review the impact proposed stormwater systems will have on adjacent native vegetation and/or wetlands.

Policy E5-1.5: The City shall require that erosion and sediment control practices be utilized to protect water bodies, wetlands, and watercourses from siltation during construction activities.

Policy E5-1.6: The City shall require adequate easements for stormwater system maintenance and conveyance.

Policy E5-1.7: New development and redevelopment shall be required to accommodate upland flow that presently discharges through the site.

Policy E5-1.8: Necessary measures shall be taken to protect and maintain the natural drainage features within the City limits of Mascotte.

Policy E5-1.9: The cumulative effects of drainage from small developments, as it affects the overall drainage system, will be addressed during the site plan approval phase.

Policy E5-1.10: Drainage from new developments shall not adversely impact the natural drainage features within the City.

Policy E5-1.11: All new developments with a density greater than one unit per acre shall provide curb and gutter drainage systems.

Objective E5-2: Stormwater Master Plan. The City shall maintain a Stormwater Master Plan which establishes high water elevations, addresses existing deficiencies, and coordinates the construction of new and replacement facilities.

Policy E5-2.1: The City shall maintain a detailed inventory and analysis of the existing publicly owned and managed drainage facilities within its municipal boundaries in the City's Stormwater Master Plan.

Policy E5-2.2: The City shall update the Stormwater Master Plan every 5 years. Areas that have been annexed into or adjacent to the service area since the time of the last study shall also be included in this analysis.

Policy E5-2.3: The Stormwater Master Plan shall include review of stormwater quality discharged into surface water bodies and recommendations for needed improvements.

Policy E5-2.4: The Stormwater Master Plan shall establish priorities for stormwater system replacements, insuring correction of existing drainage facility deficiencies, and providing for future facility needs.

Policy E5-2.5: After completion, the City shall rely on the Stormwater Master Plan to prepare the City's annual budget for funding of stormwater facility replacement and deficiency upgrades.

Policy E5-2.6: The City shall utilize the Stormwater Master Plan for preparation of the 5-year Capital Improvement Plan to correct existing deficiencies and prepare for future stormwater demands.

Policy E5-2.7: New developments shall design stormwater management systems to meet the rules and criteria established by the City of Mascotte, the St. Johns River Water Management District, the Florida Department of Transportation, and Lake County (as applicable), and the East Central Florida Regional Planning Council.

Policy E5-2.8: The minimum acceptable Flood Protection Level of Service standards for the City of Mascotte shall be met in order to protect from flooding that would result from a 25-year, 24-hour storm event.

Objective E5-3: Correcting Facility Deficiencies. The City shall ensure that surface water management system deficiencies are corrected and that natural drainage features are protected.

Policy E5-3.1: The City shall coordinate with Lake County, Lake County Water Authority, and SJRWMD to encourage maintenance of conveyance and treatment features.

Policy E5-3.2: The City shall educate and inform citizens of their responsibility regarding maintenance and protection of stormwater collection systems.

Objective E5-4: Flood Control. *The City shall achieve and maintain the following adopted stormwater management level of service standards that shall meet or exceed state and federal regulations for stormwater quality and quantity.*

Policy E5-4.1: All new development and redevelopment shall provide stormwater retention, infiltration, and/or detention systems.

Policy E5-4.2: The level of service (LOS) standards for the drainage system facilities developed within the City of Mascotte shall be as follows:

- Open Channels and culverts external to development 25 year
- Open Channels and culverts internal to development 10 year
- Cross Drains 25 year
- Storm Sewers 10 year
- Major Detention/ Retention Structures 25 year (SJRWMD)
- Minor Detention/ Retention Structures 25 year
- Retention w/ Percolation or Detention w/ filtration 25 year

Policy E5-4.3: Stormwater treatment shall be required to serve the development through a stormwater treatment system, which is site-specific. Regardless of the area served, the stormwater treatment system must provide a level of treatment, which meets the requirements of the Florida Administrative Code (F.A.C.), the City of Mascotte Code of Ordinances and the criteria of the St. Johns River Water Management District.

Policy E5-4.4: Pollutant retardant structures that separate oils and greases from runoff shall be designed for all new commercial and industrial type projects.

Policy E5-4.5: Whenever feasible, natural systems shall be used in lieu of structural alternatives.

Policy E5-4.6: At a minimum, the existing stormwater management systems and current levels of service shall be maintained.

Objective E5-5: Intergovernmental Coordination. *The City of Mascotte shall educate citizens and coordinate with all applicable jurisdictions to address stormwater issues of mutual concern and to provide adequate levels of service.*

Policy E5-5.1: The Stormwater Master Plan shall be developed and updated in coordination with Lake County and other regulatory agencies, such as the, the St. Johns River Water Management District, and the Florida Department of Transportation.

Policy E5-5.2: The Stormwater Master Plan process will include public participation review of the plan by affected citizens and City Advisory Committees.

Policy E5-5.3: The City shall maintain a complaint monitoring system to log complaints and initiate work orders for corrective actions.

Policy E5-5.4: The City will support St. Johns River Water Management District's programs and stormwater regulations.

Policy E5-5.5: The City shall coordinate with the County, and the St. Johns River Water Management District to identify areas that require immediate flood protection and to investigate areas that lack water quality treatment.

Objective E5-6: Floodplain. *The City shall restrict development within the 100-year floodplain to those uses, which will not adversely affect the capacity of the floodplain to store water.*

Policy E5-6.1: The City Code of Ordinances shall require compensating storage volumes for floodwater displaced by development. Compensating storage volumes shall be provided above the high water table elevation and below the elevation of the 100-year flood.

Policy E5-6.2: The City shall require the finished floor elevation of all structures shall be protected from flooding through provisions included in the Land Development Code.

Policy E5-6.3: Where feasible, the floodplain shall be reserved for conservation, open space and recreational uses to preserve the natural flow of runoff.

Policy E5-6.4: The City shall strive to protect and /or acquire land with natural depressions within its Urban Service area.

Goal E6: To provide, maintain, and protect, the surficial and Floridan aquifers to ensure that recharge of the natural groundwater aquifer occurs in a manner which maintains sufficient quality and quantity of the public water supply to meet current and future demands.

Objective E6-1: Natural Recharge Protection and Conservation. *The City of Mascotte shall coordinate with other agencies and adopt measures in the Code of Ordinances that will ensure preservation of natural recharge to the City's groundwater resource and conservation of our potable water sources.*

Policy E6-1.1: Coordination. The City shall adhere to regulations and mapping established by St. Johns River Water Management District to protect areas of high recharge.

Policy E6-1.2: Coordination. The City shall continue to coordinate with Lake County, St. Johns River Water Management District, and state and federal agencies to achieve regional aquifer recharge protection objectives.

Policy E6-1.3: Coordination. The City shall coordinate with the SJRWMD on preparation of the regional Aquifer Protection Plan.

Policy E6-1.4: Education. The City shall educate residents on the benefits of water conservation and shall expand water conservation efforts.

Policy E6-1.5: Site Determination. For any application for development approval, the City shall require site specific determinations of whether a site lies within a prime aquifer recharge area as defined St. John's River Water Management District.

Policy E6-1.6: Wellfield Protection. The City shall protect wellfields by establishing a "primary protection zone" which shall include all land within a 500 foot radius of any existing wellhead and a "secondary protection zone" which includes all land within a 1,000 foot radius of any public wellhead. Development other than wellfield facilities or passive recreation shall be prohibited within the primary protection zone. Within the secondary protection zone the following land use activities shall be prohibited: sanitary landfills, animal feedlots, wastewater treatment facilities, petroleum and pesticide storage facilities, incinerators, and all other activities that store, handle, or generate hazardous materials or wastes. Above-ground or below-ground pipes which store or transfer pollutants or other contaminants as well as open drainage cuts below the seasonal high water table shall also be prohibited within the secondary protection zone.

Objective E6-2: Best Management Practices. *The City shall recognize the best management practice of promoting conservation of water.*

Policy E6-2.1: The City shall promote low or no water native landscaping, the use of solid waste compost, efficient irrigation systems, and the prohibition of exotic plant species, which will result in the conservation of water.

Policy E6-2.2: Stormwater. The City shall require that development within prime aquifer recharge areas maintain pre-development net retention to protect ground and surface water quality (Agricultural activities that use Best Management Practices adopted by US Natural Resources Conservation Service and the Florida Department of Environmental Protection are exempted).

Policy E6-2.3: The City shall require detention of stormwater runoff in compliance with state and water management requirements.

Policy E6-2.4: The City will maintain a leak detection and repair program for its potable water utilities.

Policy E6-2.5: The City shall pursue new techniques and innovative programs that will protect and conserve the City's potable water resources including, but not limited to, Low Impact Development (LID) principles, green design principles, or protection of vulnerable wetland systems that may be impacted by consumptive withdrawals.

Goal E7: To provide efficient and safe solid waste disposal facilities and collection services on a regular basis for all City residents and commercial establishments within the City of Mascotte to protect the environment and public health.

Objective E7-1: Solid Waste Disposal. *The City shall coordinate the disposal of solid waste throughout the planning horizon in a safe and efficient manner.*

Policy E7-1.1: Level of Service. The City's minimum level of service for municipal solid waste shall be 6.00 pounds per person per day, which will be utilized to plan for future demand.

Policy E7-1.2: Franchise Administration. The City Manager shall be responsible for franchise administration and coordination of billing matters.

Policy E7-1.3: Standards. All solid waste disposal contracted or performed by the City of Mascotte shall be operated in a manner that complies with all applicable city, regional, state and federal solid waste disposal standards throughout the planning period.

Policy E7-1.4: Mandatory Collection. Solid waste collection shall be mandatory for all residential and non-residential land uses within the City corporate limits through the use of contracted haulers and/or the City.

Policy E7-1.5: Monitoring. Throughout the planning period the City shall continue to monitor complaints regarding residential and commercial solid waste collection by the contracted hauler to ensure that the most efficient, orderly, sanitary and environmentally sound service is being provided.

Objective E7-2: Collection. *The City shall continue to provide for solid waste collection services to city residents and commercial establishments throughout the planning horizon.*

Policy E7-2.1: Alternative Evaluation. The City shall evaluate cost-effective collection alternatives, including the potential use of private or contracted haulers, to provide solid waste collection services to city residents and non-residential establishments throughout the planning horizon.

Policy E7-2.2: Equipment. The City, or the selected private provider, will provide adequate equipment to maintain a level of service standard for solid waste collection of 6.0 pounds per capita per day.

Policy E7-2.3: Collection Schedule. The City shall ensure the collection of refuse from residences at least twice each week.

Objective E7-3: Recycling. *The City shall require a reduction in municipal solid waste final disposal in landfill facilities by maintaining and promoting its recycling program.*

Policy E7-3.1: Curbside Pick-up. The City shall continue to have a collection process in place for curbside pickup of newspapers, glass, plastics, tin and aluminum.

Policy E7-3.2: Yard Waste. The City shall continue to have a collection process in place for curbside pickup of yard waste.

Policy E7-3.3: Waste Stream Reduction. The City of Mascotte will promote the efforts of Lake County towards the reduction of the solid waste stream.

Policy E7-3.4: Coordinate with Lake County. The City shall endeavor to coordinate with Lake County with respect to Solid Waste Management and Waste Recycling Programs.

Policy E7-3.5: Hazardous Waste. The City shall coordinate with the County to monitor and control the disposal of hazardous wastes in accordance with State law.

Policy E7-3.6: Amnesty Day. The City will help the County promote and support the County's Amnesty Day Programs.

ELEMENT F - PUBLIC SCHOOL FACILITIES

Goal F1: Ensure and maintain a public school system that offers a high quality educational environment, provides accessibility for its students, and ensures adequate school capacity to accommodate enrollment demand in the City.

***Objective F1-1: Level of Service.** Level of Service (LOS) standards shall be adopted through the incorporation of public school facilities level of service standards for each Lake County School Board School Concurrency Service Area. The City shall coordinate with the District School Board of Lake County to address school facility deficiencies within the period covered by the Five-Year Schedule of Capital Improvements and the long-term planning period.*

Policy F1-1.1: The LOS is defined as school enrollment as a percentage of school student capacity based upon the Florida Inventory of School Houses (FISH). The LOS standard is the maximum level of school utilization that will be permitted in the Lake County School District.

Policy F1-1.2: The LOS shall be consistent with the Interlocal Agreement for the Coordination of Planning Activities and based upon permanent capacity as determined by the FISH, the following LOS standards are established for each School Concurrency Area (SCA):

- The LOS for all schools shall be set at 100% of FISH permanent capacity. In instances where the CORE (dining) capacity is greater than the FISH permanent capacity, the school capacity shall then be increased to that of the CORE (dining) capacity and the level of service maintained at 100% of the school capacity. In no instance shall the school capacity increase more than 125% due to additional CORE (dining) capacity.

Policy F1-1.3: The adopted LOS standard shall become applicable to the City no later than June 1, 2008.

Policy F1-1.4: Individual schools are discouraged from operating in excess of the established LOS. Moreover, the issuance of development orders and building permits shall be strictly conditioned upon the availability of school capacity and the maintenance of the adopted LOS.

Policy F1-1.5: The LOS standards will be used to determine whether sufficient school capacity exists to accommodate future development projects and evaluate the sufficiency of the Five-Year Schedule of Capital Improvements. The Five-year Schedule of Capital Improvements shall be reviewed, updated and adopted annually thus ensuring those projects necessary to address existing deficiencies, and to meet future needs based upon our adopted level of service standards, are adequately planned for. Furthermore, coordination with the Lake County School Board's Five Year District Facilities Work Plan, the plans of other local governments, and as necessary, updates to the Concurrency Service Area map is required to ensure that the adopted Level of Service Standards for Concurrency Service Areas will be achieved and maintained.

Policy F1-1.6: In accordance with the Interlocal Agreement between Lake County, Lake County School Board and Municipalities for School Facilities Planning and Siting, future amendments to the Concurrency Service Areas (CSA's) may be accomplished by the School Board only after review and comment by the County and other municipalities within Lake County as provided in the Interlocal Agreement. Amendments of the CSA's shall be established to maximize available school capacity, taking into account transportation costs, desegregation plans, diversity policies, and the extent to which development approvals have been issued by a local government based on the availability of school capacity in a CSA contiguous to the CSA in which the development approval was issued. Amendment to the CSA's and attendance zones shall be designed to make efficient use of new and existing public school facilities in accordance with the Level of Service Standards set forth in the Interlocal Agreement.

Objective F1-2: Evaluation of Development Proposals. *Ensure that comprehensive plan amendments and other land use decisions are simultaneously evaluated with school capacity availability within the City.*

Policy F1-2.1: School Board findings and comments on the availability of adequate school capacity shall be considered when evaluating the decision to approve comprehensive plan amendments and other land use decisions as provided for in §163.3177(6)(a), F.S.

Policy F1-2.2: The School Board shall review potential new development student generation impacts and available school capacity. Where capacity will not be available to serve students from the property seeking development approval and proportionate share mitigation is not an option, the School Board shall not issue a favorable concurrency determination. The City may use lack of school capacity demonstrated by an unfavorable concurrency determination as a reason for denial.

Objective F1-3: Educational Facilities. *Ensure that the planning and construction of educational facilities are coordinated so that the timing is proper, the selected location is compatible with the surrounding area, the construction is concurrent with necessary services and infrastructure and the proposal is consistent with the comprehensive plan.*

Policy F1-3.1: The City shall coordinate with the School Board so that proposed public school facility sites are consistent with the applicable land use designations and policies of the comprehensive plan. Pursuant to §1013.33, F.S., the City will consider each site plan as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. In addition, road capacity and traffic concerns will also be evaluated. The City will also continue to pursue the development of mutually acceptable guidelines for the selection of future school sites including, but not limited to:

- Acquisition of school sites which allow for future expansions to accommodate future enrollment and other facility needs deemed beneficial for joint-uses, as identified by the Lake County School Board and the City;
- Coordination of the location, phasing, and development of future school sites to ensure that site development occurs in conjunction with the provision of required infrastructure to serve be school facility;
- Preferences for urban and urbanizing areas; and
- Provide for allowances for rural sites as deemed necessary and appropriate under certain circumstances.

The City will coordinate its comprehensive plan and adopted Future Land Use Map with the Lake County School Board's future conditions/long-range public school facilities map.

Policy F1-3.2: The City shall coordinate with the School District to evaluate and located potential sites where the co-location of schools with other public facilities, such as parks, libraries, and community centers can be selected.

Objective F1-4: Land Use. *Enhance community design through effective school facility design and siting standards and encourage the siting of school facilities so that they are compatible with the surrounding land use.*

Policy F1-4.1: The City shall closely coordinate with the School Board in order to provide consistency between the City's comprehensive plan and public school facilities programs, such as:

- Greater efficiency for the School Board and the City by locating schools to take advantage of existing and planned roads, water, sewer, parks and drainage systems;

- Improved student access and safety by coordinating the construction of new and expanded schools and sidewalk construction programs;
- The location and design of schools with parks, ball fields, libraries, and other community facilities to take advantage of shared use opportunities;
- The expansion and rehabilitation of existing schools to support neighborhoods.

Policy F1-4.2: Local governments and the school district shall coordinate emergency preparedness issues including, but not limited to, the use of school facilities as public shelters during emergencies.

Policy F1-4.3: Public schools shall provide bicycle and pedestrian access consistent with Florida Statutes. Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the City and County. Parking and sidewalks at public schools will be provided consistent with the comprehensive plan.

Policy F1-4.4: Schools shall be designed consistent with the comprehensive plan. Land uses in which schools will be an allowable use will be directed by the City's comprehensive plan and any subsequent zoning and land development codes must be consistent with the comprehensive plan.

Goal F2: It is the goal of the City to establish a process for the implementation of school concurrency by providing for capacity determination standards, applicability standards, and proportionate share mitigation.

Objective F2-1: *Capacity Determination. Establish capacity determination standards.*

Policy F2-1.1: The School Board shall determine whether adequate school capacity exists for a proposed development based on LOS standards.

Policy F2-1.2: The School District shall conduct concurrency review that includes findings and recommendations of whether there is adequate school capacity to accommodate the proposed development for each type of school within the City consistent with the LOS standard. The School District shall issue a concurrency determination based on the findings and recommendations.

Objective F2-2: *Availability Standards. Establish availability standards.*

Policy F2-2.1: The City shall not deny a subdivision plat or site plan for the failure to achieve and maintain the adopted level of service for the public school capacity where:

- Adequate school facilities will be in place or under construction within three (3) years after the issuance of the subdivision plat or site plan according to the School Board's five year Capital Improvement Plan at the time of approval;
- Adequate school facilities are available and the capacity impacts of development can be satisfied by utilizing available capacity in an adjacent Concurrency Service Area; or
- The developer executes a legally binding commitment to provide mitigation proportionate to the demand for public school facilities to be created by the actual development of the property subject to the final plat or site plan.

Policy F2-2.2: If the School District determines that adequate capacity will not be in place or under construction within three (3) years after the issuance of final subdivision or site plan approval according to the Lake County School Board's five year Capital Improvement Plan at the time of approval and mitigation is not an acceptable alternative, the School District shall issue a School concurrency Determination stating that capacity is not available. If the School District determines that adequate capacity does not exist, but mitigation, through proportionate share mitigation is an option, the development will remain active pending the conclusion of mitigation negotiations.

Objective F2-3: Proportionate Share Mitigation. Establish Proportionate Share Mitigation.

Policy F2-3.1: The City will establish proportionate share mitigation alternatives which are financially feasible and will achieve and maintain the adopted LOS standard consistent with the adopted Lake County School Board's financially feasible Capital Improvement Plan.

Policy F2-3.2: In the event that mitigation is an acceptable alternative to offset the impacts of a proposed development, where the adopted LOS standards would otherwise be exceeded, the following options listed below, for which the School District assumes operational responsibility through incorporation in the adopted School Board's financially feasible Capital Improvements Program and which will maintain the adopted LOS standards, shall include but not limited to:

- The donation, construction, or funding of school facilities created by the proposed development.
- The creation of mitigation banking based on the construction of a public school facility in exchange for the right to sell capacity credits.
- Establish proportionate share mitigation alternatives which are financially feasible and will achieve and maintain the adopted LOS standard consistent with the adopted Lake County School Board's financially feasible Capital Improvement Plan.

Policy F2-3.3: Proposed mitigation shall be directed toward a permanent capacity improvement identified in the School Board's financially feasible 5-Year Capital Improvement Program. Consideration may be given by the School Board to place an additional improvement required for mitigation on its Capital Improvement Program. The proposed mitigation must satisfy the demand created by the proposed development consistent with the adopted LOS standards or identified as an amendment to the adopted Capital Improvement Program. Portable classrooms will not be accepted as mitigation.

Policy F2-3.4: Mitigation shall be directed to projects on the school Board's financially feasible Capital Improvement Program that the School Board agrees will satisfy the demand created by that development approval, and shall be assured by a legally binding development agreement between the School Board, the relevant local government, and the applicant executed prior to the issuance of the subdivision plat, site plan, or functional equivalent. If the school agrees to the mitigation, the School Board must commit in the agreement to placing the improvement required for mitigation on its Capital Improvement Program. This development agreement shall include landowner's commitment to continuing renewal of the development agreement upon its expiration.

Policy F2-3.5: The applicant's total proportionate-share mitigation obligation to resolve a capacity deficiency shall be calculated by multiplying the number of new student stations required to serve the new development by the average cost per student station. The average cost per student station shall include school facility development costs and land costs. The applicant's proportionate-share mitigation obligation will be credited toward any other impact fee or exaction imposed by local ordinance for the same need on a dollar-for-dollar basis, at full-market value.

Policy F2-3.6: The process to determine proportionate share mitigation obligation shall be as follows:

Step 1: Determine the number of students to be generated by the development.

Number of Dwelling Units in the proposed development (by unit type)

MULTIPLIED BY

Student Generation Rate (by type of DU and by School Type provided by the school board)

EQUALS

Number Students Stations needed to serve the proposed development

Step 2: Comparing the available capacity to the number of student stations calculated in Step 1 to assess the need for mitigation.

Available Capacity within Service Area

MINUS

The Number of new Students Stations needed to accommodate the proposed development

EQUALS

The shortfall (negative number) or surplus (positive number) of capacity to serve the development

Step 3: Evaluating the available capacity in contiguous service areas.

If Step 2 results in a negative number, repeat that step for one or more contiguous service areas. If this step still results in a negative number, then proceed to step 4 to calculate the proportionate share mitigation.

Step 4: Calculating proportionate share mitigation.

Needed additional Student Stations from Step 3 (deficit)

MULTIPLIED BY

Average cost per Student Station

Policy F2-3.7: The student generation rates used to determine the impact of a particular development application on public schools shall be consistent with Lake County School Board and Florida Department of Education Standards. The student generation rates shall be reviewed and updated every two (2) years in accordance with professionally accepted methodologies.

ELEMENT G - OPEN SPACE AND RECREATION

Goal G1: Provision of Open Space, Parks, and Recreation. To provide adequate open space, parks, and recreation facilities to serve the needs of all Mascotte residents.

Objective G1-1: *Level of Service Standards for Parks.* To ensure adequate lands are provided for parks, the City shall utilize level of service standards for parks and other criteria specific to population, park size and location. For purposes of implementing this Objective, the City may utilize parklands under the jurisdiction of Lake County and public parks provided within residential developments.

Policy G1-1.1: The level of service (LOS) standard for parks shall be as follows:

- Overall Parkland: four (4) acres per 1,000 residents. This standard includes both passive and active City parks and recreational facilities, and includes Community, Neighborhood, and Mini-parks.

Policy G1-1.2: The City of Mascotte shall utilize the following guidelines for determining the type and location for parklands:

- Community Park - A facility designed to serve the needs of more than one neighborhood. This facility type shall serve a minimum of 5,000 City residents and is located no greater than three (3) miles from those residents. The minimum size of any new community parks should be five (5) acres. Typical facilities found in community parks are designed to serve the entire family and typically include both passive and active recreation opportunities such as playground areas, recreation buildings, sports fields, paved multipurpose courts, picnic areas, open or free play areas, swimming pools, and landscaping.
- Neighborhood Park - A facility that serves an entire neighborhood or area with a minimum of 2,500 city residents and is located no greater than three-fourths (3/4) of a mile from those residents. The minimum size of a neighborhood park should be two (2) acres. Typical facilities provided include playground areas, recreation buildings, sports fields, paved multi-purpose courts, picnic areas, open or free play areas, and landscaping.
- Mini-Park - A small park serving a concentrated or limited population of 500 to 2,500 residents within a radius of up to six (6) blocks. A minimum size of one-quarter (1/4) acre for each stand-alone park is recommended. Mini-parks primarily offer passive recreation and typical facilities provided include playground areas, benches, open space, picnic tables, and landscaping.

Policy G1-1.3: The Land Development Code shall address standards for park development and improvements. Standards shall include buffering, landscaping, parking, and the amount of area available for facilities.

Policy G1-1.4: Those lands identified in this element as “Parks” shall perpetually be held in public ownership for recreation purposes.

Policy G1-1.5: The City shall include any declared land acquisition for recreational space within the Capital Improvement Schedule.

Policy G1-1.6: The City shall explore the potential for the construction of public boat launches (for non-motorized watercraft) on the shores of Dukes Lake, Sunset Lake, Little Bluff Lake and Big Bluff Lakes.

Policy G1-1.7: To maximize the use of existing and future sites, the City shall evaluate the feasibility of providing lights at active-based parks. However, no lights shall be installed if they would have a negative impact on a residential neighborhood.

Objective G1-2: Parks and Recreation Master Plan. *The City shall prepare and maintain a Parks and Recreation Master Plan to identify future additions of activity-based recreational facilities to existing and future parks.*

Policy G1-2.1: The City shall prepare and maintain a Parks and Recreation Master Plan indicating the status of activity-based recreational facilities in the City.

Policy G1-2.2: The City shall use the State recommended standards for recreational facilities (fields and courts) as guidelines for the provision of facilities within existing and new City parks. These facilities are not required to be budgeted and constructed.

Policy G1-2.3: The Parks and Recreation Master Plan shall include areas for general open space (other than water bodies).

Policy G1-2.4: The Parks and Recreation Master Plan shall include an implementation plan indicating which activity-based recreational facilities will be added to existing and future parks in the City.

Policy G1-2.5: Consistent with the Capital Improvements Schedule process, the City of Mascotte shall budget for acquisition and actively negotiate to obtain property to ensure adequate park space in the future.

Policy G1-2.6: The City shall coordinate with the Florida Department of Environmental Protection to identify available grant funds for recreation and open space land acquisition and for development of recreation facilities.

Policy G1-2.7: The City shall actively pursue coordination with Lake County to ensure the County Future Land Use Map provides for areas to be reserved for neighborhood and community parks in the area of Mascotte.

Policy G1-2.8: Maximize the use of existing recreation space by promoting recreation activities and programs.

Objective G1-3: LOS Updates. *The City shall review and, if necessary, update the Parks level of service standards every five years.*

Policy G1-3.1: The City Manager shall provide a written report every five (5) years justifying or proposing amendments to the level of service standards for parks and recreation facilities.

Policy G1-3.2: At the time the first written report is prepared, the City shall consider the need to adopt detailed level of service standards for specific activity-based recreational facilities (fields and courts).

Policy G1-3.3: Minimum land requirements needed to comply with the above LOS standard shall be monitored and evaluated at least once a year.

Objective G1-4: Park Maintenance. *The City shall maintain and improve all City parks in a manner that is consistent with the recreation needs of the City residents, and maximizing the potential of the individual facilities.*

Policy G1-4.1: The City's parks and recreational facilities shall be renovated and/or upgraded as needed to provide improved recreational opportunities.

Policy G1-4.2: The City shall continue to maintain existing lights for evening recreation activities.

Policy G1-4.3: The City shall maintain an inventory of the location, size, condition and amenities available at each public park. This inventory shall be updated every year.

Objective G1-5: Accessibility. All recreation and open space areas shall be evaluated as to the accessibility to all Mascotte residents regardless of physical condition, age, or economic condition as outlined in the Uniform Federal Accessibility Standards.

Policy G1-5.1: All city parks and open space shall be located so as to provide unobstructed access, when reasonably possible, through the following procedures:

- Existing facilities shall be evaluated and improved if necessary.
- Any new roadway or sidewalk construction required to access future sites shall be improved to Land Development Regulation engineering standards.

Policy G1-5.2: Any park undergoing renovation shall incorporate wheelchair and bicycle access.

Policy G1-5.3: Bicycle racks shall be provided at all recreation sites. The type and quantity of such facilities shall be determined by the City's Parks and Recreation Coordinator.

Objective G1-6: Private Parks and Recreation Facilities. The City shall coordinate the provision of open space by private interests.

Policy G1-6.1: Park dedication requirements for residential development (see Policy A2-1.6), whether in the form of land or cash in-lieu of land, shall be addressed by the City at the time of the development review process.

Policy G1-6.2: Impact fees for recreation, parks and open space shall be evaluated every 5 (five) years to determine the appropriate fee to be charged to the development community.

Objective G1-7: Joint Use of Facilities. The City shall continue to coordinate with developers and other agencies to avoid duplication of recreation facilities, including provisions for joint use of private, as well as school board, recreation facilities to meet the recreation demands of the City's citizens.

Policy G1-7.1: The City shall coordinate ways and means for private developers to provide public recreation facilities within their developments.

Policy G1-7.2: The City shall utilize the level of service review to recommend recreation improvements located within private development.

Policy G1-7.3: The City shall strengthen coordination with the Lake County School Board, to allow the use of school board facilities by the general public.

Policy G1-7.4: To avoid duplication of services, the City shall coordinate recreation planning activities with local and State governments.

Policy G1-7.5: The City shall review updates of the Countywide Parks and Recreation Master Plan, as they are done, and make the necessary updates to this element to achieve consistency.

Policy G1-7.6: The City shall pursue an interlocal agreement with Lake County for the purpose of using Lake County parks for organized recreation activities for Mascotte residents.

ELEMENT H - CONSERVATION

Goal H1: To protect, maintain, and conserve the natural resources of Mascotte for continued environmental quality and the well-being of all citizens.

***Objective H1-1: Air Quality.** The City shall maintain and enhance air quality.*

Policy H1-1.1: On an annual basis, the City shall obtain a revised list of any identified air pollution generators in and surrounding Mascotte from the Florida Department of Environmental Protection.

Policy H1-1.2: The City of Mascotte shall protect air quality by complying with or exceeding air standards established by the Florida Department of Environmental Protection.

Policy H1-1.3: Mascotte shall coordinate with Lake County and other local municipalities to prevent land uses adjacent to the City which would adversely impact air quality within Mascotte based on future land use compatibility.

Policy H1-1.4: The City of Mascotte shall require the highest air quality standards of industrial, commercial, and agricultural activities occurring in and around the City.

Policy H1-1.5: The City shall participate in air quality public information programs and shall encourage alternative forms of transportation.

***Objective H1-2: Groundwater Resources.** The City shall conserve, use best management techniques, and protect future and existing groundwater resources for potable water usage.*

Policy H1-2.1: The City shall require the installation of water conserving devices in all new construction, such as water conserving water closets, showerheads, faucets, etc. within its building codes.

Policy H1-2.2: To reduce groundwater consumption and runoff related to landscape irrigation, the City shall require new development to plant and/or preserve native drought-resistant vegetation for landscaping.

Policy H1-2.3: The City shall also promote the upgrade of existing commercial and residential landscaping to native drought-resistant species through education and pursuing matching grant programs.

Policy H1-2.4: The City shall support, assist and otherwise cooperate with, the Central Florida Water Initiative and the St. Johns River Water Management District in the implementation of the District's Water Shortage Plan.

Policy H1-2.5: The City shall notify the St. Johns River Water Management District of the presence of any abandoned free-flowing artesian wells identified within its jurisdiction and to record their existence.

Policy H1-2.6: The City, in cooperation with the City of Leesburg and the City of Groveland through existing interlocal agreements, shall pursue providing the implementation of a reclaimed water system as deemed feasible for non-potable water for irrigation.

Policy H1-2.7: The City shall not allow sink formations to be filled or excavated, and no debris placed adjacent to the sink, until the Florida Sink Hole Research Institute, or a surrogate state agency, has completed a site investigation to determine appropriate actions to protect property and groundwater quality.

Policy H1-2.8: The City shall prevent the storage of chemicals in the 100-year floodplain and in areas of high aquifer recharge.

Policy H1-2.9: The City shall participate in water conservation public information programs and shall encourage the use of water conserving plumbing fixtures and drought-resistant native vegetation for landscaping.

Policy H1-2.10: To ensure an adequate supply of potable water, the City shall evaluate the implementation of the Florida Water StarSM program for all new construction.

Policy H1-2.11: The City shall continue participation with the planning and development of the Central Florida Water Initiative Regional Water Supply Plan.

Policy H1-2.12: During the development of alternative water supply projects, the City shall continue to be engaged with the Central Florida Water Initiative and shall evaluate each project to determine its benefit to the City's water resource needs.

Policy H1-2.13: Within 18 months of the approved and updated Regional Water Supply Plan, the City shall incorporate alternative water supply projects that have been identified and determined beneficial by the City into the comprehensive plan.

Objective H1-3: Wetlands. *The City shall maintain and enforce Land Development Code that include performance criteria designed to protect and conserve wetlands from physical and hydrologic alterations as well as specifically direct incompatible land uses away from wetlands. These Policies within this Objective shall not apply to the Green Swamp Area of Critical State Concern.*

Policy H1-3.1: The City shall include in the LDR a requirement that any development that contains land meeting the definition of a wetland, as defined in Florida Statutes, shall conduct a wetland delineation. A delineation of the upland wetland boundary shall be established based upon an onsite field survey by a professional biologist or registered engineer provided by the applicant and coordinated with the St. Johns River Water Management District, the Florida Department of Environmental Protection, and/or the US Army Corps of Engineers. Furthermore, the development shall through a comprehensive planning process identify the types, values, functions, size, conditions, and specific locations of the wetlands on the site.

Policy H1-3.2: The City shall require that all new development obtain a stormwater management permit and, as necessary, other required permits from the St. Johns River Water Management District (SJRWMD), Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (ACOE).

Policy H1-3.3: The City will coordinate with SJRWMD, FDEP, and the ACOE regarding all stormwater management and other required permit applications.

Policy H1-3.4: The City shall require and enforce an undisturbed buffer, twenty-five (25) feet in width, adjacent to all wetlands and lakes. The area of wetlands in question shall include all contiguous wetlands located on the site and adjacent to the site. Buffers without native vegetation shall be revegetated with indigenous habitat to protect the quality of the adjacent isolated wetland, wetland system, lake, river or stream.

Policy H1-3.5: Wetlands shall be protected from physical or hydrologic alterations in order to maintain natural functions of the wetlands and lakes. No development shall be permitted in wetlands other than open space, restricted access to the property (where unavoidable, and kept to minimum width), bird sanctuary, natural preserve, or other similar land uses approved by the City pursuant to Land Development Code designed to carry out the intent of the Comprehensive Plan. The City shall continue to enforce existing regulations that address the following issues:

- Criteria and stipulations for protecting wetlands and managing the development review criteria;
- Protection of wetlands and fragile transition areas;

- Compensatory mitigation where proposed upland development presents a potential hazard to wetland functions.

The City's existing regulations require uses and activities in wetlands to comply with design and performance criteria which also regulate retention of natural drainage characteristics, minimization of alteration or modification, stormwater, and wetland buffers.

Policy H1-3.6: Transition areas shall be defined as the area separating wetland areas and their undisturbed buffers, from upland areas and in which development activities may be regulated to protect wetlands. The transition zone is an area having a direct groundwater or surface water influence. The transition area provides a buffer between wetlands and upland development or other land alteration activities. The purpose of the transition zone is to ensure the continuing function of respective wetland communities. The City shall retain the right to prohibit development within the wetland transition area. The boundary of a wetland transition area shall be established by field investigation. At a minimum the following uses shall be prohibited within the wetland transition areas:

- All industrial uses;
- Sanitary landfills;
- Wastewater treatment facilities;
- Incinerators;
- Animal feedlots;
- Petroleum or pesticide storage facilities;
- Above-ground or below-ground pipes (such as, gas/petroleum lines) for pollutants or contaminants;
- Any land use that stores, handles, or generates hazardous material or waste.

Policy H1-3.7: The City shall enforce performance criteria designed to protect and preserve wetlands, wetland transition areas and water management areas. The City shall enforce its stormwater management and wetland preservation regulations to provide for the dedication of conservation easements or reservations where the City finds that the dedication is reasonable in order to protect the value and function of a wetland or to further the objective of stormwater management plan.

Objective H1-4: *Wetlands within the Green Swamp Area of Critical State Concern. Within one year of the adoption of this Objective, the City shall further protect wetlands within the Green Swamp Area of Critical State Concern by enacting land development code regulations that implement the following Policies.*

Policy H1-4.1: Upland Buffer. No new development shall be located within fifty feet (50 ft.) of the furthest upland extend of any wetlands or water body.

Policy H1-4.2: Wetland Impacts. Wetland impacts shall only be allowed when there is no other alternative, such as when providing access to a parcel will result in unavoidable wetlands impacts and the denial of said impacts would result in a taking. Impacts shall be properly mitigated through the appropriate agency with jurisdiction.

Policy H1-4.3: Unaltered State. Wetlands and upland buffers shall be maintained in their natural and unaltered state. However, controlled burns, selective thinning, and ecosystem restoration and maintenance are permissible activities within the wetlands and upland buffers, provided they are performed in accordance with current Silvicultural Best Management Practices published by the Division of Forestry. Any isolated wetlands of less than one acre shall be exempt from these requirements.

Policy H1-4.4: Wetland Delineations. An application for development within the Green Swamp Area of Critical State Concern must include a wetlands delineation or statement that no wetlands are located on the parcel. The delineation or statement shall be prepared by a

professional biologist or registered engineer provided by the applicant and coordinated with the St. Johns River Water Management District, the Florida Department of Environmental Protection, and/or the US Army Corps of Engineers. Furthermore, an application for development shall identify the types, values, functions, size, conditions, and specific locations of the wetlands on the site.

Objective H1-5: Surface Water. *The City shall protect surface water from all known and identifiable pollution sources.*

Policy H1-5.1: The City shall require new developments to use the best stormwater management techniques to control sediments, silt, and pollution carried by urban runoff before discharging into open waters

Policy H1-5.2: The design of stormwater management systems, including low impact development (LID) projects, shall meet the rules and criteria established by the City of Mascotte, the St. Johns River Water Management District, the Florida Department of Transportation (if applicable), and the East Central Florida Regional Planning Council.

Policy H1-5.3: On an annual basis, the City shall identify those components of the Mascotte drainage system that may be contributing to the overall degradation of surface water quality, and develop a priority listing for the mitigation of components.

Policy H1-5.4: The City shall not allow on-site sanitary sewer systems to directly discharge into any lake, nor shall a system use surface waters for back-up or overflow discharge.

Policy H1-5.5: The City shall pursue funding sources which are available from the State of Florida to acquire land along lakefront areas for recreation or conservation purposes

Policy H1-5.6: The City shall participate in the Florida Lake Watch Program with Lake County.

Policy H1-5.7: The City shall manage development along lake shoreline areas and lakefront littoral region through the establishment of both a Shoreline Protection and a Lakefront Littoral Zone. Both Zones shall be established as part of any new surface water management system, which consists of lakes and designated wetland areas. The Land Development Code shall provide appropriate development setbacks to preclude encroachment into these zones.

Objective H1-6: Floodplains. *The City shall ensure long-range protection of the functionality of the City's floodplains. The Policies within this Objective shall not apply to the Green Swamp Area of Critical State Concern.*

Policy H1-6.1: Regulations for development within the floodplains and floodways will be maintained in the City's Land Development Code to prevent flooding.

Policy H1-6.2: On-site waste disposal systems shall be located outside of the floodplain to avoid impairment to them or contamination from them during flooding.

Policy H1-6.3: The City shall prohibit septic tanks, wastewater treatment plants, and spray fields within the 100 Year Flood Zone.

Policy H1-6.4: Where feasible, the floodplain shall be reserved, undisturbed, for conservation, open space and passive recreational uses to preserve the natural flow of runoff.

Policy H1-6.5: When development is proposed within the Flood Zone, to maintain reasonable use of and value of property, compensatory mitigation shall be required to maintain its natural flow regime.

Policy H1-6.6: The 100 Year Flood Zone shall be delineated within the Future Land Use Map Series, and its demarcations shall be determined by the most recent Flood Insurance Maps prepared by the Federal Emergency Management Agency.

Objective H1-7: Floodplain within the Green Swamp Area of Critical State Concern. *Within one year from the adoption of this Objective, the City shall further protect the floodplain within the Green Swamp Area of Critical State Concern by enacting land development code regulations that implement the following Policies.*

Policy H1-7.1: Definition and Determination. Floodplain (or known as “flood hazard area”) shall be defined as that area that lies within Zone A or Zone AE as delineated by the FEMA Flood Insurance Rate Map.

Policy H1-7.2: Development. For parcels that include land both outside the floodplain and within the floodplain, no development shall be allowed within the floodplain.

Objective H1-8: Wildlife and Vegetation Protection. *The City shall appropriately use and protect wildlife and native wildlife habitat.*

Policy H1-8.1: The City shall work closely with the Florida Fish and Wildlife Conservation Commission (FFWCC) and private landowners to increase the public’s knowledge of habitat protection and best management practices to protect endangered and threatened species, as well as species of special concern.

Policy H1-8.2: The City shall notify the Florida Game and Fresh Water Fish Commission to the presence of any roosting, nesting, or frequented habitat areas for endangered or threatened wildlife occurring within its jurisdiction.

Policy H1-8.3: The City shall coordinate during the development review process with the appropriate state and federal agencies for technical assistance in environmental issues regarding wildlife, and native wildlife habitat.

Policy H1-8.4: The City shall regulate the following activities in areas identified as being environmentally sensitive and in areas containing endangered and/or threatened wildlife, to ensure that such areas are preserved:

- The removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, or materials of any kind;
- The changing of existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics;
- The disturbance of the environmentally sensitive area’s water level or water table by drainage, impoundment, or other means;
- The dumping or discharging of material, or the filling of an environmentally sensitive area with material;
- The placing of fill or the grading or removal of material that would alter topography;
- The destruction or removal of plant life that would alter the character of an environmentally sensitive area or wildlife habitat; and
- The conduct of an activity that results in a significant change of water temperature, a significant change of physical or chemical characteristics of environmentally sensitive area water sources, or the introduction of pollutants.

Policy H1-8.5: Native Vegetation Protection regulations shall mandate fair and equitable restoration and/or compensatory mitigative measures in order to compensate for loss of vegetation and to enhance stabilization of fragile slopes and/or lake shorelines

Policy H1-8.6: The City shall encourage new developments to protect existing native vegetation in common areas and buffer zone.

Policy H1-8.7: The City shall encourage additional planting of native plant species to enhance sparse vegetation in common areas and buffer zone.

Policy H1-8.8: The City shall cooperate with and assist Federal and State environmental and wildlife preservation agencies in their efforts to protect fish populations within the City's lakes and to promote environmental management activities, which enhance fish propagation through natural processes or by managed fish restocking.

Policy H1-8.9: The City shall coordinate with the Lake County Water Authority to control any aquatic weed, algae blooms, or other aquatic plant proliferation occurring within the City's lakes.

Policy H1-8.10: The City, through its Land Development Code will ensure the protection of areas of native vegetation, wildlife habitat, and endangered and threatened species.

Policy H1-8.11: Developers shall be required to identify wildlife habitat, and endangered and threatened species as part of the development review process, and shall be required to submit mitigation measures for review as part of the City's development review process.

Policy H1-8.12: Annually, the City shall maintain updated maps from FFWCC showing the locations of habitat for endangered and threatened species and species of special concern, and unique natural areas.

Policy H1-8.13: The City shall coordinate with Lake County to ensure the protection of environmentally sensitive areas that cross jurisdictional boundaries.

Objective H1-9: Soil Management. *The City shall appropriately manage soils data and protect against soils erosion and uses inconsistent with soils.*

Policy H1-9.1: The City's Land Development Code shall continue to require that all site developments properly install and maintain erosion and sedimentation control devices, and that developers submit an erosion and sediment control plan before start of construction.

Policy H1-9.2: All disturbed soil areas will be permanently stabilized upon completion of development activities, in order to reduce soil erosion.

Policy H1-9.3: Whenever possible, native trees, shrubs and ground cover will be maintained on development sites to prevent soil erosion.

Policy H1-9.4: The City shall notify the local office of the U.S. Soil Conservation Service of any major soil erosion problems that may occur within the City's jurisdiction.

Policy H1-9.5: The City shall maintain soils records to be used in determining appropriate development usage.

Policy H1-9.6: The City shall not allow septic tanks in soils that do not adequately percolate.

Objective H1-10: Mining. *The City shall regulate mining activities to prevent incompatible land uses from locating adjacent to each other.*

Policy H1-10.1: As no significant deposits of valuable minerals are present within the City of Mascotte, the City shall not encourage mining activities.

Policy H1-10.2: Major wind current patterns shall be considered for locating mining activities to ensure that dust particles and odors do not negatively impact adjacent land uses.

Policy H1-10.3: Mining, borrow pits, or any other resource extraction (including sand mining, peat mining, limerock mining, and phosphate mining) shall be prohibited in the Green Swamp Area of Critical State Concern.

Objective H1-11: Hazardous Waste. *The City shall coordinate with the appropriate agencies to ensure that sources of hazardous waste are identified and monitored.*

Policy H1-11.1: The City shall continue to utilize the Lake County fire and emergency management services and the State Emergency Response Commission for Hazardous Materials, for its monitoring of hazardous waste generators within the City.

Policy H1-11.2: The City shall coordinate with Lake County to provide and promote citizen education programs and materials regarding hazardous waste and the proper method of disposal of common household hazardous waste materials.

Policy H1-11.3: The City shall reserve all rights and privileges to deny development of any commercial or industrial activity that is a threat to the quality of ground water or to the health and safety of City residents.

Objective H1-12: Historical, Archeological and Cultural. *The City shall conserve significant sites and protect existing historical structures.*

Policy H1-12.1: The City shall coordinate with the State Division of Historic Resources in continuing to identify, protect, analyze, and explain the City's historical, archaeological, and cultural resources. Such efforts shall include determination of their worth and vulnerability, as well as determination of specific applicable preservation management policies.

Policy H1-12.2: The City shall prohibit development activities in or adjacent to historic archaeological sites that depreciate or eliminate their historical value.

Policy H1-12.3: The City shall promote and support local efforts, including those fostered by the Lake County Historical Society, to effectively pursue registration of historically significant sites under Federal and State certified historical master files.

ELEMENT I - INTERGOVERNMENTAL COORDINATION

Goal I1: Implement and promote stable working relationships with other governmental agencies to ensure efficient, effective, and thorough delivery of governmental services.

Objective I1-1: *Coordination of Plans.* The City of Mascotte Comprehensive Plan shall strive to be consistent with the growth management plans of applicable agencies, such as the State Plan, the East Central Florida SRPP, Lake-Sumter Metropolitan Planning Organization's Long Range Transportation Plan, the Interlocal Service Boundary Agreement, and Lake County's Comprehensive Plan.

Policy I1-1.1: Coordinate with affected governmental agencies on the review of development applications in a manner consistent with the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes.

Policy I1-1.2: Review the Comprehensive Plans of Lake County and other local municipalities to determine the impact of those adopted plans on the future growth and development of the City of Mascotte; such review shall occur on an annual basis, and whenever major Plan changes are made by those jurisdictions.

Policy I1-1.3: Participate in the ECFRPC's Strategic Regional Policy Plan review and update process as mandated by State Statute.

Policy I1-1.4: Continue coordination in planning efforts with Lake County, Groveland, and Leesburg through the sharing of relevant planning data and analysis, notification of development occurring within the City, and review of the impacts, including land use compatibility and impacts on City levels of service standards, of proposed development on adjacent local governments during the City's development review process.

Policy I1-1.5: Coordinate with the water resource protection efforts of the SJRWMD's Water Shortage Plan.

Policy I1-1.6: Gain standing and representation on Lake County Comprehensive Plan land use amendments, which would prove not to be consistent with the Future Land Use Element of the City's Comprehensive Plan.

Policy I1-1.7: Participate in the Long Range Transportation Plan process with the Lake-Sumter Metropolitan Planning Organization.

Policy I1-1.8: The City shall provide the following information and services to affected local governments and agencies:

- Provide planning data and analysis when requested,
- Review the actions of other local governments as to the impact of such actions on City levels of service, and
- Notification to affected local governments and governmental agencies of pending City actions regarding the provision of services and comprehensive plan amendments.

Policy I1-1.9: The City, as part of the development review process, shall provide the County and adjacent municipalities, the opportunity to comment on the siting of facilities with region wide significance.

Policy I1-1.10: *Informal Mediation Process.* The City shall coordinate with the County and adjacent municipalities to establish an informal mediation process for solving local intergovernmental coordination problems among local governments and other units of government providing services but not having regulatory authority over the use of land.

Policy I1-1.11: Formal Mediation Process. Where formal mediation fails to resolve local conflicts, the City shall determine if the issue warrants intervention of an unbiased mediation forum. Such mediation shall be granted to the East Central Florida Regional Planning Council, unless it is evident that the ECFRPC will not represent a fair or unbiased mediator. Upon such determination, the City shall coordinate with the Florida Department of Community Affairs to resolve intergovernmental conflict with another Regional Planning Council serving as the mediator.

Policy I1-1.12: Resolution through other means. Where Informal and Formal Mediation Processes fails to resolve local conflicts, The ECFRPC's conflict resolution process will be used for any disputes that cannot be otherwise resolved.

Objective I1-2: Joint Planning Areas. *The City will continue to coordinate and if needed complete execution of agreements with adjacent local governments to improve land use compatibility between the respective governments.*

Policy I1-2.1: The City will continue to pursue Joint Planning opportunities with Lake County outlining the following:

- Establishment of a joint planning area for the purpose of annexation and identification of infrastructure service areas.
- The City would not exercise municipal jurisdiction over any lands unless they are annexed. The County Comprehensive Policy Plan would control those lands until annexed.
- Agreement to coordinate the provision of utilities to avoid duplication/overlap of facilities and services.
- Agreement to establish procedures for annexation, so that upon approval of an annexation ordinance, the City's comprehensive plan and Land Development Code shall apply. Concurrent with the annexation, the City may establish an initial zoning and rezone the annexed property consistent with the City comprehensive plan and the interlocal agreement.
- Agreement to apply, where possible, to City development standards.

Policy I1-2.2: The City shall coordinate with Lake County, other municipalities within Lake County, Sumter County, and the City of Center Hill, through interlocal agreements, if necessary, to improve the notification process regarding new development proposals within one mile of the common boundary that may impact the other jurisdiction in the provision of public facilities.

Objective I1-3: Informal Coordination. *The City will appoint representatives to attend meetings regarding growth management, schools, parks, infrastructure and other related issues to coordinate on the City's behalf and maintain records of correspondence at such meetings.*

Policy I1-3.1: The City will strive to increase interaction with the ECFRPC, such as attendance at council meetings.

Policy I1-3.2: The City will attend and coordinate efforts through the Lake County Planner's Forum.

Policy I1-3.3: The City will coordinate land use amendment impacts with other local municipalities.

Policy I1-3.4: The City will coordinate with Lake County in an effort to compare the respective Land Use Code, and where there are inconsistent regulations, work towards eliminating such inconsistency, to the extent possible.

Objective I1-4: School Coordination. *The City will participate in full cooperation and coordination with the Lake County School Board, as needed, to coordinate planning activities and maximize the use of available public funds.*

Policy I1-4.1: The City of Mascotte shall continue to coordinate with the School Board for Public School Facility Planning as required through the Interlocal Service Agreement.

Policy I1-4.2: The City shall continue to coordinate with the Lake County School Board to provide planning for adequate sites and infrastructure for future public education facilities within the City of Mascotte, through the following activities:

- The School Board shall provide facilities plans and population projections on an annual basis to ensure that consistency is maintained between the two.
- The School Board shall provide the City with any plans to site schools within the corporate limits or joint planning area.
- The City shall provide to the School Board all application for land use plan amendments that have the potential of increasing residential density and that may affect student enrollment, enrollment projections, or school facilities.
- The City shall allow a member of the School Board to sit on the Local Planning Agency and comment on proposals that have the potential to increase density.
- Take part in the Lake County Educational Concurrency Review Committee established by the County, School Board and municipalities that shall meet at least annually but more often if needed, and will hear reports and discuss issues concerning school concurrency.
- Take part in The Joint Staff School Concurrency Review Group, comprised of Staff of the County, Cities, and School Board, that shall meet at least quarterly to discuss issues concerning school concurrency. These issues shall include but not be limited to land use, school facilities planning, including such issues as population and the student projections, level of service, capacity, development trends, school needs, co-location and joint use opportunities, and ancillary infrastructure improvements needed to support schools and ensure safe student access. The School Board staff shall be responsible for making meeting arrangements.
- During pre-development program planning and school site selection activities, the City shall coordinate with the Lake County School Board to collocate schools with other public facilities, such as parks, libraries, and community centers to the maximum extent possible.

Objective I1-5: Annexation Coordination. *The City will prioritize and manage annexations that are going to provide for the most effective implementation of public services and provide opportunities to prevent sprawling development patterns.*

Policy I1-5.1: All annexation policies shall be consistent with the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes.

Objective I1-6: Transportation Coordination. *The City shall coordinate transportation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-6.1: The City will coordinate transportation planning efforts with the Lake-Sumter Metropolitan Planning Organization.

Policy I1-6.2: On an annual basis, the City will notify the Lake-Sumter Metropolitan Planning Organization of population changes in the City to coordinate the voting opportunities of the Lake-Sumter Metropolitan Planning Organization's Elected Body board.

Policy I1-6.3: The City shall actively participate in the Florida Department of Transportation's 5-Year Transportation Improvement Program by submitting data that would impact S.R. 50 for inclusion in the program on an annual basis.

Objective I1-7: Infrastructure Coordination. *The City shall coordinate infrastructure issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-7.1: Subject to the utilities policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City of Mascotte shall notify Lake County of any requests for utility service connections or extensions within unincorporated Lake County.

Policy I1-7.2: The City will request Lake County to notify the City of Mascotte of any requests for development of lands within the unincorporated portion of the City's utility service area.

Policy I1-7.3: Subject to the utilities policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City shall continue to coordinate with the City of Groveland, City of Leesburg, and Lake County regarding the utility service area boundaries.

Policy I1-7.4: Infrastructure Level of Service Coordination. The City shall exchange information with such entities on issues impacting concurrency and level of service throughout the process of developing the concurrency management system and especially in the determination of effective levels of service.

Policy I1-7.5: Subject to the fire hydrant policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City shall coordinate with Lake County on the installation of fire hydrants on City water mains that are located within unincorporated Lake County.

Objective I1-8: Conservation Coordination. *The City shall coordinate conservation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-8.1: Continue coordination with Federal, State, Regional, and private environmental agencies to ensure adequate technical support for all environmental issues in which the City requires technical expertise.

Policy I1-8.2: The City shall continue to participate and support programs and projects of State, Regional, and County agencies which seek to preserve environmentally sensitive lands, promote usable open space for all citizens, preserve habitats for endangered species, and protect groundwater supplies, potable water supplies, and surface water quality.

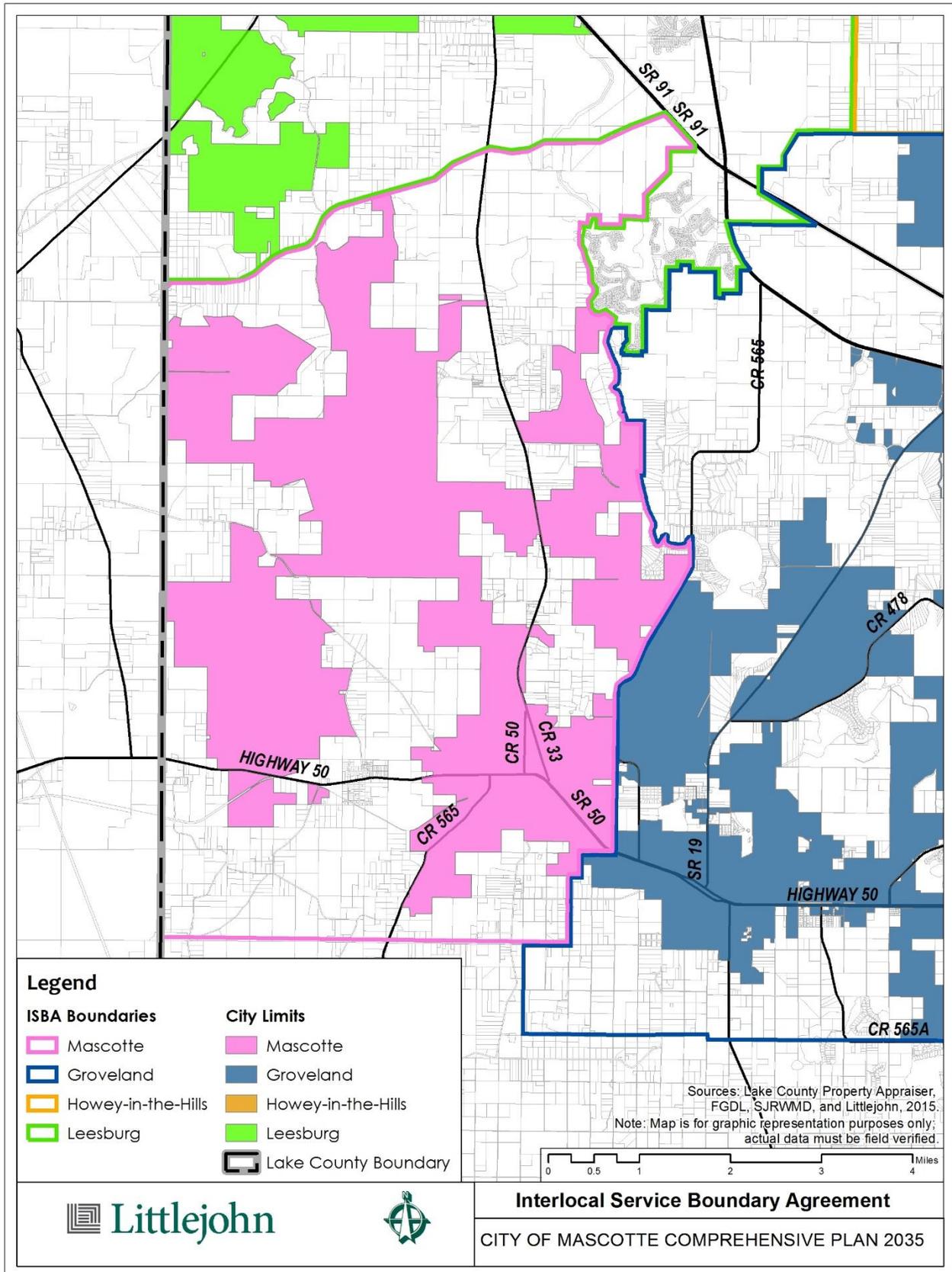
Objective I1-9: Parks and Recreation Coordination. *The City shall coordinate parks and recreation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-9.1: Coordinate with Lake County to recommend the provision of adequate land use acreage on the County and City Future Land Use Maps for regional, community and neighborhood park recreational space.

Policy I1-9.2: If opportunities arise, implement and maintain interlocal agreements with the Lake County School Board and Lake County for the provision and maintenance of shared recreational facilities within the City.

Policy I1-9.3: Coordinate greenways and trails with the County and State, and pursue funding mechanisms for implementation of these needed improvements.

MAP I - 1: INTERLOCAL SERVICE BOUNDARY AGREEMENT



MAPS ADOPTED PREVIOUSLY

**APPENDIX D: USFWS INFORMATION FOR PLANNING AND CONSULTATION
(IPAC) REPORTS**

DRAFT



Florida
Department of Environmental Protection



Source Water Assessment & Protection Program

- » [SWAPP Homepage](#)
- » [Search By County](#)
- » [Search by PWS Name or Number](#)
- » [How to Help?](#)

Definitions

- » [Aquifers](#)
- » [Public Water Systems](#)
- » [Assessment](#)
- » [Potential Contaminants](#)
- » [Susceptibility](#)
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Contact Us

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- » [Source Water Protection Workshop](#)

EPA Source Water Protection website



Results for: 2020

MASCOTTE WATER DEPARTMENT

143 KNIGHT ST.
MASCOTTE, FL 34753

Public Water System ID: 3350812

Previously Known As:

MASCOTTE WATER DEPARTMENT-2WPS

County: LAKE

DEP Regulatory Office: DEP Central District
3319 Maguire Blvd, Suite 232
Orlando, FL 32803
407-897-4100

Public Water System Type : COMMUNITY

Public Water System Source : GROUND

Primary Use: MUNICIPAL/CITY

Population Served: 7952

Size of Assessment Area:

GROUND: For this community system, a 5-year ground water travel time around each well was used to define the assessment area. The 5-year ground water travel time is defined by the area from which water will drain to a well pumping at the average daily permitted rate for a five year period of time.

Number of Wells: 2

Well ID	Owner ID	FLUWID Status	Well Depth(ft)	Aquifer
4887	WELL#1-450'/210'@700GPM	AAAF4505 ACTIVE	450	Floridan Aquifer
36277	WELL 2B	AAC4876 ACTIVE	650	Floridan Aquifer

Results:

GROUND WATER:

Number of Unique Potential Contaminant Sources: 4

Facility Type	Facility Class	Status	Name	Affected Well	Susceptibility Score	Concern Level
INDUSTRIAL WASTEWATER	WASTEWATER SITE	A	Cal-Maine Foods-Mascotte Facility	4887	0.03	LOW
INDUSTRIAL WASTEWATER	WASTEWATER FACILITY	A	Cal-Maine Foods-	36277	0.03	LOW

INDUSTRIAL WASTEWATER	WASTEWATER SITE	A	Mascotte Facility Cal-Maine Foods-Mascotte Facility	36277	0.03	LOW
DELINEATED AREAS	N/A	ACTIVE	Zone ID: 35263171	36277	33.33	MODERATE
PETROLEUM STORAGE TANK	LOCAL GOVERNMENT	OPEN	MASCOTTE CITY-KNIGHT ST WTP	36277	8.33	LOW
PETROLEUM STORAGE TANK	LOCAL GOVERNMENT	OPEN	MASCOTTE CITY-KNIGHT ST WTP	4887	8.33	LOW
DELINEATED AREAS	N/A	ACTIVE	Zone ID: 35263171	4887	33.33	MODERATE
INDUSTRIAL WASTEWATER	WASTEWATER FACILITY	A	Cal-Maine Foods-Mascotte Facility	4887	0.03	LOW

Last updated: February 19, 2020



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Commonwealth
Boulevard M.S.
49
Tallahassee,
Florida 32399
850-245-2118
(phone) / 850-
245-2128
(fax)

APPENDIX E: CONSUMPTIVE USE PERMIT

DRAFT



St. Johns River Water Management District

Hans G. Tanzler III, Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
On the Internet at floridaswater.com.

February 12, 2015

City of Mascotte
Larry Walker
161 Knight St
Mascotte, FL 34753-9268

SUBJECT: Consumptive Use Permit Number 2453-8
City of Mascotte

Dear Sir/Madam:

Enclosed is your permit authorized by the St. Johns River Water Management District on February 12, 2015.

Please be advised that the period of time within which a third party may request an administrative hearing on this permit may not have expired by the date of issuance. A potential petitioner has twenty-six (26) days from the date on which the actual notice is deposited in the mail, or twenty-one (21) days from publication of this notice when actual notice is not provided, within which to file a petition for an administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes. Receipt of such a petition by the District may result in this permit becoming null and void.

The enclosed permit is a legal document and should be kept with your other important records. Please read the permit and conditions carefully since the referenced conditions may require submittal of additional information. Where possible, please submit all information required to comply with permit conditions, electronically, at floridaswater.com/permitting via the District's e-Permitting portal. If you have any questions concerning the conditions of your permit, please contact Dwight Jenkins in the Maitland Service Center at (407) 659-4868 or Allyson Grosmaire in the Maitland Service Center at (407) 659-4860.

Sincerely,

A handwritten signature in cursive script that reads "M. Daniels".

Margaret Daniels, Bureau Chief
Bureau of Regulatory Support

Agent: Sarah Whitaker
SMW GeoSciences Inc
Ste 1009A
668 N Orlando Ave
Maitland, FL 32751-4460

GOVERNING BOARD

John A. Miklos, CHAIRMAN
ORLANDO

Douglas C. Bournique
VERO BEACH

Fred N. Roberts Jr., VICE CHAIRMAN
OCALA

Douglas Burnett
ST. AUGUSTINE

Lad Daniels
JACKSONVILLE

Chuck Drake, SECRETARY
ORLANDO

Maryam H. Ghyabi
ORMOND BEACH

Carla Yetter, TREASURER
FERNANDINA BEACH

George W. Robbins
JACKSONVILLE

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
Post Office Box 1429
Palatka, Florida 32178-1429

PERMIT NO: 2453-8

DATE ISSUED: February 12, 2015

PROJECT NAME: City of Mascotte

A PERMIT AUTHORIZING:

The District authorizes, as limited by the attached permit conditions, the withdrawal and use of up to 365.0 million gallons per year (1.0 mgd) of groundwater from the upper and lower Floridan aquifers for household, landscape irrigation, commercial/industrial and water utility type uses.

LOCATION:

Site: City of Mascotte
Lake County

SECTION(S): TOWNSHIP(S): RANGE(S):
14, 15 22S 24E

ISSUED TO:

City of Mascotte
161 Knight St
Mascotte, FL 34753-9268

The permittee agrees to hold and save the St. Johns River Water Management District and its successors harmless from any and all damages, claims, or liabilities which may arise from permit issuance. Said application, including all plans and specifications attached thereto, is by reference made a part hereof.

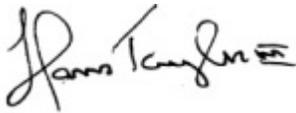
This permit does not convey to the permittee any property rights nor any rights or privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation or requirement affecting the rights of other bodies or agencies.

This permit may be revoked, modified or transferred at any time pursuant to the appropriate provisions of Chapter 373, Florida Statutes and 40C-1, Florida Administrative Code.

PERMIT IS CONDITIONED UPON:

See conditions on attached "Exhibit A", dated February 12, 2015

AUTHORIZED BY: St. Johns River Water Management District
Division of Regulatory, Engineering and Environmental Services

By: 

Hans Tanzler
Executive Director

"EXHIBIT A"
CONDITIONS FOR ISSUANCE OF PERMIT NUMBER 2453-8
City of Mascotte
DATE ISSUED: February 12, 2015

1. With advance notice to the permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The permittee shall either accompany District staff onto the property or make provision for access onto the property.
2. Nothing in this permit should be construed to limit the authority of the St. Johns River Water Management District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the permittee must adhere to the water shortage restrictions, as specified by the District. The permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order.
3. Prior to the construction, modification or abandonment of a well, the permittee must obtain a water well permit from the St. Johns River Water Management District or the appropriate local government pursuant to Chapter 40C-3, F.A.C. Construction, modification, or abandonment of a well will require modification of the consumptive use permit when such construction, modification, or abandonment is other than that specified and described on the consumptive use permit application form.
4. Leaking or inoperative well casings, valves, or controls must be repaired or replaced as required to eliminate the leak or make the system fully operational.
5. The permittee's consumptive use of water as authorized by this permit shall not interfere with legal uses of water existing at the time of permit application. If interference occurs, the District shall revoke the permit, in whole or in part, to curtail or abate the interference, unless the interference associated with the permittee's consumptive use of water is mitigated by the permittee pursuant to a District-approved plan.
6. The permittee's consumptive use of water as authorized by this permit shall not have significant adverse hydrologic impacts to off-site land uses existing at the time of permit application. If significant adverse hydrologic impacts occur, the District shall revoke the permit, in whole or in part, to curtail or abate the adverse impacts, unless the impacts associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.
7. The permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where permittee's control of the land subject to the permit was demonstrated through a lease, the permittee must either submit documentation showing that it continues to have legal control or transfer control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40C-1.612, F.A.C. Alternatively, the permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
8. A District-issued identification tag shall be prominently displayed at each withdrawal site by permanently affixing such tag to the pump, headgate, valve, or other withdrawal facility as provided by Rule 40C-2.401, F.A.C. The permittee shall notify the District in the event that a replacement tag is needed.

9. The permittee's consumptive use of water as authorized by this permit shall not significantly and adversely impact wetlands, lakes, rivers, or springs. If significant adverse impacts occur, the District shall revoke the permit, in whole or in part, to curtail or abate the adverse impacts, unless the impacts associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.
10. The permittee's consumptive use of water as authorized by this permit shall not reduce a flow or level below any minimum flow or level established by the District or the Department of Environmental Protection pursuant to Section 373.042 and 373.0421, F.S. If the permittee's use of water causes or contributes to such a reduction, then the District shall revoke the permit, in whole or in part, unless the permittee implements all provisions applicable to the permittee's use in a District-approved recovery or prevention strategy.
11. The permittee's consumptive use of water as authorized by the permit shall not cause or contribute to significant saline water intrusion. If significant saline water intrusion occurs, the District shall revoke the permit, in whole or in part, to curtail or abate the saline water intrusion, unless the saline water intrusion associated with the permittee's consumptive use of water is mitigated by the permittee pursuant to a District-approved plan.
12. The permittee's consumptive use of water as authorized by the permit shall not cause or contribute to flood damage. If the permittee's consumptive use causes or contributes to flood damage, the District shall revoke the permit, in whole or in part, to curtail or abate the flood damage, unless the flood damage associated with the permittee's consumptive use of water is mitigated by the permittee pursuant to a District-approved plan.
13. The permittee's consumptive use of water as authorized by the permit shall not cause or contribute to a violation of state water quality standards (existing at the time of permit issuance) in receiving waters of the state, as set forth in Chapters 62-3, 62-4, 62-302, 62-520, and 62-550, F.A.C., including any anti-degradation provisions of paragraphs 62-4.242(1)(a) and (b), subsections 62-4.242(2) and (3), and Rule 62-302.300, F.A.C., and any special standards for Outstanding National Resource Waters set forth in subsections 62-4.242(2) and (3), F.A.C. If violations occur, the District shall revoke the permit, in whole or in part, to curtail or abate the violations, unless the violations associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.
14. All consumptive uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.
15. This permit does not convey to the permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
16. A permittee may seek modification of any term of an unexpired permit. The permittee is advised that Section 373.239, F.S., and Rule 40C-2.331, F.A.C., are applicable to permit modifications.
17. All irrigation shall be in conformity with the requirements set forth in subsection 40C-2.042(2), F.A.C.

18. All submittals made to demonstrate compliance with this permit must include CUP number 2453-8 labeled on the submittal. Submittals should be made on-line at floridaswater.com/permitting whenever possible.
19. This permit will expire on February 10, 2035.
20. The permittee shall meter all service connections.
21. Maximum annual withdrawals from the Upper Floridan aquifer shall not exceed 255.5 million gallons (0.7 million gallons per day annual average).
22. Maximum annual withdrawals from the Upper and Lower Floridan aquifers shall not exceed 365.0 million gallons (1.0 million gallons per day annual average).
23. Total withdrawal from well No.'s 1, 2, 2B, 3 and 4 (GRS Station No's 19797, 19798, 105692, 129641, 129642) must be recorded continuously, totaled monthly, and reported to the District at least every six months for the duration of this permit using Water Use Pumpage Report Form (EN-50). The reporting dates each year will be as follows:

Reporting Period	Report Due Date
January – June	July 31
July – December	January 31
24. Prior to use, all proposed wells must be equipped with totalizing flow meters. All flow meters must measure within +/- 5% of actual flow, be verifiable and be installed according to the manufacturer's specifications.
25. The permittee must maintain all flowmeters for measuring flow. In case of failure or breakdown of any meter, the District must be notified in writing within 5 days of its discovery. A defective meter must be repaired or replaced within 30 days of its discovery.
26. The permittee must have all flow meters checked for accuracy at least once every 10 years, specifically before February 10, 2025, and recalibrated if the difference between the actual flow and the meter reading is greater than 5%. Flow Meter Accuracy Report Form (EN-51) must be submitted to the District within 10 days of the inspection/calibration.
27. Groundwater samples must be collected and analyzed from Floridan aquifer Well Nos. 3 and 4 (Station ID 129641 and 129642) upon completion of the wells.

Sample Collection

All groundwater samples must be collected in accordance with Florida Department of Environmental Protection (DEP) Standard Operating Procedure FS 2200 for groundwater sampling (DEP-SOP-001/01), DEP Quality Assurance Rule, 62-160, F.A.C.

Wells must be purged in accordance with the appropriate procedure in FS 2200, as necessary to evacuate water from the well column and induce groundwater representative of the hydrogeologic formation into the well prior to sampling. Purged water must be sampled and analyzed in the field for the following parameters:

- Water Temperature (oC)
- pH (SU)
- Specific Conductance (umhos/cm or uS/cm)
- Turbidity (NTU)

Calibrated instruments equipped with probe sensors are acceptable for field measurements during well purging and water quality sampling procedures. Purging and sampling must be documented using the Groundwater Sampling Log form referenced in FS 2200 or equivalent.

Water samples must be preserved in accordance with the selected laboratory analytical method, stored on ice immediately after collection and remain on ice until received and processed by the laboratory. It is recommended that sample duplicates be taken to allow for laboratory errors or data loss, and these samples be stored by the laboratory for a minimum of 60 days to ensure backup sample availability should re-analyses be required.

Laboratory Analyses

Water samples must be analyzed in the laboratory for the following major ion suite:

- Calcium (mg/L)
- Magnesium (mg/L)
- Potassium (mg/L)
- Sodium (mg/L)
- Total iron (mg/L)
- Strontium (mg/L)
- Chloride (mg/L)
- Sulfate (mg/L)
- Bicarbonate Alkalinity (as mg/L CaCO₃)
- Carbonate Alkalinity (as mg/L CaCO₃)
- Total Dissolved Solids (mg/L)
- Specific Conductance (umhos/cm or uS/cm)

Quality Assurance

The permittee must provide documentation that field instruments were properly calibrated prior to obtaining field measurements during purging and sampling.

All water quality analyses must be performed by a laboratory certified by the Florida Department of Health (DOH) Environmental Laboratory Certification Program (ELCP) and the National Environmental Laboratory Accreditation Program (NELAP). All laboratory analyses must be performed using methods for which the laboratory has DOH certification. All laboratory analyses must be completed within EPA holding times. If data is lost or a laboratory error occurs and the EPA holding time for an analysis has expired, the permittee must have the well re-sampled within 15 days of notification from the laboratory that a loss or laboratory error has occurred. The resample shall be collected according to the procedures described above, and analyzed for the field parameters and the major ion suite listed above.

Laboratory analyses utilizing selective ion electrodes and field screening test kits (e.g., Hach and LaMotte) are not acceptable due to the inadequate sensitivity of these methods.

All major ion analyses must be checked for anion-cation balance (equivalent concentration in meq/L), and must not exceed 5% difference. If the ion balance exceeds 5% difference, the permittee must review the data and include in the report submitted to the District, a discussion of the cause or explanation of the imbalance. The permittee may also be required to have the sample re-analyzed if it is within acceptable holding times or have the well re-sampled. The resample shall be collected according to the procedures described above, and analyzed for the four field parameters and the major ion suite.

Report

A report must be submitted to the District no later than the last day of the month after the month of the sampling (for example, the report for samples collected in May must be submitted to the District no later than June 30). The report must include the following:

Table summarizing results for field measurements and laboratory chemical analyses
Groundwater sampling log
Field instrument calibration verification
Chain of custody form (if outsourced)
Laboratory analytical report (if outsourced)

All data must be submitted to the District in a District-approved electronic format readable by the District's computerized database. Form No. 40C-2.900(11) in paper format may be used in lieu of the electronic format for permittees not having access to a computer or the internet.

28. If water quality data collected by the permittee or the District indicates that significant saline water intrusion is occurring in any of the permitted wells as a result of the withdrawals authorized by this permit, the permittee must submit a plan for District approval to abate the impact caused by the saline water intrusion. The plan must contain a schedule for implementation of corrective action which may include modification of the well construction, well rehabilitation and reduction in well withdrawal rates or other measures identified by the permittee to abate the impact. The permittee must implement the District-approved plan pursuant to the schedule set forth in the plan.
29. When the permittee's 12-month rolling annual average water use from the upper Floridan aquifer well Nos. 1, 2, and 2B (GRS Station No's 19797, 19798, and 105692) combined reach 0.60 million gallons per day for any single month, the applicant shall submit within 90-days, a proposed well construction and aquifer performance test program for wells 3 and 4 (Station IDs 129641 & 129642). The permittee shall conduct the District approved testing plan pursuant to the requirements and schedule set forth therein. Results of the drilling process, aquifer performance test results, analyses and interpretations of the aquifer conditions shall be summarized in a report and submitted to the District.
30. A permittee may seek modification of any term of an unexpired permit. The permittee is advised that Section 373.239, F.S., and Rule 40C-2.331, F.A.C., are applicable to permit modifications. If the permittee demonstrates that additional allocations are needed for efficient water use, the permittee may request to modify the permit to include an additional 0.2 million gallons per day of ground water from the Lower Floridan aquifer.
31. The permittee shall install a shallow monitoring well at Sunset Lake. The existing monitoring well at Gallows Lake and the new monitoring well at Sunset Lake will be used to conduct the wetland/other surface waters monitoring as proposed in the Wetland Monitoring Plan received on August 28, 2014. Water level monitoring must be initiated at all new monitoring locations by June 30, 2015.

Monitoring wells for Sunset Lake and Gallows Lake must be located in uplands near the upland/wetland interface. The monitoring well design and specific locations must be approved in writing by the District prior to well construction. Monitoring well depths must be at least 15 feet below the seasonal high water elevation unless prohibited by subsurface geologic conditions. The monitor wells must be installed by or under the supervision of a licensed water well contractor. All monitor wells must be surveyed for top casing (TOC) vertical elevation to an accuracy of +/- 0.01 foot relative to the North American Vertical

Datum (NAVD) of 1988, and horizontal position in degree minute seconds (DMS) coordinates (YY°YY'YY.YY" North latitude, XX°XX'XX.XX" West longitude) relative to the North American Datum (NAD) of 1983.

32. By August 31, 2015, the permittee must submit to the District a detailed baseline monitoring report of the wetland hydrology and overall conditions, for wetlands Sunset Lake and Gallows Lake, for the period from date of permit issuance to June 30, 2015, for all monitored wetlands. The baseline wetland monitoring report shall be submitted to the District utilizing the CUP Wetland Monitoring Template available through the District's E-Permitting website. If the CUP Wetland Monitoring Template is not available, the baseline report shall be submitted utilizing a District-approved electronic format. The purpose of the monitoring will be to document and assess the physical and hydrologic condition of the wetlands. The permittee must coordinate with District staff to provide the following information for each wetland site.

For Sunset Lake (one data transect):

- a. Certified survey of location and elevation of limits of wetlands as verified by District staff, pursuant to 62-340, Florida Administrative Code (FAC) at the location described in the monitoring plan received on August 28, 2014, the map received on October 13, 2014, and the memorandum received on November 6, 2014.
- b. Qualitative description of vegetation of the delineated point (looking waterward), including the percent cover at each level (canopy, sub-canopy, ground cover, etc.).
- c. Complete soil profile description at the wetland delineated point (total of one). (Reference "Field Indicators of Hydric Soils in the United States"; USDA, NRCS).
- d. Identification and delineation landward extent of where a muck soil indicator (if present) occurs at the soil surface. A complete soil profile description must be provided. Certified survey of location and elevation must be submitted.
- e. Identification of ordinary high water elevation (2- 3 data points) at wetland boundary point. Staff have identified in the field a maple tree and culvert that should provide evidence of the elevation. Certified survey of location and elevation for each data point.
- f. Photo documentation of items a through e above, including photographs of the surrounding area at each cardinal direction (e.g. north, east, south and west).
- g. Weekly rainfall data collection for monitoring period, if the permittee elects to collect their own site specific rainfall data.
- h. Continuous recording groundwater elevations within the wetland monitoring piezometers, for stations equipped with data loggers and weekly recording for stations measured manually.

For Gallows Lake (two data transects):

- a. Certified survey of location and elevation of limits of surface waters and location and elevation of limits of wetlands as verified by District staff, pursuant to 62-340, Florida Administrative Code (FAC) at the location described in the monitoring plan received on August 28, 2014, the map received on September 17, 2014, and the memorandum received on November 6, 2014.
- b. Qualitative description of vegetation at each point (looking waterward), including the estimated percent cover at each level (canopy, sub-canopy, ground cover, etc.).
- c. Complete soil profile description at each surface water and wetland delineated point (total of four). (Reference "Field Indicators of Hydric Soils in the United States"; USDA, NRCS).

- d. Photo documentation of items a through c above, including photographs of the surrounding area at each cardinal direction (e.g. north, east, south and west).
 - e. Weekly rainfall data collection for monitoring period, if the permittee elects to collect their own site specific rainfall data.
 - f. Continuous recording groundwater elevations within the wetland monitoring piezometers, for stations equipped with data loggers and weekly recording for stations measured manually.
33. When the permittee's 12-month rolling annual average withdrawals from the Upper Floridan aquifer from well Nos. 1, 2, and 2B (GRS Station No's 19797, 19798, and 105692) combined reach 182.5 million gallons (0.5 million gallons per day average) or within 5 years of the date of issuance of this permit, whichever occurs first, the applicant shall proceed with construction of an upper Floridan aquifer monitoring well located at Sunset Lake. Prior to construction of the well, the permittee shall submit a construction plan to the District for review and approval. Upon approval by the District, the permittee shall construct the well as approved.
34. Within 60 days upon completion of wetland site monitoring well installations, a Water Well Completion Report shall be submitted that includes for each well:
- a) Latitude/longitude degree minute second (DMS) coordinates (YY°YY'YY.YYYY" N, XX°XX'XX.XXXX" W) relative to North American Datum (NAD) of 1983,
 - b) Top of casing elevation (feet NAVD 1988),
 - c) Ground surface elevation (feet NAVD 1988),
 - d) Top of screen depth (feet below ground surface),
 - e) Bottom of screen depth (feet below ground surface),
 - f) Depth to groundwater (feet below ground surface),
 - g) Total depth of well (feet below ground surface),
 - h) Mapped well location and
 - i) Lithologic description of subsurface soil profiles.
35. The permittee must conduct hydrologic monitoring at each of the wetland areas listed below:
- Wetland monitoring sites:
- a. Sunset Lake(28° 34' 38" N, 81° 53' 22"W)
 - b. Gallows Lake(28° 34' 21" N, 81° 54' 04"W)
- Intermediate/Upper Floridan monitoring sites:
- a. Sunset Lake (28° 34' 34" N, 81° 53' 29"W) as depicted on the parcel map received on September 15, 2014.
- Data must be collected for each of the sites listed above, and submitted electronically every six months to the District utilizing a District-approved format. Data collected must include:
- a. Weekly rainfall totals. Use of available District Doppler radar data is the preferred source. Submittal of any other rainfall data collection methods (e.g. on-site rainfall data collection, regional rainfall data collect sites) must be pre approved by the District.

- b. Water levels (weekly without data loggers, daily with data loggers) from wetland, Intermediate and/or Upper Floridan monitoring wells:

District ID	Station Name
448057	Sunset Lake (wetland)
244161	Gallows Lake (wetland)
448215	Sunset Lake (UFA)

Data collected January through June must be submitted on or before July 31st of each year. Data collected July through December must be submitted on or before January 31st of each year. Water level data (measured weekly without data loggers or daily with data loggers) must be recorded by the permittee for each wetland monitoring site and must be reported as elevation relative to North American Vertical Datum (NAVD) of 1988.

36. A recurring hydrological and vegetative wetland monitoring report shall be submitted to the District every five (5) years subsequent to the baseline monitoring event. The five-year reports shall be submitted no later than August 31 of the submittal year and include the information, as described above. The five-year reports shall be submitted to the District utilizing the CUP Wetland Monitoring Template through the District's E-Permitting website. If the CUP Wetland Monitoring Template is not available, the five-year reports shall be submitted utilizing a District-approved format.

The recurring hydrological and vegetative wetland monitoring reports must include graphs summarizing the water level data, collected rainfall data and wellfield pumpage data. The elevation of the upland/wetland interface must be indicated on the graphs. In addition, the report must include a brief analysis and discussion of trends and wetland health as well as any changes occurring at the location of the hydrologic data points identified above. A double mass analysis and/or a time series analysis of rainfall, well levels, and elevations of data collection points must be included for each well and monitoring location.

37. By September 30, 2020, and every five years thereafter, the permittee must meet with District staff to confirm the approach and specifics of the wetland monitoring plan for the next five year period. By February 28, 2021, and every five years thereafter, if proposed, the permittee must provide any changes to the wetland monitoring plan to the District for review and written approval. Any re-evaluation of the wetland monitoring plan shall be completed using the most recently collected well and aquifer data for comparative purposes and may require using a District approved model to re-evaluate impacts of predicted drawdown within the surficial aquifer in the area of the wellfield to substantiate the need for any modifications of the monitoring plan.
38. If the permittee is unable to obtain or maintain legal access to any of the monitoring sites referenced above, the permittee must notify SJRWMD in writing within 15 days of concluding that access to any specific site is not possible. Within 45 days of this notification, the permittee must submit an alternative site to modify the monitoring network. Within six months of SJRWMD approval of the monitoring network modification, the permittee must implement the approved change(s).
39. The permittee must implement the Water Conservation Plan submitted to the District on August 8, 2014, in accordance with the schedule contained therein.
40. The permittee shall use the lowest quality water source, such as reclaimed water, surface/storm water, or alternative water supply, to supply the needs of the project when deemed feasible pursuant to District rules and applicable state law.

41. The permittee shall submit, to the District, a compliance report pursuant to subsection 373.236(4), F.S., every 10 years during the term of the permit. The permittee shall submit the report by February 10, 2025. The report shall contain sufficient information to demonstrate that the permittee's use of water will continue, for the remaining duration of the permit, to meet the conditions for permit issuance set forth in the District rules that existed at the time the permit was issued for 20 years by the District.
42. The Central Florida Water Initiative had documented existing water resource environmental impacts within its boundaries. This Initiative remains underway and is, in part, crafting long-term water supply solutions for the region. As a component of immediate, interim measures the permittee is encouraged to participate in the District's on-going, heightened water conservation public education program. Given the permittee's use class, opportunities may include such activities as participation in water conservation public service announcements, demonstrations of irrigation efficiency at community gardens, posting water conservation information or links on the permittee's website. Please contact the District's Office of Communication at (386) 329-4500 to discuss opportunities participation in this important District effort.
43. This project is located in the Central Florida Water Initiative (CFWI) area, an area with on-going impacts to water resources which are being addressed by the CFWI. If the District determines that adverse impacts to water resources or existing legal users are occurring or are projected to occur because of the Permittee's authorized withdrawals over the permit duration, the District, upon reasonable notice to the permittee and including a statement of facts upon which the District based its determination, may modify quantities permitted or other conditions of the permit, as appropriate, to address the impact, but only after an opportunity for the permittee to resolve or mitigate the impact or to request a hearing. Such modification, if any, will consider such factors as the permittee's relative contribution to the water resource impact being addressed due to groundwater withdrawals, the timing of this permit issuance compared to presently existing legal use of water, and other considerations identified by the CFWI Solutions Planning and Regulatory Teams. Modifications may include mitigation of impacts and/or reconsideration of allocations or requirements to timely implement required actions that are consistent with the long-term, regional water supply solutions as implemented by rules. Such actions may include the development of alternative water supplies, the implementation of water resource and/or water supply development projects, the application of impact offsets or substitution credits, operating plans, heightened water conservation or other appropriate actions. Nothing in this condition is intended to abrogate the rights of the Governing Board or of any other person under Section 373.233, Fla. Stat.

APPENDIX F: NEPTUNE R900 PROPAGATION ANALYSIS

DRAFT

R900 Propagation Analysis
Mascotte, FL
May 31, 2019

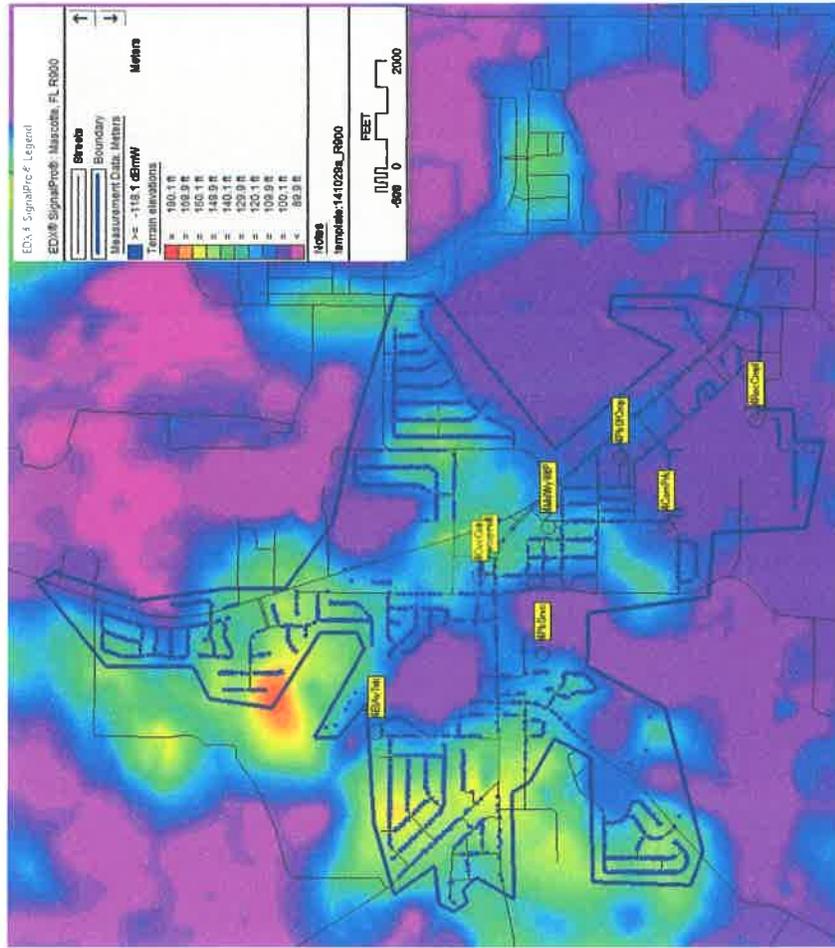


Predicted Coverage Results:

Map	Description	Provided Services		2,107 Read Type	Geocoded Services		2,105 %Pass	Area (sq Miles)		2.50 %Pass	sq Mi /Coll
		#Coll	MIU Type		Pass	Pass		Pass	Pass		
1	Provided	8	R900v4 Pit	Daily	1,990	94.53%	2.43	96.92%	0.3		
3	>90%	2	R900v4 Pit	Daily	1,936	91.97%	2.33	92.92%	1.2		
4	>99%	4	R900v4 Pit	Daily	2,099	99.71%	2.48	98.96%	0.6		
5	Primary Provided Assets	3	R900v4 Pit	Daily	1,988	94.44%	2.42	96.68%	0.8		

Elevation Map

(National Elevation Dataset available, courtesy of the U.S. Geological Survey)



Gateway Locations:

Map	Location	Latitude	Longitude	Collector	Elev(m)	AntHgt(m)	Elev(ft)	AntHgt(ft)	Coax(dB)	AntGain	Antenna
1,2,3,4	4EIAVThk	28.584607	-81.8967	GPV4	35	52	115	170	2.8	7.1	MF89155 915
1,2,3	4ComPrk	28.569869	-81.884851	GPV4	30	15	99	50	1.1	7.1	MF89155 915
1,4	4MdWwyWtP	28.575863	-81.884934	GPV4	40	18	131	60	1.1	7.1	MF89155 915
1,4	4RecCmpl	28.565307	-81.878837	GPV4	30	15	98	50	1.1	7.1	MF89155 915
1	4CtyHall	28.578831	-81.8872	GPV4	39	15	128	50	1.1	7.1	MF89155 915
1	4CvcCntr	28.579372	-81.887742	GPV4	36	15	118	50	1.1	7.1	MF89155 915
1	4PbSfCmp	28.572208	-81.880966	GPV4	31	15	102	50	1.1	7.1	MF89155 915
1	4PbSrvc	28.576164	-81.892262	GPV4	33	15	108	50	1.1	7.1	MF89155 915
3	4F001	28.580745	-81.880003	GPV4	44	23	144	75	1.6	7.1	MF89155 915
3	4F002	28.594554	-81.891131	GPV4	34	23	113	75	1.6	7.1	MF89155 915

Conditions:

Spare gateway recommended for system maintenance.

Revised propagation analysis required for Gateway location or height changes.

[FAA/ASR](#) may be required for structures near airports or heights >200ft.

AM Tower detuning evaluations for structures within 3km, check with [LBA Group](#) or [Sitesafe](#).

10ft minimum vertical separation from other 900MHz system antennas on structure. Antenna requires 3ft-4ft standoff for side mounting on towers.

Complies with FCC/IC Rules: May not cause harmful interference, and must accept any interference received, including interference that may cause undesired operation.

MIUs mounted inside structures are not recommended for Fixed Network solutions. RF signal is affected differently by building materials used within structures and it is difficult to account for all types of construction. If the Scope states inside MIU used for study, an average loss value is applied to the model. In situations, where inside MIUs do not perform as necessary, an external wall MIU or additional Gateways may be required

R900 propagation based on defined MIU (External Wall or Pit w/External Antenna) with specified gateway/collector. Older equipment should be replaced.

R900 propagation is subject to change based on equipment specifications and performance

R900 propagation performance cannot be confirmed until final system evaluation and analysis complete. Propagation model is based on performance for >90% daily read success and typical noise level <-120dBm. Use of this propagation analysis done with this understanding and there is no guarantee of product or performance. Additional gateways could be required.

Tektelic LoRa gateway is not released and propagation is in development. Receiver diversity requires minimum of 6 feet horizontal antenna separation.

**APPENDIX G: COST AND EFFECTIVENESS CERTIFICATION AND
WATER/ENERGY CONSERVATION CERTIFICATION**

DRAFT

APPENDIX H: SITE CERTIFICATION FORM

DRAFT

AUTHORIZED REPRESENTATIVE'S SITE CERTIFICATION

Project Number _____

Project Description Water distribution system improvements includes installation of new transmission
mains, storage tanks, a treatment facility and upgrades to an existing treatment facility proposed in
existing rights-of-way.

I do hereby certify as to the following:

1. City of Mascotte has acquired all real property or real property rights that are or will be, required for the construction, operation and maintenance of the Project described above.
2. All real property and real property rights required for the entire Project were acquired in accordance with the State and local requirements.

Dated this _____ day of _____, 20 _____

Signature of Authorized Representative

Larry Walker

Name (print)

Public Services Director

Title

August 26, 2004

APPENDIX I: CAPITAL FINANCING PLAN

DRAFT

APPENDIX J: CAPITAL FINANCING PLAN WORKSHEETS

DRAFT

APPENDIX K: WATER AND SEWER RATE SCHEDULE

DRAFT

APPENDIX L: 2017 MASCOTTE COMPREHENSIVE PLAN

DRAFT



City of Mascotte

Comprehensive Plan

Goals, Objectives and Policies

**Amended May 2, 2016
Effective June 13, 2016
Ordinance No. 2016-03-543
and
Amended Jan. 17, 2017
Effective February 27, 2017
Ordinance No. 2016-12-550**

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ELEMENT A - FUTURE LAND USE

Goal A1: Future Land Use. The City shall maintain a coordinated distribution of land uses to assist in stimulating the economic conditions in the City and proactively plan for timely progressive development within the urban boundaries through the year 2035.

***Objective A1-1: Land Use Categories.** The City shall maintain a range of future land use categories to ensure the allocation of coordinated land uses, allow the protection of natural and historic resources, and maximize economic development opportunities in the City.*

Policy A1-1.1: Category Identification. The City hereby adopts the following future land use categories, which shall be depicted on the adopted Future Land Use Map. Objectives A1-3 to A1-17 contain the purpose of each future land use designation and the allowable density and intensity for each.

- Agriculture
- Rural Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Downtown Mixed-Use
- Community Mixed-Use
- Rural Neighborhood Mixed-Use
- Commercial
- Industrial
- Public/Semi-Public
- Recreation and Open Space
- Conservation
- Green Swamp Land Use Designations (as specified in Goal A4)

Policy A1-1.2: Density/Intensity. Unless otherwise noted in this comprehensive plan, the density and intensity figures described in this Future Land Use Element shall apply to gross land area, including wetlands and/or surface waters and required open space. This Policy, however, does not apply to land that lies within the Green Swamp Area of Critical State Concern.

Policy A1-1.3: Open Space. Open Space shall be defined as a portion of the gross land area dedicated to the public, a homeowner's or property owner's association, or the owner of individual small lot developments, unencumbered by any road or other impervious surface, and open from the ground to the sky, to include unfenced dry stormwater retention ponds which are designed as site amenities, buffer areas, and recreation areas. In addition, up to 25% of the required open space for any one project may be comprised of wetland areas and/or surface waters. This Policy, however, does not apply to land that lies within the Green Swamp Area of Critical State Concern.

Policy A1-1.4: Land Development Code. The City shall maintain an adopted matrix within the Land Development Code (LDC) specifying which zoning districts implement each future land use category. The LDC shall further define the allowable uses, densities, and intensities in each zoning district.

Objective A1-2: Land Use Compatibility. Future development must be consistent with the adopted Future Land Use Map and existing incompatible uses shall not be allowed to expand and shall be eliminated, when feasible.

Policy A1-2.1: Inconsistencies. Proposed land use amendments which are inconsistent with the character of the community or inconsistent with adjacent future land uses shall not be approved by the City.

Policy A1-2.2: Redevelopment/Demolition. The City's LDC shall continue to contain provisions that prohibit the repair or rehabilitation of an inconsistent structure that is abandoned or damaged (even if by natural causes) beyond fifty (50) percent of its appraised value and shall require demolition of the structure. Redevelopment of the property will only be allowed if it is consistent with the Future Land Use Map.

Policy A1-2.3: Adequate Services. No future land use plan amendments or changes shall be approved unless adequate public facilities and services, including water supply, are available or will be available to meet projected growth demands.

Objective A1-3: Agriculture. The City shall designate land for Agriculture.

Policy A1-3.1: Purpose of Agriculture Future Land Use Designation. This designation is intended to provide opportunities for agricultural activities and rural residential development to be located on the fringes of the urban areas.

Policy A1-3.2: General Uses. Agriculture-designated areas may include uses such as vegetable farms, livestock ranches, fruit groves, plant nurseries and silvicultural activities, as well as kennels, farm equipment storage and sales, and other more intensive uses based upon location criteria. This designation will also allow for necessary supporting services such as utilities and parklands, and civic facilities.

Policy A1-3.3: Location of Agriculture Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Agriculture future land use designation and the type of development allowed:

- Raising livestock and commercial farming activities shall not be allowed in the downtown area or adjacent to established residential neighborhoods.
- Agricultural lands should be served primarily by major roads that do not traverse residential neighborhoods.
- Agricultural activities that involve livestock and commercial farming should not be permitted to locate along roadways that serve residential developments that are greater than 1 dwelling unit per acre.
- More intensive agricultural uses, such as kennels and livestock veterinarians, wood chipping, fruit packaging, etc., which create noise, glare or odor that may impact adjacent properties, must provide a buffer and setback large enough to prevent the nuisance from impacting the adjacent properties.
- Agricultural uses should generally be discouraged from locating adjacent to professional office and light retail uses, except for retail and office uses that support the agricultural industry, such as feed and seed stores, hardware, tractor stores, etc.

- Alternative roadways (truck routes) should be proposed to serve agricultural future land use designations if any type of production is proposed that actively requires a truck distribution network for either exporting or importing of goods.
- Annexed properties that do not meet the standards above, may require additional buffering techniques per the Land Development Code, and will not be permitted to expand agricultural activities that would have a negative impact on adjacent uses.

Policy A1-3.4: Density and Intensity. The maximum residential density for land designated Agriculture shall not exceed one dwelling unit per five acres (1 du/5 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.10 and an impervious surface area ratio of 0.10.

Policy A1-3.5: Holding Category. The Agriculture future land use category may be used as a holding category for annexed lands that are anticipated for suburban or urban development in the future. These properties would not necessarily be eligible for an agricultural zoning district because of location performance standards. Therefore, they may retain the County zoning designation until their land use classification is changed. A land use category amendment will be required prior to development of more intensive uses.

Objective A1-4: *Rural Residential. The City shall designate land for Rural Residential.*

Policy A1-4.1: Purpose of Rural Residential Future Land Use Designation. This designation is intended to serve as a transition category between agriculture lands and the more urban residential future land use designations.

Policy A1-4.2: General Uses. Typical uses allowed in Rural Residential include single family detached dwellings and accessory uses, agricultural uses intended to serve the needs of the land owners as opposed to commercial agricultural activities, equestrian stables, and other similar uses. This category also provides for conservation of natural resources by allowing clustering of residential development.

Policy A1-4.3: Development within Rural Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Rural Residential future land use designation and the type of development allowed:

- Intensive livestock and commercial farming are not encouraged in this land use category. Only horse stables and similar public or private equestrian recreational uses are encouraged in rural residential land use categories.
 - Recreational uses, both active and passive, are highly encouraged in rural residential areas.
 - Primary and secondary educational uses may locate in the rural residential category if adequate public facilities and access are available.
 - The rural land use designation shall encourage clustering of residential development to protect natural resources and open space.
 - Commercial uses, other than stables and non-intensive nurseries, are not allowed in rural residential categories.
 - On-site wastewater disposal systems (septic tanks or septic system drain fields) will not be permitted for any site that does not have soils that are suitable to accommodate the tanks and protect the environment.

- Rural development in the Rural Residential future land use category will be required to provide potable water and, may be required to provide dry lines or connections to the City's sanitary sewer system as it becomes available.
- If package plants for sewer are proposed, they will be constructed to City standards, deeded to the City for maintenance and designed to be eventually looped into the City's system.

Policy A1-4.4: Density and Intensity. The residential density for land designated Rural Residential shall be a maximum of one dwelling unit per one acre (1 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.3.

Objective A1-5: *Low-Density Residential. The City shall designate land for Low-Density Residential.*

Policy A1-5.1: Purpose of Low-Density Residential Future Land Use Designation. This designation is intended to accommodate uses ranging from the large single-family lots found in the rural residential category to low density multifamily developments.

Policy A1-5.2: General Uses. The Low Density Residential designation allows low density single family and multi-family units such as duplexes, triplexes, quadplexes, or townhomes and accessory dwelling units.

Policy A1-5.3: Location of Low-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Low-Density Residential future land use designation:

- Low density residential uses should not be located abutting State Road 50 in the downtown CRA.
- Low density residential should be located in a manner that encourages a transition between rural residential lands to more urban land use classifications that allow uses such as offices, medium density residential and light retail uses.

Policy A1-5.4: Development within Low-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Low-Density Residential future land use designation:

- The City shall establish standards in the Land Development Code to ensure that non-residential uses are not allowed to locate in the Low-Density Residential Land Use Designation, unless the residential uses are protected from encroachment and negative impacts.
- Conversions of low density residential dwelling units into commercial uses are not allowed unless the site has the appropriate zoning for the proposed use, and the following standards are applied to ensure the protection of established neighborhoods and the feasibility of the proposed conversion:
 - The roadways, utilities and access to the property must be adequate to support the proposed change.
 - Adequate private or public parking must be provided for the proposed use of the property, including the standards of the American Disabilities Act.
 - Appropriate buffering will be required adjacent to existing residences.
 - The scale and design of the structure and signage must be consistent with the character of the neighborhood.

- Any proposed low density development will be required to provide potable water and may be required to provide dry lines and connections to the City's sanitary sewer service.
- If package plants for either water or sewer are proposed, they will be constructed to City standards, deeded to the City for maintenance, and designed to be eventually looped into the City's public service network.
- Culs-de-sac are discouraged in the City because they interfere with connectivity and increase traffic congestion on collector roads.
- Grid street networks are highly encouraged to serve residential developments and provide connectivity throughout the City.
- Gated communities (residential or mixed use) are discouraged because of the limitations their design creates for road connectivity.
- Parks, public open spaces, community centers and/or other public realm gathering spaces are required to be strategically located in residential developments to encourage social activity and recreation for the citizens.
- Cohesive streetscape design, signage, landscape architecture and streetscape furniture are encouraged to create an identity for new neighborhoods in the City.

Policy A1-5.5: Density and Intensity. The residential density for land designated Low-Density Residential shall be a maximum of four dwelling units per one acre (4 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-6: Medium-Density Residential. *The City shall designate land for Medium-Density Residential.*

Policy A1-6.1: Purpose of Medium-Density Residential Future Land Use Designation. This designation provides for a range of housing types in a medium density setting.

Policy A1-6.2: General Uses. Typical uses may include single family detached, zero lot line, duplexes, triplexes, quadplexes, garage apartments, villas, cluster housing, townhouses, mobile homes, modular/manufactured homes and small apartment complexes at medium densities. Accessory dwelling units are allowed in this designation as well.

Policy A1-6.3: Location of Medium-Density Residential Future Land Designation. The following criteria shall be used for determining appropriate locations for the Medium-Density Residential future land use designation:

- Medium density residential uses are primarily encouraged within the downtown area, as well as in mixed use planned communities.
- The medium density residential category serves as a transition between low density residential uses and retail/office/high density uses.

Policy A1-6.4: Development within Medium-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Medium-Density Residential Future Land Use Designation:

- Appropriate performance standards shall be adopted for medium density residential zoning districts to reduce impacts on adjacent low density residential uses.
- Lower densities shall be located along the perimeter adjacent to lower density development.

- Direct access to collector or arterial roads shall be required for medium density residential developments, unless located within a mixed use planned unit development.
- Provision of central potable water service is required.
- Provision of wastewater service is required for all medium density residential developments that exceed 4 dwelling units an acre.

Policy A1-6.5: Density and Intensity: The residential density for land designated Medium-Density Residential shall be a maximum of eight dwelling units per one acre (8 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-7: High-Density Residential. *The City shall designate land for High-Density Residential.*

Policy A1-7.1: Purpose of High-Density Residential Future Land Use Designation. This designation also provides for a wide range of housing types, but at higher densities than other residential categories.

Policy A1-7.2: General Uses. This designation allows for small multi-family complexes in addition to very dense single family dwelling subdivisions, such as zero lot line. Typical uses may include single family dwellings, duplexes, triplexes, quadplexes, villas, cluster housing, townhouses, mobile homes, manufactured homes and small apartment complexes.

Policy A1-7.3: Location of High-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the High-Density Residential future land use designation:

- High density is primarily encouraged within the downtown area, particularly along State Road 50 and County Road 33, as well as in mixed use planned communities.
- High density residential uses are to be used as transitional areas between medium density residential uses and retail, office and light industrial uses.
- Proximity of one mile to existing or designated commercial areas or employment centers shall be required for high density residential.

Policy A1-7.4: Development within High-Density Residential Future Land Use Designation. The following criteria shall be used for determining appropriate development within the High-Density Residential future land use designation:

- Lower densities shall be located along the perimeter adjacent to lower density development.
- Building heights must be stepped down if adjacent to sites with a lower intensity and density future land use designation.
- Direct access to collector or arterial roads shall be required for high density residential developments, unless located within a mixed use planned unit development.
- Provision of central potable water and wastewater is required for all high density residential development.

Policy A1-7.5: Density and Intensity: The residential density for land designated High-Density Residential shall be a maximum of twelve dwelling units per one acre (12 du/1 ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 0.4.

Objective A1-8: Downtown Mixed-Use. *The City shall designate land for Downtown Mixed-Use.*

Policy A1-8.1: Purpose of the Downtown Mixed-Use Future Land Use Designation. The Downtown Mixed-Use future land use designation is intended to accommodate a variety of uses in a compact mixed-use development setting appropriate for the downtown/CRA area. The intensity/density of the development and location of land uses within the downtown mixed use category will vary depending upon the compatibility of land uses, internally within the site and with surrounding uses.

Policy A1-8.2: General Uses. The Downtown Mixed-Use Future Land Use Designation permits low, medium and high density residential; commercial uses (retail and office); light industrial; educational facilities; recreation facilities and compatible public facilities.

Policy A1-8.3: Location of the Downtown Mixed-Use Future Land Use Designation. The Downtown Mixed-Use Land Use Designation will be allowed only in the downtown Community Redevelopment Area (CRA). Other future land use designations may be utilized within the CRA, as appropriate.

Policy A1-8.4: Development within the Downtown Mixed-Use Future Land Use Designation. The City shall adopt detailed standards in the land development code to direct the location of more intensive developments to activity center nodes, allowing a mix of uses and higher densities and intensities at those nodes. The areas between nodes may be developed with single uses at lower densities and intensities. The following general criteria shall be used for determining appropriate development within the Downtown Mixed-Use Future Land Use Designation:

- Activity center nodes shall be located along arterials and collectors, must be two (2) acres in size or greater. Residential uses within those nodes shall not occupy more than 75% of the total floor area of each development.
- The Downtown Mixed-Use Planned Unit Development (PUD-DM) zoning district is available, but not required, for development within the Downtown Mixed-Use land use designation.
- The Land Development Code shall maintain performance standards for the location and the types of uses that will be allowed in the Downtown Mixed-Use land use designation.
- The City shall encourage a compact and walkable living environment and workplace in the Downtown Mixed-Use land use designation.
- This designation shall allow an assortment of building types to be developed at a pedestrian scale for satisfying residential and non-residential needs.
- Low density residential uses will not be allowed adjacent to State Road 50.
- Private stormwater ponds shall be designed as amenities and to provide buffering when appropriate.
- New development shall use a grid pattern for efficient traffic circulation with at least two points of access and clustering homes away from natural resources.
- All large scale new developments over five (5) acres in size within the Downtown Mixed-Use will be required to provide unified architectural and streetscape themes.

- Redevelopment and new development shall be encouraged to create a balanced transportation system that accommodates pedestrians and bicyclists, as well as motorists.
- Strip commercial development shall be discouraged in the Downtown Mixed-Use.
- Mixed use buildings will be highly encouraged in this category.
- The City shall coordinate proposed future land use amendments and rezoning in the Downtown Mixed-Use with the Community Redevelopment Agency.

Policy A1-8.5: Density and Intensity. The residential density for land designated Downtown Mixed-Use shall be a maximum of twelve dwelling units per one acre (12 du/1 ac). Mixed-use developments at activity nodes shall have a *minimum* density of four dwelling units per acre (4 du/ac). The maximum intensity of non-residential uses shall not exceed a floor area ratio of 4.00 and an impervious surface area ratio of 0.90.

Objective A1-9: *Community Mixed-Use. The City shall designate land for Community Mixed-Use.*

Policy A1-9.1: Purpose of Community Mixed-Use Future Land Use Designation. The purpose of the Community Mixed-Use future land use designation is to establish mixed-use neighborhoods with a diversity of housing types within walking distance from a village center.

Policy A1-9.2: General Uses. The Community Mixed-Use future land use designation permits low, medium and high density residential; commercial uses (retail and office); limited light industrial; educational facilities; recreation facilities and compatible public facilities. The intensity/density of the development, location of land use, and allowed uses within the mixed-use category will vary depending upon compatibility of land uses, internally within the site and with surrounding uses.

Policy A1-9.3: Location of Community Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Community Mixed-Use future land use designation:

- Community mixed use lands shall be located adjacent to arterial or collector streets.
- Residential developments shall be required to provide at least two points of access and to provide shared access easements or roadways connecting to adjacent subdivisions.

Policy A1-9.4: Development within Community Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate development within the Community Mixed-Use future land use designation:

- The community mixed use land use is primarily intended to establish residential neighborhoods that have services within walking distance.
- A mixture of residential, retail, offices, civic and recreation shall be encouraged in the community mixed-use category.
- A diversity of housing types including single family detached, condos, duplexes, quadplexes, townhouses, and apartments may be encouraged if compatible with adjacent developments.
- The community mixed-use future land use category encourages the development of town or village centers that are sized to serve the needs of residents living within a one-quarter mile distance from the village center.

- The commercial (office and retail) component of a mixed-use community shall be limited to a maximum of twenty-five (25%) percent of the net area of the site.
- A maximum of 10,000 square feet of commercial and office use will be allowed unless a market study is prepared to demonstrate that the demand exists to accommodate additional non-residential use.
- No stand-alone commercial zoning shall be allowed along corridors and at intersections unless part of a town center or village center.
- The Community Mixed-Use Planned Unit Development District (PUD-CM) zoning district is the only district allowed for the development of mixed-use communities within the community mixed use land use category. Other zoning districts may be used for single use developments.
- The PUD rezoning application and Developers Agreement shall demonstrate the mitigation of impact on the City's ability to service the proposed development, and provide an explanation of how the proposed compact design will reduce demand on services.
- The intended character of a proposed mixed-use development shall be established at the time of rezoning to PUD. The Developer's Agreement shall specify the building styles or themes to be used throughout the development.
- The Developer's Agreement shall specify how the design of the less intensive uses will blend into the community with any more intensive uses proposed in the development program.
- Any amendment to the development program that adds a new type of development in an approved PUD will require an amendment to the Developer's Agreement to demonstrate how the character of the design of the new proposed use will integrate into the mixed-use community.
- Low density residential is appropriate in a community that provides a variety of mixed development such as residential, retail and office; as well as a variety of housing types including townhouses, condos and higher density apartments, as long as the design of the more urban uses is sensitive to the low-density character.
- Unified architectural and streetscape themes shall be required for all developments within the Community Mixed-Use category.

Policy A1-9.5: Density and Intensity. The residential density for land designated Community Mixed-Use shall be a maximum of eight dwelling units per one acre (8 du/1 ac). The *minimum* density for mixed-use developments shall be one dwelling unit per one acre (1 du/1 ac). The maximum intensity shall not exceed a floor area ratio of 0.35 (3.0 within a Village or Town center) and an impervious surface area ratio of 0.80. If a compact walkable community is proposed with mixed use buildings located in a central Town or Village center, then the floor area ratio for non-residential uses may be allowed to increase to a maximum of 3.0 within said Town or Village center.

Policy A1-9.6: Development greater than five acres in size may include a mix of residential and non-residential uses. Residential uses shall be a minimum of 75% (by land area), and a maximum of 100% (by land area). Non-residential uses shall be a minimum of 0% (by land area) and a maximum of 25% (by land area).

Objective A1-10: Rural Neighborhood Mixed-Use. *The City shall designate land for Rural Neighborhood Mixed-Use.*

Policy A1-10.1: Purpose of Rural Neighborhood Mixed-Use Future Land Use Designation. The purpose of this land use is to encourage mixed-use developments that accommodate a greater amount of open space and are designed to allow residents to work and live in closer proximity. The variety of uses should be placed in such configuration as to encourage pedestrian accessibility. By accomplishing this, vehicle trips will be greatly reduced and greenhouse gas emissions will also be reduced.

Policy A1-10.2: General Uses. This category includes a mixture of commercial, residential, office and public/semi-public uses.

Policy A1-10.3: Location of Rural Neighborhood Mixed-Use Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Rural Neighborhood Mixed-Use future land use designation:

- The City desires to reduce dependence on automobile travel and, therefore, vehicle miles traveled (VMT). Accordingly, the City of Mascotte shall be required to develop and implement a program designed to ensure that an adequate number of jobs per residential unit exists.
- The objective is to (1) reduce VMT and (2) establish and measure over time the jobs/housing balance so as to provide a framework for determining the number of jobs created and to measure the internal capture of trips and to ensure that, to the fullest extent possible, provides for alternative modes of transportation to and from work and recreation places.

Policy A1-10.4: Development within the Rural Neighborhood Mixed-Use Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Rural Neighborhood Mixed-Use future land use designation:

- This category includes land used for a mixture of commercial, residential, office and public/semi-public uses. Included in this category are multi-use planned developments which support commercial, residential, office and public/semi-public uses.
- Residential development will include adequate onsite facilities for residents including open space, recreational amenities and parking facilities.
- Residential developments shall contain a diversity of attached and detached housing types and lot sizes.
- The commercial component is intended to provide for the day to day needs of the immediate neighborhood and shall be within walking distance from the neighborhood unless unusual site constraints prevail.
- Commercial uses to be distributed within the development are encouraged. A majority of commercial floor area will be highway or highway access. The balance of the commercial development will be internal to the project or as specified by the applicable overlay zone.
- Integration of commercial and office uses in the same building is encouraged. Some integration of residential uses with commercial and office in the same building is required if located within an overlay zone.
- Any proposed development utilizing the Rural Neighborhood Mixed Use designation must be designed with attention paid to the creation of a recreational trails system and transit

orientation. All efforts must be made to connect to any adjacent trails and accommodate any transit system.

Policy A1-10.5: The density and intensity of development within Rural Neighborhood Mixed-Use Future Land Use Designation shall be as follows:

- Development must include a minimum of 25% (by land area) open space. All undeveloped uplands, all recreation facilities, pedestrian plazas, dry retention ponds that are designed as amenities, and the land above the design water elevation on wet retention ponds count toward open space within Rural Neighborhood Mixed-Use.
- Residential density shall not exceed three dwelling units per net acre (3 du/1 ac), unless located within the Overlay Zones. Net acreage will mean the total land area less wetlands and/or surface waters within Rural Neighborhood Mixed-Use.
- Non-residential intensity shall not exceed a floor area ratio of 0.05 and an impervious surface ratio of 0.30, unless located within the following Overlay Zones.
 - One-Quarter Mile Overlay Zone. If any part of the development is located within one-quarter mile of an employment center or the intersection of arterial and/or collector roads as indicated on the Future Land Use Map or Comprehensive Plan Transportation Element, intensity within the stated radius may be maximized up to a floor area ratio of 0.20. Residential density within the stated radius will be a maximum of seven dwelling units per acre (7 du/1 ac). Integration of residential and commercial uses is required. A minimum of 75% of residential densities created by the Overlay Zone will be attached or integrated within commercial and office uses.
 - One-Half Mile Overlay Zone. If any part of the development is located more than one-quarter mile, and less than or equal to one-half mile, from an employment center or the intersection of arterial and/or collector roads as indicated on the Future Land Use Map or Comprehensive Plan Transportation Element, intensity within the stated radius may be developed up to 50% of the maximum floor area ratio and impervious surface area ratio of the One-Quarter Mile Overlay Zone. Residential densities within the stated radius will be a maximum of five dwelling units per acre (5 du/1 ac). A minimum of 50% of residential units created by the Overlay Zone will be attached or integrated with commercial and office uses.
- Development quantities and intensities realized by application of Overlay Zone criteria shall be distributed throughout the development as follows:
 - A minimum of 75% of the commercial/office floor area shall be located adjacent to the highway or have direct highway access.
 - A minimum of 75% of attached residential units will be located within the One-Half Mile Overlay Zone.
 - The remaining 25% of the commercial/office floor area and 25% of the attached residential may be distributed through the remainder of the project using traditional planning principles.

Policy A1-10.6: Development shall include a minimum of three of the following four uses: residential, commercial sales/services, office, and public/semi-public. The maximum and minimum of each use (by land area) shall be as follows:

- Residential - Maximum 60%, Minimum 15%
- Commercial Sales/Services - Maximum 25%, Minimum 2%
- Office - Maximum 25%, Minimum 2%
- Public/Semi-Public - Maximum 25%, Minimum 2%

Objective A1-11: Commercial. *The City shall designate land for Commercial.*

Policy A1-11.1: Description of Commercial Future Land Use Designation. The Commercial Future Land Use Designation permits a variety of retail and office uses such as, medical facilities, shopping centers, restaurants, automobile service facilities, and other similar uses. Commercial land uses can be either light or heavy, but zoning for heavy commercial, such as auto sales and repair, will be limited based upon location criteria.

Policy A1-11.2: Location of Commercial Future Land Use Designation. The following criteria shall be used for determining appropriate locations for the Commercial Future Land Use Designation:

- All new development within the Commercial Future Land Use Designation shall be served by central sewer and water. If central sewer is not available and the project demand does not exceed 6,000 gallons per day, other interim sewer may be allowed upon authorization by the City.
- The amount of Commercial allowed along corridors and at intersections shall be limited to prevent urban sprawl.
- Development occurring in this designation must have direct access to collector or arterial roads or to service roads that maintain direct access to these roads.

Policy A1-11.3: Development within Commercial Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Commercial Future Land Use Designation:

- No residential uses, other than security or emergency sleep quarters shall be allowed in commercial designated areas.
- Commercial areas shall encourage employment centers for various uses.

Policy A1-11.4: The non-residential intensity for land designated Commercial shall not exceed a floor area ratio of 0.50 and an impervious surface area ratio of 0.90.

Objective A1-12: Industrial. *The City shall designate land for Industrial.*

Policy A1-12.1: Description of Industrial Future Land Use Designation. The Industrial Future Land Use Designation includes both light and heavy industrial uses. Industrial uses are typically connected with manufacturing, assembly, processing or storage of products. Allowed industrial uses include warehousing, wholesaling, limited retail, heavy equipment repair, private utility facilities, limited assembly, processing, motor vehicle impoundment facilities, construction offices, adult entertainment, and storage areas. This designation is intended to provide land for those uses that may emit noise or air pollution, significant truck traffic and be otherwise incompatible with residential areas.

Policy A1-12.2: Location of Industrial Future Land Use Designation. The following criteria shall be used in determining the appropriate locations for the Industrial Future Land Use Designation:

- Industrial uses shall not be located adjacent to residential development without appropriate opaque permanent buffers. Only non-manufacturing uses shall be placed adjacent to residential development.

Policy A1-12.3: Development within Industrial Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Industrial Future Land Use Designation:

- No residential uses, other than security or emergency sleep quarters, shall be allowed in industrial designated areas.
- The Land Development Code will contain performance standards for location criteria and intensity of light industrial versus heavy industrial uses.
- Adult entertainment establishments and sexually oriented businesses shall be strictly limited to lands designated “Industrial” on the Future Land Use Map. The City may adopt interlocal agreements with Lake County and other neighboring cities to jointly coordinate the location of adult entertainment establishments and sexually oriented businesses and prevent them from impacting residential neighborhoods.

Policy A1-12.4: The non-residential intensity for land designated Industrial shall not exceed a floor area ratio of 0.75 and an impervious surface area ratio of 0.90.

Objective A1-13: *Public/Semi-Public. The City shall designate land for Public/Semi-Public uses.*

Policy A1-13.1: Description of Public/Semi-Public Future Land Use Designation. The Public/Semi-Public Future Land Use Designation consists of public facilities and private non-for-profit uses. This category allows public structures or lands that are owned, leased, or operated by a government entity, such as civic and community centers, hospitals, libraries, police and fire stations, and government administration buildings. The not-for-profit and semi-public uses include churches, social services, cemeteries, nursing homes, emergency shelters, utilities and other similar uses. Additionally, education facilities are included within this category, such as public or private schools (primary or secondary), vocational and technical schools, and colleges and universities.

Policy A1-13.2: Development within the Public/Semi-Public Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Public/Semi-Public Future Land Use Category:

- Minor public utility facilities (telephone switching stations, lift stations, drainage infrastructure and ponds) shall be allowed in specified zoning districts including residential districts.
- Major public utility facilities (water and wastewater plants, landfills) shall require Public/Semi-Public land use categories.

Policy A1-13.3: The non-residential intensity for land designated Public/Semi-Public shall not exceed a floor area ratio of 0.45 and an impervious surface area ratio of 0.60.

Objective A1-14: *Recreation and Open Space. The City shall designate land for Recreation and Open Space.*

Policy A1-14.1: Description of Recreation and Open Space Future Land Use Designation. This land use category includes park and recreation facilities owned by the City; the category may also include private parks and golf courses; as well as recreation facilities located at area schools that are under lease to the City. Open space includes those areas deemed worthy of preservation; such as attractive tree stands or pastures, public open space, common open spaces in private developments and significant right-of-way buffers along major roadways and drainage systems. Private recreation within subdivisions and common privately owned open space are not required to have this land use designation and may be located as accessory uses within residential categories. Similarly, private recreation uses that are open to the public for

a fee, such as bowling alleys, skate rinks, etc. may also be allowed in the commercial land use category and mixed use categories.

Policy A1-14.2: Development within Recreation and Open Space Future Land Use Designation. The following criteria shall be used in determining appropriate development within the Recreation and Open Space Future Land Use Designation:

- Public or private lands may be designated as recreation and open space.
- If development of recreation facilities occurs in this land use category, it should be for a public benefit.
- Private parkland does not have to be designated as Recreation and Open Space on the Future Land Use Map.
- If the facility is resourced based, the maximum amount of the site should be retained for open space to enjoy the resource. Only those recreation facilities that will allow interaction and enjoyment of the resource should be encouraged, such as boardwalks and picnic tables.
- If the facility is not resourced-based, a maximum of 25% impervious area shall be allowed for parking and buildings in areas designated as Recreation and Open Space land use to ensure the maximum protection of the open space, proper development and future public use and benefit.
- Greenways should be designated Recreation and Open space land use category and shall be encouraged to connect to the City's existing and proposed open space, conservation areas and parks.

Policy A1-14.3: The non-residential intensity for land designated Recreation and Open Space shall not exceed a floor area ratio of 0.25 and an impervious surface area ratio of 0.50.

Objective A1-15: *Conservation. The City shall designate land for Conservation.*

Policy A1-15.1: Description of Conservation Future Land Use Designation. The Conservation Future Land Use Designation includes public lands that have been acquired and private land areas that have been reserved by mutual agreement with the property owner for the preservation and protection of the City's natural resources.

Policy A1-15.2: Location of Conservation Future Land Use Designation. The following criteria shall be used in determining the appropriate locations for the Conservation Future Land Use Designation:

- Any properties that contain very steep sloping topography subject to soil erosion, wildlife habitat areas, hydric solids/wetlands, special vegetative communities, floodplains, and other areas subject to environmental constraints are potentially suitable to be designated as Conservation.
- The actual boundaries for conservation lands should be delineated by a professional environmental analysis.
- Only passive recreation facilities shall be allowed in conservation areas.

Policy A1-15.3: No development, other than passive recreation, shall be allowed in the Conservation Future Land Use Designation. If the passive recreation includes a caretaker residence, the residential density shall not exceed one dwelling unit per twenty-five acres (1 du/25 ac).

Objective A1-16: *Green Swamp Area of Critical State Concern. Lands within the Green Swamp Area of Critical State Concern shall be designated as such, with regulating polices that are specific for the Green Swamp as specified in Goal A4.*

Objective A1-17: *Site-Specific Approved Density or Intensity. The City of Mascotte has determined that specific sites shall have a maximum number of dwelling units and/or impervious surface area.*

Policy A1-17.1: For the parcels listed below (and as designated on the Future Land Use Map), the City shall ensure that the density and intensity of developments allowed within those designations will not exceed the projected residential and commercial needs shown in the table below.

Parcel	Original Developer Parcel ID	Approx. Area (acres)	Future Land Use Designation	Maximum Dwelling Units	Maximum Commercial and Office Floor Space (sf)
A	Whidden/Langley 312125030510700000 012224000200000200 012224000200000400 012224010603300000 012224010603300001 022224000100000100 362124000300001700 352124000100000500 012224000300001300 352124000400001900 012224010603600001 262124000400000600	841.14	Community Mixed Use	2500	200,000
B	Ellis 352124000400001800	38.73	Community Mixed Use	150	0
C	BL Land Investments 332124000400000103 342124000300000602 342124000300000900 032224000200000600 032224000100002200	186.49	Low Density Residential	540	0
D	Weber/Flagship 042224000100001500 032224000200000800 012224020101200001	244.96	Community Mixed Use	999	0
E	Providence/Fakih 012224020103700000 012224020103900000 012224020105300000	114.84	Community Mixed Use	350	100,000
F	Banyan Construction 112224020000900000 112224000400002000 112224000100000400	112	Low Density Residential	228	0

Goal A2: Quality of Life. To effectively manage the land use pattern in the City to enhance the quality of life for its citizens; promote economic vitality; protect historic and natural resources; and, accommodate population and development growth in an environmentally acceptable manner through the year 2035.

Objective A2-1: Open Space. *Open space shall be provided for the enjoyment of all citizens.*

Policy A2-1.1: All residential, commercial, industrial and mixed use land use categories will be required to provide a minimum of 25% of the gross land area as open space.

Policy A2-1.2: If a land use category other than Recreation and Open Space contains parkland for private or public use then the subject parkland may contribute toward the required open space for the development.

Policy A2-1.3: The combination of development within the downtown Community Redevelopment Area shall be required to provide 25% open space overall, and a tracking system will be established by the City.

Policy A2-1.4: Recreation and open space within the downtown Community Redevelopment Area may be allowed to increase the impervious surface and reduce the open space requirements for plazas that are provided for recreation to the general public.

Policy A2-1.5: No more than twenty-five percent (25%) of the open space requirement can be fulfilled with wetlands and/or surface waters.

Policy A2-1.6: Developments of more than 25 dwelling units shall provide 250 square feet of outdoor recreational facilities per single family dwelling unit and 100 square feet per multifamily unit. Developments providing private recreational facilities (not open to the public) shall not be exempt from paying recreation impact fees, which are used to fund public recreation facilities.

Policy A2-1.7: Lakefront developments are encouraged to maintain the majority of the land around the lake as park land or common open space and to provide lake access, so that the lake is enjoyed by all the residents of the development.

Objective A2-2: Development Buffers. *Residential areas shall be buffered from adjacent roadways and intensive agricultural, commercial, and industrial land uses.*

Policy A2-2.1: The City shall encourage transitional uses between future land use categories that have different intensities/densities that may potentially have a negative impact on each other.

Policy A2-2.2: Buffering with berms, trees, wrought iron fences, brick walls, and other methods shall be included in the City's Land Development Code to protect various types of development from the impact of others.

Policy A2-2.3: The City shall maintain a landscape ordinance that requires adequate visual screening between incompatible uses.

Policy A2-2.4: The City shall maintain site design requirements and subdivision regulations in the Land Development Code which adequately address the impacts of new development on adjacent properties in all land use categories and zoning districts.

Policy A2-2.5: The City's Land Development Code shall limit signage and the glare from lighting which can be viewed from residential property and restrict the location of signs which interfere with traffic flow and sight distance.

Objective A2-3: Wetland Buffers and Setbacks. Wetlands and/or surface waters shall be buffered from development. Buffers and Setbacks within the Green Swamp Area of Critical Concern may be greater than those specified within this Objective.

Policy A2-3.1: The City shall require and enforce an undisturbed buffer, twenty-five (25) feet in width, adjacent to all wetlands and lakes. The area of wetlands in question shall include all contiguous wetlands located on the site and adjacent to the site. Buffers without native vegetation shall be revegetated with indigenous habitat to protect the quality of the adjacent isolated wetland, wetland system, lake, river or stream.

Policy A2-3.2: On-site wastewater disposal systems (septic tanks or septic drain fields) shall not be allowed within seventy-five (75) feet of a wetland and/or surface water.

Objective A2-4: Transportation/Land Use Compatibility. The City will ensure that population densities, housing types, employment patterns, and land uses are consistent with the City's transportation network.

Policy A2-4.1: Curb-cuts and points of access to the traffic circulation system shall be minimized.

Policy A2-4.2: Shared driveways and cross access between adjacent properties shall be encouraged.

Policy A2-4.3: Proposed transportation improvements shall be consistent with the land use patterns on the Future Land Use Map.

Policy A2-4.4: Land uses that generate high traffic counts shall be encouraged to locate adjacent to arterial roads.

Policy A2-4.5: The City shall require an adequate quantity of on-site parking to accommodate land uses and develop criteria for allowing off-site parking.

Policy A2-4.6: The City shall require new developments to provide safe and convenient on-site traffic flow.

Objective A2-5: Historic and Archeological Sites. The City shall identify historic properties and structures within the City and to provide for protection of archaeological sites.

Policy A2-5.1: The City will protect and preserve its historic sites and properties, buildings, artifacts, and objects of antiquity that have scientific or historic value, or are of interest to the public.

Policy A2-5.2: Development shall be prohibited which alters or damages any site or building determined to be historically significant that is designated on the register of historically significant property maintained by the State of Florida.

Policy A2-5.3: Where feasible, the City shall assure that there shall be no loss of historic resources on City-owned property.

Objective A2-6: Public Utilities. *The City will maintain regulations and procedures which will require provision of land for utility facilities necessary to support development and will limit land development activities when such land for utility facilities is not available, as specified in the following policies:*

Policy A2-6.1: Proposed development shall be reviewed in relation to existing and projected utility systems and any land needs of these systems; such as, water and sewer plants; reservation of road rights-of-way; transmission corridors for electric and other utilities; easements for maintenance; and, other requirements.

Policy A2-6.2: No development orders shall be issued unless it can be demonstrated that the land required by utility systems serving the City will be preserved.

Policy A2-6.3: Distribution electric substations shall be permitted in all land use categories and zoning districts within an electric utility's service territory, except those designated as conservation, preservation, or historic preservation on the future land use map or zoning map. The City shall comply with state law regarding standards, procedures, and regulations for approving site applications for distribution electric substations.

Policy A2-6.4: Wireless Telecommunications Facilities. The City shall regulate the location and construction of wireless telecommunication facilities to protect existing and future development from potential adverse impacts resulting from these facilities. Siting criteria and design requirements shall be consistent with state and federal law.

Objective A2-7: Public Schools. *The City shall implement standards for the siting of public schools to increase the quality of life and local educational opportunities for its citizens.*

Policy A2-7.1: Public schools shall be allowed in all future land use designations except conservation and industrial areas.

Policy A2-7.2: Public schools shall be listed in the Land Development Code as uses allowed in all zoning districts with the exception of the Conservation and Industrial zoning districts.

Policy A2-7.3: New school sites must not be adjacent to any noxious industrial uses or other property from which noise, vibration, odors, dust, toxic materials, traffic conditions or other disturbances that would have a negative impact.

Policy A2-7.4: New schools should minimize detrimental impacts on residential neighborhoods, hospitals, nursing homes and similar uses through proper site location, configuration, design layout, access, parking, traffic controls and buffers.

Policy A2-7.5: The size of new school facilities and land areas should satisfy the minimum standards established by the Lake County School Board, whenever possible.

Policy A2-7.6: Schools shall be located in close proximity to existing or anticipated concentrations of urban residential development.

Policy A2-7.7: New school sites should be well drained and education buildings should be located away from floodplains, wetlands, and other environmentally sensitive lands.

Policy A2-7.8: Education facilities should not have an adverse impact on historic or archaeological resources.

Policy A2-7.9: New school sites should have frontage on or direct access to a collector or arterial road and should have suitable ingress and egress for pedestrians, bicycles, cars, buses, service vehicles, and emergency vehicles.

Policy A2-7.10: To the extent possible, during pre-development program planning and school site selection activities, the City shall coordinate with the Lake County School Board to collocate public facilities, such as parks, libraries, and community centers, with schools.

Policy A2-7.11: Portions of new schools should be constructed to serve adequately as emergency shelters in case of natural disasters.

Policy A2-7.12: Schools will be developed consistent with the City's Comprehensive Plan and Land Development Code, as well as any mutual agreement between the City and the Lake County School Board.

Goal A3: Discourage Urban Sprawl and Encourage Redevelopment. The City will maintain regulations and procedures to limit the proliferation of urban sprawl and encourage redevelopment and revitalization of blighted areas through the year 2035.

Objective A3-1: Discourage Urban Sprawl. The City shall discourage urban sprawl by promoting development patterns that are planned and designed to do so.

Policy A3-1.1: The City shall promote economic growth and associated land development to geographic areas of the community in a manner that does not have an adverse impact on and protects natural resources and ecosystems.

Policy A3-1.2: The City shall promote the efficient and cost-effective provision or extension of public infrastructure and services.

Policy A3-1.3: The City shall promote walkable and connected communities and provides for compact development and a mix of uses at densities and intensities that will support a range of housing choices and a multimodal transportation system, including pedestrian, bicycle, and transit, if available.

Policy A3-1.4: The City shall promote conservation of water and energy.

Policy A3-1.5: The City shall promote agricultural areas and activities, including silviculture, and dormant, unique, and prime farmlands and soils.

Policy A3-1.6: The City shall promote the preservation of open space and natural lands and provides for public open space and recreation needs.

Policy A3-1.7: All proposed development in the City shall demonstrate that such development will be adequately served by public facilities.

Objective A3-2: Encourage Redevelopment. The City shall encourage growth and redevelopment within the Community Redevelopment Area.

Policy A3-2.1: The City will encourage development of a mixed use town center through infill and higher density and intensity development within the downtown Community Redevelopment Area.

Policy A3-2.2: The City will ensure the availability of services and facilities to accommodate development in the Downtown Mixed-Use land use designated areas.

Policy A3-2.3: The City shall pursue available federal, state, county and local funds for redevelopment for blighted or otherwise deteriorated areas as identified in the Mascotte Community Redevelopment Plan.

Goal A4: Green Swamp Area of Critical State Concern. The City of Mascotte shall protect the Green Swamp Area of Critical State Concern (“Green Swamp”) as designated by the State of Florida. This protection shall include the creation of future land use designations that are specific to the Green Swamp and application of specific Policies regulating land use and development in the Green Swamp.

***Objective A4-1:** Development within the Green Swamp shall be conducted in a manner that minimizes impacts to the Floridan Aquifer system, wetlands, and flood plains.*

Policy A4-1.1: Development within the Green Swamp shall be regulated by specific policies (included in this Goal), the remaining Future Land Use Element, and the other Elements within the City of Mascotte Comprehensive Plan. Where there is a conflict in policy, standard, or regulation, the more stringent shall apply.

Policy A4-1.2: Any application for any development, other than an application for a building permit for a single-family dwelling unit, shall include a “Green Swamp Development Assessment”. This assessment shall demonstrate how the proposed development is in compliance with this Goal and shall specifically address uses, open space, floodplain, wetlands, listed species, on-site sewage disposal, sediment and erosion control, stormwater management, and landscaping and irrigation. This assessment shall also demonstrate the manner in which the development application has considered the following:

- Minimize the adverse impacts of development on resources of the Floridan Aquifer, floodplain, and wetlands.
- Protect or improve the normal quantity, quality, and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern.
- Protect or improve the water available for aquifer recharge.
- Protect or improve the functions of the Green Swamp Potentiometric High of the Floridan Aquifer.
- Protect or improve the normal supply of ground and surface water
- Prevent further salt-water intrusion into the Floridan Aquifer.
- Protect or improve existing ground and surface-water quality.
- Protect or improve the water-retention capabilities of wetlands.
- Protect or improve the biological-filtering capabilities of wetlands.
- Protect or improve the natural flow regime of drainage basins.
- Protect or improve the design capacity of flood-detention areas and the water-management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.

***Objective A4-2:** Future Land Use Designations. Within one year from the adoption of this Goal, the City of Mascotte shall enact regulations, including zoning districts that are consistent with the Future Land Use Designations described below and land development code regulations that are consistent with the Comprehensive Plan, all of which are specific to the Green Swamp.*

Policy A4-2.1: The following Future Land Use Designations shall be allowed within the Green Swamp. No other future land use designations shall be assigned to parcels wholly or partially within the Green Swamp.

- Green Swamp Conservation
- Green Swamp Rural
- Green Swamp Neighborhood
- Green Swamp Site Specific
 - Parcel Number 17-22-24-0001-0000-3400, Parcel Number 17-22-24-0001-0000-0300 and Parcel Number 17-22-24-0001-0000-0600 only, commonly known as “Boykin Parcels”

Policy A4-2.2: The maximum allowable density, maximum allowable intensity (floor area ratio), and the minimum required open space for each of the future land use designations is summarized as follows:

Future Land Use Designation	Max. Allowable Density	Max. Allowable Floor Area Ratio	Min. Required Open Space
Green Swamp Conservation	1 du/10 ac	N/A	80%
Green Swamp Rural	1 du/5 ac	N/A	60%
Green Swamp Neighborhood	2 du/1 ac	N/A	40%
Green Swamp Site Specific	See Policy A4-2.7		

Densities shall be measured over the net land area, excluding floodplain and wetlands. Transfer of residential density from floodplain and wetlands to uplands on the same site within the Green Swamp shall be allowed in accordance with Policies A4-3.6 and A4-3.7.

Policy A4-2.3: Any parcels annexed by the City of Mascotte that are located within the Green Swamp shall be designated as Green Swamp Conservation or Green Swamp Rural unless the applicant applies for a different Green Swamp designation and demonstrates that the parcel meets the requirements for the requested Green Swamp designation, as follows:

- Only parcels that are, at the time of annexation, designated by Lake County as “Green Swamp Rural” may be designated by the City of Mascotte as “Green Swamp Rural.”
- The Green Swamp Neighborhood future land use designation may only be applied to parcels that are connected to municipal water and municipal sanitary sewer utilities.

Policy A4-2.4: The Green Swamp Conservation future land designation, with a maximum density of one dwelling unit per ten acres (1 du/10 ac) and a minimum of eighty percent (80%) open space, provides for limited rural uses:

- Agriculture and forestry
- Rural single-family residential
- Passive private or passive institutional parks and recreation lands
- Non-commercial equestrian-related uses

Policy A4-2.5: The Green Swamp Rural future land use designation, with a maximum density of one dwelling unit per five acres (1 du/5 ac) and a minimum of sixty percent (60%) open space, provides for limited rural uses:

- Agriculture and forestry
- Rural single-family residential
- Passive private and passive institutional parks and recreation lands

- Non-commercial equestrian-related uses

Policy A4-2.6: The Green Swamp Neighborhood future land use designation is only appropriate for parcels on the northernmost area of the Green Swamp where there are sufficient interconnected uplands for development and it is economically feasible to extend municipal water and municipal sanitary sewer utilities to said parcels. The maximum density shall be two dwelling units per acre (2 du/1 ac) and the minimum open space shall be forty percent (40%). All development within Green Swamp Neighborhood must be connected to municipal water and sanitary sewer utilities. On-site sewage disposal systems are prohibited. Uses within Green Swamp Neighborhood shall be limited to the following:

- Low-density single-family residential
- Passive parks and recreation (private use only; only as a component of a low-density single-family residential planned unit development)
- Equestrian-related uses (non-commercial; only as a component of a low-density single-family residential planned unit development)

The following criteria shall be used for determining the appropriate locations and shall be used in consideration of any development application for property designated as Green Swamp Neighborhood:

- Any parcel designated as Green Swamp Neighborhood that is to be developed shall have direct access to State Road 50, Bay Lake Road (County Road 565 South), or Mascotte Empire Road.
- No parcel that is located south of the centerline of Brantley Road and the southernmost (westerly) segment of Carter Jones Road, or the easterly or westerly extension of each thereof, shall be designated as Green Swamp Neighborhood.
- The Land Development Code may require that development of any parcel of property designated as Green Swamp Neighborhood that would include non-residential uses (parks or equestrian-related uses) must be approved by the City of Mascotte through the City's Planned Unit Development process.
- Perimeter buffering shall be required around any new development. Buffers must be a minimum of fifty feet (50 ft.) in depth along any dedicated road right-of-way and a minimum of one hundred feet (100 ft.) in depth along any parcels adjoining the development. Buffering may be included in the calculation of open space.

Policy A4-2.7: Green Swamp Site Specific. Parcel Number 17-22-24-0001-0000-3400, Parcel Number 17-22-24-0001-0000-0300 and Parcel Number 17-22-24-0001-0000-0600, as defined by the Lake County Property Appraiser (commonly known as "Boykin Parcels"), are designated as Green Swamp Site Specific, and the following site-specific policies shall apply:

- Development applications may be approved on the parcels if the parcels are not connected to municipal water and municipal sanitary sewer utilities.
- Any development shall include a minimum of forty percent (40%) open space as defined in this Goal.
 - Open space does not include parking or any other impervious surfaces.
 - No materials shall be stored in the open space.
 - The combined open space requirement for all three Boykin Parcels is 440,827 square feet. This open space may be provided in one area or may be distributed across the

Boykin Parcels. Buffer, as required in this Policy, may be included in the calculation of open space.

- Prior to construction of additional buildings, a survey shall be prepared indicating the location and amount of open space.
- The open space identified on the Boykin Parcels will be indicated by stakes or some other permanent identifying barrier to ensure that it remains undisturbed.
- The total gross floor area of all buildings and structures, including conditioned space, unconditioned space, canopies, and overhangs, shall not exceed 8,000 square feet combined on the Boykin Parcels until such time that the parcels are connected to municipal water and municipal sanitary sewer utilities.
- Perimeter buffering shall be required around any new development. Buffers must be a minimum of twenty-five feet (25 ft.) in depth along any dedicated road right-of-way and a minimum of fifty feet (50 ft.) in depth along any parcels adjoining the development. Appropriate buffers may include opaque fencing, walls, landscaping, or other appropriate buffer to reduce visibility, noise, and particulate matter. Buffering may be included in the calculation of open space.
- Wholesale and retail sales on the Boykin Parcels shall be limited to the following materials: clean soil; clean sand, gravel, and stone; limerock; and clean, processed debris such as wood, concrete, and asphalt millings. The natural materials listed above shall not be extracted from the Boykin Parcels.
- Asphalt millings shall be placed on an impervious surface and shall have secondary containment to ensure that stormwater run-off is retained within the impervious surface and is treated prior to any discharge.
- Office uses shall be allowed on the Boykin Parcels; however, office uses shall be limited to the property owner's primary business located on site.
- Storage, maintenance, and repair of vehicles shall be allowed on the Boykin Parcels; however, storage, maintenance, and repair shall be limited to vehicles and equipment used for the property owner's business located on site.
- Processing and storage of materials may be allowed on the Boykin Parcels; however, processing and storage of materials shall be limited to the materials that are for sale as part of the property owner's business located on site. Materials shall not be stored in open space.
- Refuse containers shall be limited to a maximum of fifty cubic yards (50 yds.). The existing aboveground diesel fuel storage tank shall be limited to a maximum capacity of five thousand gallons (5000 gal). No more than one aboveground storage tank shall be allowed. Underground storage tanks shall be prohibited.
- Any development application shall demonstrate that sufficient land area has been identified for existing on-site sewage disposal systems (septic systems) and the placement of any new on-site sewage disposal system (as required by the Lake County Department of Health). In addition, sufficient land area shall be reserved for the replacement of existing and required on-site sewage disposal systems.
- Property owners shall be required to connect to municipal water utility within 180 days of written notification from the City that water utilities are available, as defined by the City's Code.

- Property owners shall be required to connect to the municipal sanitary sewer utility within 180 days of written notification, and, pursuant to Fla. Stat. §381.00655, that sanitary sewer service is available as defined by the City's Codes.
- All other Objectives and Policies regulating land use and development within the Green Swamp not inconsistent with these site-specific policies shall apply to these parcels, including, but not limited to, prohibited uses, floodplain, wetlands, stormwater management, and inspection of on-site sewage disposal systems (septic systems).

Objective A4-3: *Within one year from the adoption of this Goal, the City of Mascotte shall enact land development code regulations that impose specific restrictions on any construction activity, development, and land use within the Green Swamp Area of Critical State Concern and implement the following Policies.*

Policy A4-3.1: Development. Single-family residential lots shall be clustered in any development, with the remaining land to be used for open space. The clustering of single-family residential lots shall be located on the least-sensitive land areas of the entire development parcel.

Policy A4-3.2: Access. Any parcel approved for development by the City shall have frontage on a city-maintained, county-maintained, or state-maintained roadway. Building permits may be issued for parcels that do not have frontage on said roadways if the parcel was created prior to the adoption of the 1991 Lake County Comprehensive Plan.

Policy A4-3.3: Prohibited Uses. The following activities are specifically prohibited within the Green Swamp:

- Mining, borrow pits, or any other resource extraction (including sand mining, peat mining, limerock mining, and phosphate mining)
- Solid waste management facilities (landfills, transfer stations, drop-off facilities, or material recovery facilities)
- Wastewater treatment plants and wastewater spray fields (when wastewater has not been treated to advanced wastewater treatment standards)
- Spreading of sludges
- Golf courses
- Dry cleaning plants
- Petroleum pipelines, petroleum-related industries, and fuel wholesalers
- Chemical manufacturers and distributors
- Fertilizer manufacturers and distributors
- Underground storage tanks

Policy A4-3.4: NPDES Permits. With the exception of general construction activities, facilities engaged in industrial activities that require a National Pollution Discharge and Elimination System (NPDES) Permit for Stormwater Associated with Industrial Activities (Chapter 40, CFR Part 122) shall not be permitted within the Green Swamp.

Policy A4-3.5: Open Space. Development within the Green Swamp shall include open space as required by the Future Land Use Designation. Open space within the Green Swamp is defined as a portion of the gross land area that remains unencumbered by any building, canopy, roadway, pavement, or other impervious surfaces and remains open from the ground to the sky.

Floodplain and wetlands may be included in the calculation of open space. Surface waters shall not be included in the calculation of open space. Stormwater management ponds, other stormwater management improvements, and on-site sewage disposal systems may be located within the designated open space.

Policy A4-3.6: Floodplain. Development within the one-hundred year floodplain (or known as “flood hazard area”; defined as that area that lies within Zone A or Zone AE as delineated by the FEMA Flood Insurance Rate Map) shall be limited as follows:

- For parcels that include land both outside the floodplain and within the floodplain, no development shall be allowed within the floodplain.
- Residential densities may be transferred from the land area within the floodplain to the land area outside the floodplain at a rate of one dwelling unit per ten acres (1 du/10 ac). There shall be no transfer of non-residential intensity.
- For parcels that are entirely within the floodplain and that were created prior to the adoption of the 1991 Lake County Comprehensive Plan, the maximum residential density shall be one dwelling unit per ten acres (1 du/10 ac). Non-residential development shall be prohibited on parcels that are entirely within the floodplain.
- For any proposed subdivision or development that includes more than five acres (5 ac) within the floodplain, a flood study shall be performed in accordance with FEMA Guidelines and Specifications for Flood Hazard Mapping Partners. The construction of a single-family residence shall be exempt from this requirement. A single-family residential subdivision that is less than ten lots shall also be exempt from this requirement.

Policy A4-3.7: Wetlands. Development within, adjacent to, or near wetlands shall be limited as follows:

- No new development shall be located within fifty feet (50 ft.) of the furthest upland extent of any wetlands or water body.
- No development shall be allowed within wetlands.
- Wetland impacts shall only be allowed when providing access to a parcel will result in unavoidable wetlands impacts and the denial of said impacts would result in a taking. Impacts shall be properly mitigated through the appropriate agency with jurisdiction.
- Residential densities may be transferred from the land area within wetlands to the land area outside wetlands at a rate of one dwelling unit per twenty acres (1 du/20 ac). There shall be no transfer of non-residential intensity. Land area within wetlands shall not be included in the calculation of floor area ratio.
- For parcels that are entirely within wetlands and that were created prior to the 1991 Lake County Comprehensive Plan, the maximum residential density shall be one dwelling unit per twenty acres (1 du/20 ac), and only one dwelling unit shall be allowed on any parcel. Non-residential development shall be prohibited on parcels that are entirely within wetlands.
- Wetlands and upland buffers shall be maintained in their natural and unaltered state. However, controlled burns, selective thinning, and ecosystem restoration and maintenance are permissible activities within the wetlands and upland buffers, provided they are performed in accordance with current Silvicultural Best Management Practices published by the Division of Forestry. Any isolated wetlands of less than one acre shall be exempt from these requirements.

Policy A4-3.8: Protection of Listed Species. Any new development application within the Green Swamp shall include a field study for listed species (flora or fauna identified as endangered, threatened, or special concern by the US Fish and Wildlife Service and/or the Florida Fish and Wildlife Commission). If it is determined that listed species are located on the parcel, a habitat management plan shall be prepared and implemented as part of the development. Said management habitat plan shall be reviewed and approved by the US Fish and Wildlife Service and/or the Florida Fish and Wildlife Commission.

Policy A4-3.9: Containment. Any land use within the Green Swamp that proposes to store and/or sell materials such as sand, peat, soil, and/or rock, or similar new or recycled materials, must provide adequate containment and storage. Land uses that propose to store products such as petroleum-based materials, metals or metallic materials, asphalt, paints, or other similar materials, must provide an impervious base for the materials and curbing as required so that there is no discharge of run-off or contact water from the materials. Vehicle or equipment repair areas must provide an enclosed space or an impervious base with secondary containment as required so that there is no discharge of any liquids to groundwater.

Policy A4-3.10: On-Site Sewage Disposal System (Septic Systems). The City shall adopt an onsite sewage treatment and disposal system evaluation and assessment program for onsite sewage disposal systems which exist or that are constructed within the Green Swamp that meets the following regulations, to the extent such regulations do not deviate from the requirements of § 381.00651(3) and (6):

- No new on-site sewage disposal system (septic system), or any component thereof, including, but not limited to, septic tanks, dosing tanks, and drainfields, shall be located within one hundred feet (100 ft.) of the furthest upland extent of any wetlands or water bodies.
- At least once every five (5) years, every parcel owner with one or more on-site sewage disposal system within the Green Swamp shall have all septic tanks cleaned and inspected in accordance with the requirements of the Lake County Department of Health. The City of Mascotte shall coordinate with the Department of Health to require that the septic tank be cleaned, that the mound, drainfield, septic tank, and other components of the on-site sewage disposal system shall be in good working order and in compliance with the standards of Chapter 64, FAC, and the standards described herein. As necessary, a fee to be paid by parcel owners shall be assessed to cover the costs of administering this program. The parcel owner shall make all repairs that are necessary to bring the septic tank system in compliance with all the requirements herein.

Policy A4-3.11: Sediment and Erosion Control. General construction activities are permitted within the Green Swamp. All development permits shall be conditioned upon an applicant obtaining all necessary state and federal permits before commencement of development.

Policy A4-3.12: Stormwater Management. Within the Green Swamp, stormwater management systems shall meet the following requirements:

- Stormwater quality best management practices shall be required to treat the greater runoff volume from either the first one inch (1 in.) of rainfall over the entire parcel (less floodplain and wetlands) or the first two and one-half inches (2-1/2 in.) of rainfall over the impervious surfaces.
- Stormwater management systems located within areas that have soils designated as Hydrologic Soil Group "A" (HSG A) must specifically retain and infiltrate the run-off from

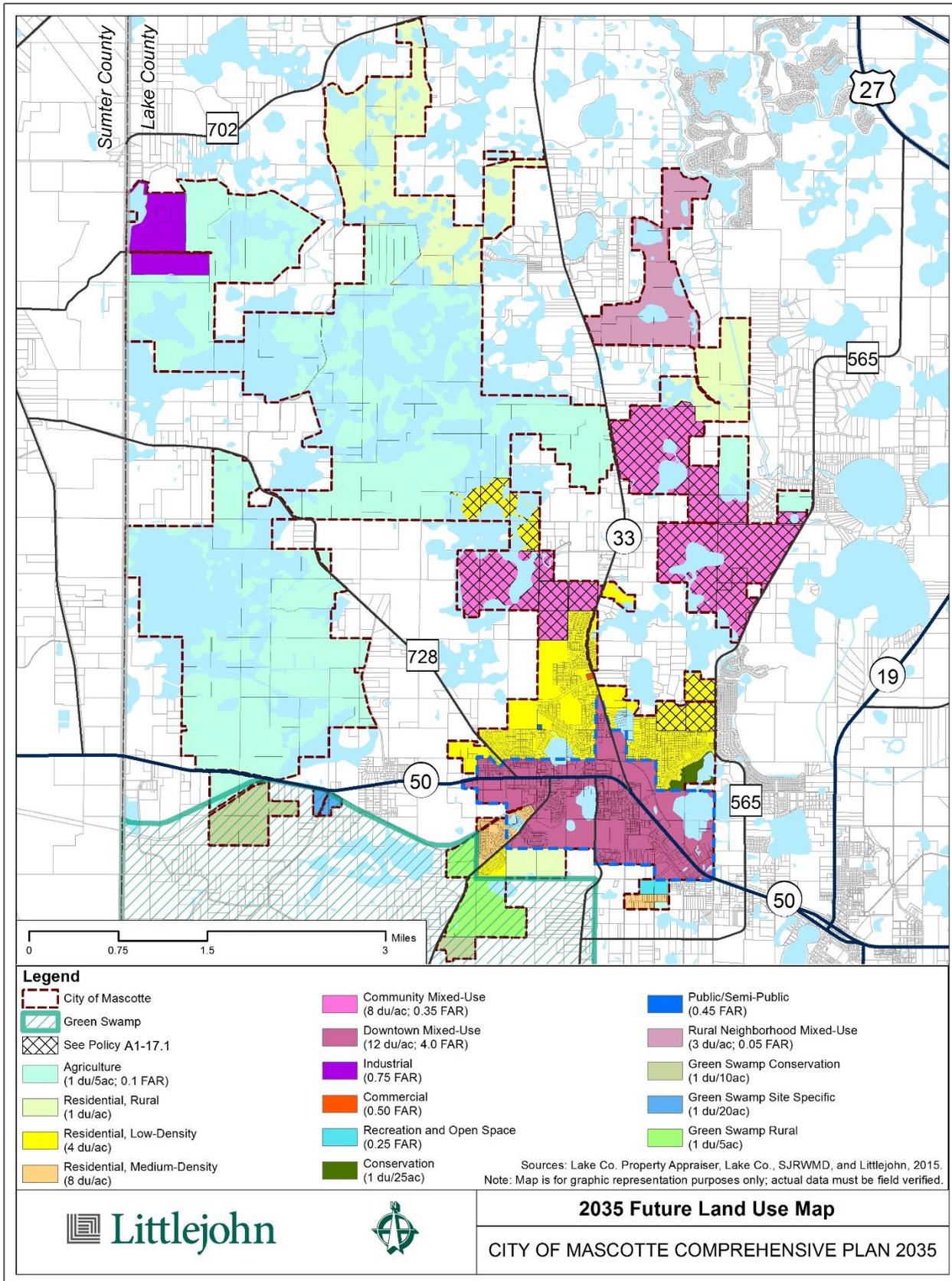
either the first three inches (3 in.) of rainfall or the mean-annual, 24-hour rainfall event, whichever is greater, over directly-connected impervious surfaces.

- Runoff volume discharged from impervious surfaces within non-residential developments must be treated through a filtering or cleansing device or other best management practice that specifically removes a minimum of sixty percent (60%) of oils and greases from the stormwater discharge.
- Residential developments shall designate a specific entity that is responsible for the maintenance and operation of the stormwater management system for the development.
- Each owner of a non-residential parcel shall be responsible for the maintenance and operation of the stormwater management system on that parcel.

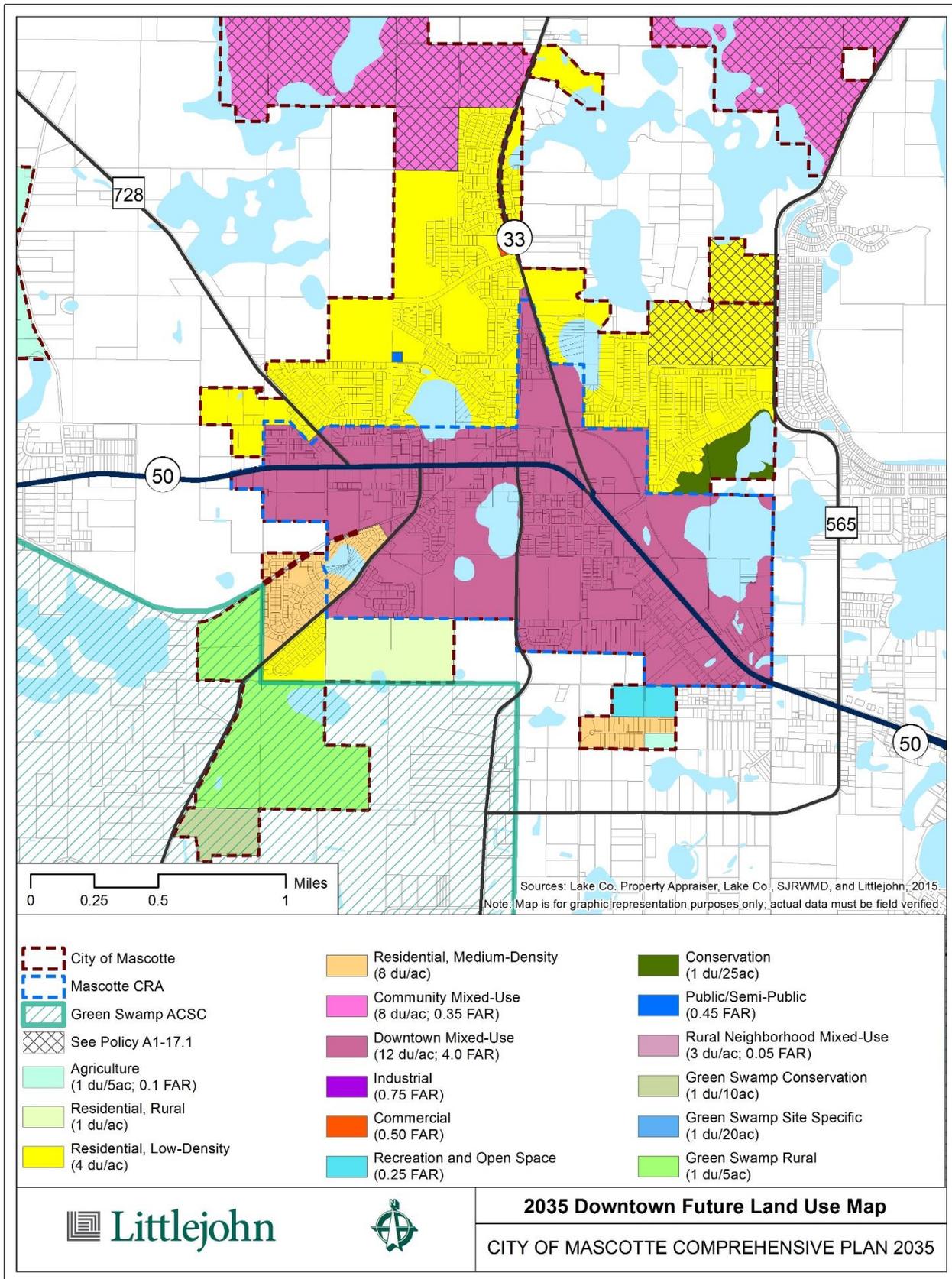
Policy A4-3.13: Irrigation and Landscaping. Within the Green Swamp, the irrigated area of any parcel shall be limited as follows:

- The irrigated area of any single-family lot shall not exceed ten thousand square feet (10,000 sf).
- The irrigated area of any non-residential developments shall not exceed the size of the building footprint of the primary building.
- Irrigation of agricultural uses shall be regulated by the appropriate water management district.
- For non-agricultural uses, fertilizer may be applied no more than four times per year and may not be applied during the months of June, July, August, and September.

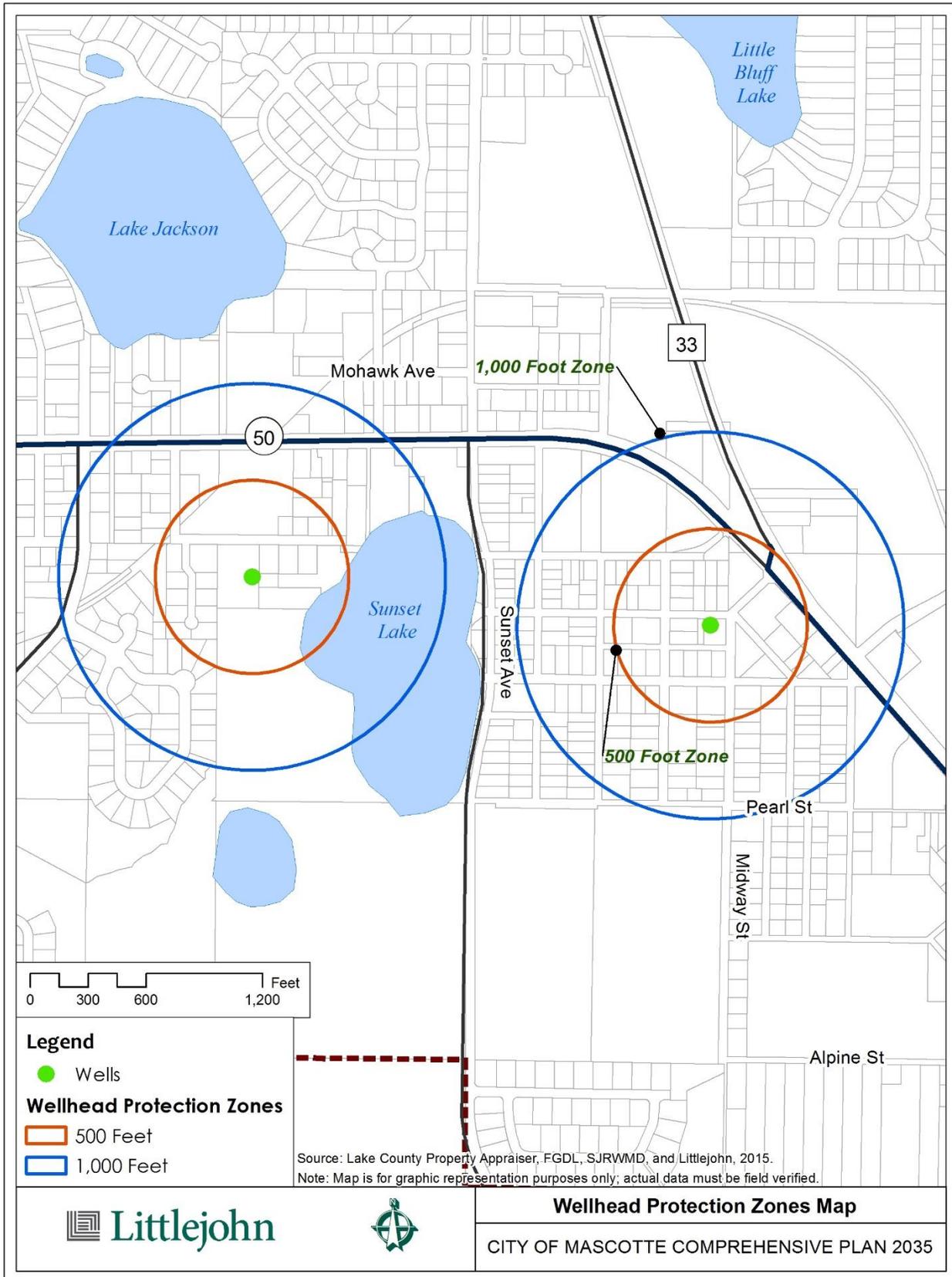
MAP A - 1: FUTURE LAND USE MAP



MAP A - 2: FUTURE LAND USE MAP - DOWNTOWN AREA



MAP A - 3: WELLHEAD PROTECTION ZONES



ELEMENT B - HOUSING

Goal B1: Provision of Housing. To ensure an adequate supply of a wide range of housing types, at various levels of affordability, to accommodate the needs of the residents of Mascotte through the year 2035.

Objective B1-1: Housing Supply. *Assist the private sector to provide approximately 573 new dwelling units of various types, sizes, and costs by 2025, plus an additional 722 units between 2025 and 2035 necessary to house the City's anticipated population through the planning horizon. The City shall create an environment that allows the private sector to provide both the number of housing units and the type of housing units required for the expected growth of the City, including affordable housing, multi-family housing, and housing for seniors.*

Policy B1-1.1: The City's Future Land Use Map shall include adequate amounts of lands to accommodate the projected housing growth.

Policy B1-1.2: Ensure that necessary infrastructure capacity for the new dwelling units, population, and the secondary non-residential development expected from an increase in the housing stock and population.

Policy B1-1.3: The City shall regularly review ordinances, codes, regulations, and the permitting process to eliminate excessive requirements and to encourage private sector participation in meeting housing needs, including affordable housing needs.

Policy B1-1.4: The City shall, through the Land Development Code, encourage the development/redevelopment of housing that will integrate divergent choices of housing across all neighborhoods.

Policy B1-1.5: The City shall regularly review the regulatory and permitting process to determine whether there is a need to streamline the process.

Policy B1-1.6: The City shall continue to assist developers of residential dwelling units by providing technical and administrative support regarding permitting and regulations to maintain a housing production capacity level sufficient to meet the demand. Technical assistance includes, but is not limited to, assistance meeting the development review requirements of the City and other regulatory agencies; referral to appropriate agencies for information and assistance in meeting infrastructure standards and requirements imposed by the City; and provision of data regarding housing needs and conditions.

Policy B1-1.7: The City shall allow mobile home parks in certain residential zoning districts where adequate public facilities and services are available. Mobile home parks should be located adjacent to areas with a comparable density of development or near small-scale convenience or neighborhood commercial activity, in areas accessible to arterial and collector roads; and they should be located within reasonable proximity to community facilities.

Policy B1-1.8: The City shall allow manufactured homes in residentially zoned areas, provided that such housing is compatible with surrounding development and meets applicable building code regulations.

Policy B1-1.9: The City shall utilize Crime Prevention through Environmental Design (CPTED) principles in order to increase the safety of housing developments.

Policy B1-1.10: The City shall continue providing adequate supporting infrastructure, i.e. paved streets, drainage, potable water, and sanitary sewer when available, throughout the City to enhance and complement the housing stock.

Policy B1-1.11: The City shall cooperate with private and non-profit participants involved in the housing production and housing renovation.

Policy B1-1.12: The City shall maintain a database of building permit activity, and shall organize it efficiently to keep information on new housing units, conversions and demolitions by type, and tenure characteristics.

Objective B1-2: Relocation. *The City shall coordinate with the appropriate agencies to offer relocation assistance to city residents who are displaced by Federal, State, or local government programs and projects. The displacing agency shall be responsible for providing assistance, which includes, but is not limited to, financial means and methods.*

Policy B1-2.1: When residents are displaced by City actions, though public development or redevelopment, the City shall attempt to ensure the residents are able to relocate to standard, affordable housing.

Policy B1-2.2: The City shall require that zoning or structure use changes be evaluated as to their impact on citizens residing in the structure and the area.

Policy B1-2.3: The City shall coordinate with appropriate agencies to prepare plans of action regarding relocation of residents, before programs are enacted that will create displaced households. Such plans shall include, but are not limited to, the following:

- Timing of the relocation,
- Assessment of the need for the program which will displace households,
- Costs associated with the displacement of such households, and
- An assessment of the household's needs and the impact of the relocation on the household, including:
 - Location and the effect of a new neighborhood location on the household's distance to job, schools, and social activities, and
 - The adequacy of public transit, if applicable at the time, to serve the displaced household.

Objective B1-3: Affordable Housing. *The City shall encourage and assist the private sector in the provision of safe, clean, and affordable housing for special needs populations of the City, particularly the low and moderate-income households.*

Policy B1-3.1: The City shall review and revise its Land Development Code to remove constraints on the development of affordable housing projects, where such constraints are not supported by a valid concern for the health, safety, or welfare of the community.

Policy B1-3.2: The City shall provide technical assistance to non-profit agencies to plan and develop and renovate affordable housing. Technical assistance includes, but is not limited to, assistance with meeting the development review requirements of the City and of other regulatory bodies, referral to appropriate agencies (including City agencies and other agencies) for information and assistance in meeting infrastructure standards and requirements.

Policy B1-3.3: The City shall pursue public-private partnerships with non-profit agencies to assist very low and low-income families with the maintenance of and renovations to existing owner-occupied housing.

Policy B1-3.4: On a case-by-case basis, the City shall evaluate all infrastructure charges and fees to determine whether adjustments can be made for affordable housing projects or projects that include an affordable housing component. The City should also encourage the County to assist in this effort as the provision of housing needs benefits the larger area as well as the City itself.

Policy B1-3.5: Promote the refurbishment of existing housing structures by providing incentives and/or credits to homeowners for "sweat equity" rehabilitation within neighborhoods

in need, by defining the criteria for such incentives and/or credits in the City's Land Development Code.

Policy B1-3.6: Promote mixed uses, which include provisions for a wide variety of housing types and prices, in large developments (greater than 50 residential units).

Policy B1-3.7: Continue allowing a wide range of housing types, such as cluster homes, single-family attached, zero lot line homes, through the Land Development Code.

Policy B1-3.8: To support affordable housing, Community Redevelopment Area funds shall be made available for programs and incentives aimed at the creation and renovation of new affordable and multi-family units.

Policy B1-3.9: Efficiently plan and operate utility systems to provide for cost effective service operations.

Objective B1-4: Special Needs Households. *The City shall ensure that adequate sites in residential areas are available for special needs populations, such as the elderly and disabled.*

Policy B1-4.1: The City shall include in the Land Development Code adequate standards for the location of community residential homes, including group homes, in residential areas in accordance with applicable Florida Statutes.

Policy B1-4.2: The City shall utilize the development review process to review any proposed projects or City Code amendments that impact housing for special need populations.

Policy B1-4.3: The City shall continue to support organizations that assist elderly and handicapped citizens in finding decent, accessible, and affordable housing. Such support may include technical assistance and alternative design standards and code requirements.

Policy B1-4.4: The City shall continue to ensure compliance with Federal and State laws on accessibility.

Policy B1-4.5: In an effort to address problems of housing for lower income elderly residents and other households with special housing needs, the City shall allow for the placement of retirement communities and elderly care facilities in areas of residential character as long as they are designed in a manner that is compatible with the character of the neighborhood.

Policy B1-4.6: The City shall adopt, as needed, Land Development Code revisions that allow the development of innovative retirement housing including adaptive construction techniques, "Granny Cottages", and accessory apartments.

Policy B1-4.7: The City shall support programs that address elderly housing policies through the area Council on Aging, and State and Federal efforts.

Policy B1-4.8: The City shall maintain a working relationship with the State of Florida Agency for Health Care Administration (AHCA), Lake County Health agencies, and organizations with an interest in the housing of disadvantaged populations, including consideration of subsidy programs offered by these agencies.

Goal B2: Preservation. Encourage the preservation of decent, safe and sanitary housing for the present and future residents of Mascotte.

Objective B2-1: Housing Units. *The City shall continue to assist in extending the life of the existing housing stock, to stabilize neighborhoods and create community pride.*

Policy B2-1.1: The City shall encourage the renovation of substandard housing units.

Policy B2-1.2: The City shall consider applying for housing rehabilitation grant funds and subsidy programs such as:

- Community Development Block Grant (CDBG) funds administered by the U.S. Department of Housing and Urban Development, through Lake County.
- Florida Neighborhood Housing Services grant administered by the Florida Department of Community Affairs. (Chapter 420.429, F.S.).
- Florida Small Cities CDBG Program Funds administered by the Florida Department of Community Affairs. (Chapter 290.0401- 290.049. F.S.).

Policy B2-1.3: The City shall encourage low-income residents to apply for housing rehabilitation assistance individually or through the programs managed by the County.

Policy B2-1.4: The City shall continue implementing code enforcement activities to reduce the amount of substandard housing and preserve the available housing stock.

Policy B2-1.5: The City shall condemn and require demolition of those units which are determined by the Building Official to not be suitable for rehabilitation by public, private, or "sweat equity" means. This policy is to be initiated with caution and proper consideration when applied to units which are owner-occupied and when condemnation would cause undue hardship to the residents of the structure.

Objective B2-2: Neighborhoods. *The City shall promote housing opportunities for new households in already established neighborhoods and ensure the stabilization of all neighborhoods through the following policies, when applicable.*

Policy B2-2.1: Identify neighborhoods that are in need of rehabilitation or are experiencing instability based on any and all of, but not limited to, the following criteria:

- Proliferation of crime,
- A large percentage of substandard housing units,
- Fragmentation of land uses, and
- Poor or deteriorating infrastructure, including water, drainage, traffic and pedestrian systems.

Policy B2-2.2: The City shall consider neighborhood plans and programs, which strive to reduce or eliminate destabilizing neighborhood conditions, and include in such plans and programs activities which include, but are not limited to, greater levels of code enforcement, implementing neighborhood watch programs, "Safe Neighborhoods" programs, and Community Development Block Grant programs.

Policy B2-2.3: Provide for a high level of resident and owner participation in any plan or program implemented for the purpose of improving and/or stabilizing neighborhoods.

Policy B2-2.4: Investigate funding sources for these plans and programs, which may include but are not limited to, special taxing districts, "Safe Neighborhoods Act" funding, and Community Development Block Grant Funding.

Policy B2-2.5: Promote and support home ownership within older neighborhoods by providing incentives and/or credits to home owners for "sweat equity" rehabilitation within targeted neighborhoods.

Policy B2-2.6: The City shall continue enforcing the regulations prohibiting the expansion of non-compatible uses within residential neighborhoods.

Policy B2-2.7: The City shall require buffering and screening of residential neighborhoods from nearby incompatible uses by using landscape buffer yards or transitional uses.

Objective B2-3: Historic Preservation. *The City shall preserve and protect historically significant structures and sites, in accordance with the provisions of this plan.*

Policy B2-3.1: The City shall pursue available grants and alternative funding to expand the local knowledge and awareness of existing historic and archaeological sites and structures.

Policy B2-3.2: The City shall annually request an updated list of historical site, properties, and buildings from the Division of Historical Resources, Master Site File.

Policy B2-3.3: The City shall consider the need to create a historic preservation ordinance and a local register of historic places.

Policy B2-3.4: The City shall continue to encourage property owners to rehabilitate and renovate their historically significant structures by supplying them with technical assistance and information regarding any available state and federal grants.

Policy B2-3.5: The City shall assist property owners of historically significant housing in submitting their properties for inclusion in local or National registers.

Objective B2-4: Infill. *The City shall promote infill development by supporting alternative development standards where necessary and feasible.*

Policy B2-4.1: The City shall develop a vacant residential parcel map and database utilizing, if possible, the Lake County Property Appraiser's Office as a base. Such a system should include the size, location, physical characteristics, utilities, zoning, and ownership data.

Policy B2-4.2: The City shall make available the vacant land database and map to interested developers and/or builders.

ELEMENT C - CAPITAL IMPROVEMENTS

Goal C1: Provide attainable fiscal means to ensure the timely and necessary installation and maintenance of public facilities needed to meet the demands of residents and business establishments within the city limits of Mascotte through the year 2020.

Objective C1-1: Capital Improvement Schedule. To ensure that the necessary facilities and infrastructure will be in place to meet Levels of Service established within the Comprehensive Plan, the City shall formally adopt the Capital Improvement Schedule as shown in the following table:

Five-Year Capital Improvements Schedule

Items by Department	Funding Source	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Public Works						
Street Resurfacing Projects	Impact Fees	\$50,000	\$50,000			
Street Resurfacing Projects	Other			\$50,000	\$50,000	\$50,000
Asphalt Rejuvenation Program	Impact Fees	\$20,000	\$20,000			
Asphalt Rejuvenation Program	Discretionary			\$20,000	\$20,000	\$20,000
Sidewalk Program	Impact Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Replace Trucks	Discretionary		\$30,000	\$30,000	\$30,000	
Parks & Recreation						
Upgrade Playground: Civic Center	Discretionary	\$30,000				
Upgrade Playground: Communicasa	Discretionary			\$30,000		
Upgrade Playground: Mascotte Recreational Complex	Discretionary					\$30,000
Water						
Reroof Knight St WTP	Current Revenues	\$15,000				
Replace Generator: Knight St WTP	Discretionary		\$215,000			
Lower Floridan Well	Other				\$500,000	
Upper Floridan Aquifer Monitoring Well	Current Revenues					\$9,100
Replace Trucks	Current Revenues	\$30,000	\$30,000	\$30,000	\$30,000	
Backhoe Replacement	Current Revenues			\$60,000		
Sewer						
Portable Generator	Current Revenues		\$30,000			
Leveraged Funds for CDBG	Discretionary	\$41,000				
New Truck	Current Revenues		\$30,000			
Stormwater Department						
Atlantic Avenue Flood Resolution	Current Revenues	\$40,300				
Palmwood Avenue Erosion Issue	Current Revenues		\$82,200			
MS4 Program	Current Revenues	\$4,000	\$2,600	\$1,400	\$1,400	

Policy C1-1.1: Capital projects shall be defined as those projects identified within the other elements of the Comprehensive Plan that are necessary to meet established levels of service, increase the capacity or efficiency of existing infrastructure, replace failing infrastructure or enhance facilities and infrastructure, and generally have a cost exceeding \$10,000.

Policy C1-1.2: Components of Capital Improvement Schedule. Capital projects for the following facilities and infrastructure shall be included and funded as part of the City's Capital Improvement Schedule:

- Transportation
- Stormwater Management (Drainage)
- Sanitary Sewer
- Solid Waste
- Potable Water
- Parks and Recreation

Policy C1-1.3: Priorities in Allocating Capital Improvements. When allocating priorities for scheduling and funding capital improvement needs identified within the Comprehensive Plan, the City shall assign the highest priority to capital improvement projects listed in the Five-Year Schedule of Improvements for purposes of eliminating existing deficiencies.

Policy C1-1.4: Criteria. Capital projects shall be prioritized according to the following criteria (in no particular order):

- Whether the project is necessary to meet established levels of service.
- Whether the project increases the efficiency of existing facilities or infrastructure.
- Whether the project represents a logical extension of facilities within the utility service area.
- Whether the project is coordinated with major projects of other agencies.
- Whether the project implements the policies of the Comprehensive Plan as they pertain to concurrency requirements.
- Whether the project eliminates a public hazard.

Policy C1-1.5: The City shall adopt a capital improvements schedule every year as part of the annual budgeting process.

Objective C1-2: Coordination with Other Agencies. The City shall coordinate with other State and Local Agencies in the planning, funding, and construction of Capital Improvements.

Policy C1-2.1: The City hereby adopts into the Capital Improvements Schedule, by reference, the Florida Department of Transportation “Five-Year Work Program”, as amended, and the Lake-Sumter Metropolitan Planning Organization “Transportation Improvements Program (TIP)”, as amended.

Policy C1-2.2: The City adopts into the Capital Improvements Schedule, by reference, the St. Johns River Water Management District “District Water Supply Plan”, as amended, and the City of Mascotte “Ten-Year Water Supply Plan”, as amended.

Policy C1-2.3: The City adopts into the Capital Improvements Schedule, by reference, the Lake County School District “District Facilities Work Program”, as amended.

Objective C1-3: Level of Service (LOS). *The City shall utilize level of service criteria defined in the various Elements of this Plan when determining the timing and funding of capital facilities.*

Policy C1-3.1: The minimum peak hour volume Level of Service (LOS) Standard for arterials and collectors roads shall be “C”.

Policy C1-3.2: The level of service for residential Sewer is 80 gallons per day per capita or 240 gallons per day per Equivalent Residential Unit (ERU).

Policy C1-3.3: The level of service for non-residential Sewer is 0.10 gallons per day per square foot of floor area.

Policy C1-3.4: The level of service for Solid Waste is 6.00 pounds per day per capita.

Policy C1-3.5: The level of service for Potable Water is 106 gallons day per capita.

Policy C1-3.6: The level of service for total Park acreage is 4 acres per 1,000 residents.

Policy C1-3.7: The level of service (LOS) standards for the drainage system facilities developed within the City of Mascotte are noted in the following table:

• Flood Protection	25 year, 24 hour event
• Open Channels and culverts external to development	25 year
• Open Channels and culverts internal to development	10 year
• Cross Drains	25 year
• Storm Sewers	10 year
• Major Detention/ Retention Structures	25 year (SJRWMD)
• Minor Detention/ Retention Structures	25 year
• Retention w/ Percolation or Detention w/ filtration	25 year

Policy C1-3.8: Compatibility. In coordination with other City departments, the City Manager shall evaluate land use amendments to determine the compatibility of those amendments with the adopted level of service standards and to ensure adequate funding is available when improvements are necessary pursuant to such land use amendments.

Policy C1-3.9: Thresholds. Capital projects shall use the following thresholds to target initiation and budgeting of construction and/or purchase of capital facilities to meet projected future needs based on adopted level of service (LOS) standards:

- Roadways - Volumes are at 90% of adopted LOS capacity (as long as projects do not conflict with the Long Range Transportation Plan adopted by the Lake-Sumter Metropolitan Planning Organization).
- Sewer - 75% of available capacity is being utilized.
- Water - 75% of available capacity is being utilized.
- Recreation and Open Space - Park lands when 95 % of available land area is utilized or when 90% of the population exists in areas in need of new park acreage.

Policy C1-3.10: Funding Sources. The City shall pursue adequate funding sources for the construction of capital projects identified in the Capital Improvement Schedule.

Policy C1-3.11: Adequate Funding. The following procedures shall be utilized to ensure adequate funding for transportation capital projects:

- The City shall continue to participate in Lake-Sumter Metropolitan Planning Organization activities to advocate for the consideration of transportation improvements within the City to be included in the Long-Range Transportation Plan.
- 100% of State revenue sharing motor fuels tax funds shall be reserved specifically for traffic related maintenance and capital improvements.

- 100% of net proceeds, after payment of existing bond obligations, of the Lake County Local Option Gasoline Tax shall be reserved specifically for traffic related maintenance and capital improvements.
- 100% of the total proceeds from the Lake County Local Option Sales Tax shall be reserved for traffic related capital improvements.
- Funds collected from the Transportation Impact Fee shall be reserved for transportation capital projects.

Policy C1-3.12: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for stormwater management (drainage) capital projects:

- 100% of the total proceeds from the Stormwater Utility Fund shall be reserved for stormwater management operating needs and capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.

Policy C1-3.13: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for sanitary sewer capital projects:

- Maintain a reserve account restricted for sanitary sewer related capital projects.
- A portion of funds collected from the Utility Enterprise Fund shall be reserved to complete sanitary sewer capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.
- Wastewater impact fees.

Policy C1-3.14: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for potable water capital projects:

- A portion of funds collected from the Infrastructure Surtax Fund shall be reserved to complete potable water capital projects.
- Cash restricted due to bond and grant covenants will be budgeted in accordance with the terms of the covenants.
- Water impact fees.

Policy C1-3.15: Adequate Funding. The following procedures shall be utilized to pursue adequate funding for parks and recreation capital projects:

- Grants shall be pursued and used for the completion of parks and recreation capital projects.
- The Code of Ordinances shall continue to contain provisions for all new developments to provide parks and recreation lands and/or facilities and/or fees-in-lieu-of improvements.
- Park impact fees.

Objective C1-4: Capital Improvement Evaluation. *All City capital projects shall be evaluated to determine if they meet the prioritization criteria and consistency with adopted level of service standards and/or public need.*

Policy C1-4.1: Evaluation Criteria. Requests for capital projects shall be evaluated for their consistency with adopted level of service standards.

Policy C1-4.2: Inventory Hazards. The City shall continue to maintain an inventory of any existing hazards within the City by using the hazards analysis and hazards mitigation criteria established within the Lake County Comprehensive Emergency Management Plan and shall also identify any grant sources available to mitigate the hazards listed on the hazard inventory.

Policy C1-4.3: Capital Requests. Requests for capital projects shall be evaluated for their impact on the City budget.

Policy C1-4.4: Compatibility. All capital projects shall be reviewed as to their compatibility and timing in relation to capital projects being implemented or planned by Lake County, the Florida Department of Transportation, the St. Johns River Water Management District, the Lake County School District, the Lake-Sumter Metropolitan Planning Organization, the Florida Department of Environmental Protection, and/or any other government agency.

Policy C1-4.5: The City should use reasonable methods to track capital projects of any agency, which may be in conflict or may enhance the City's capital projects.

Policy C1-4.6: Debt Management. The City shall adopt procedures which address the management and utilization of debt for the purposes of capital project financing, and the City will use line of credit borrowing or bond anticipation notes for specific construction projects and issue revenue pledged debt at construction completion only if current funds do not provide adequate funding to pay for construction.

Objective C1-5: Repair and Replacement. *All City departments shall prioritize capital projects to provide for the repair and/or replacement of identified facilities.*

Policy C1-5.1: Department Priorities. As part of the annual budget process, all City departments shall identify and prioritize capital facilities in need of refurbishment or replacement and submit those facilities for funding in the Capital Improvement Schedule.

Objective C1-6: New Development. *The City shall ensure that new developments share a proportionate share of the costs required to maintain adopted level of service standards, through the assessment of impact fees or developer contributions, dedications, or construction of capital facilities necessary to serve new development as required in other Elements of this Plan.*

Policy C1-6.1: Evaluation of New Development Impacts. All development order applications shall be evaluated as to the impact of the development on capital facilities and the operation and maintenance of those facilities. The evaluation shall include, but not be limited to, the following:

- Expected capital costs, including the installation of new facilities required that are related to the development.
- Expected operation and maintenance costs associated with the new facilities required by the development.
- Anticipated revenues the development will contribute, including impact fees, user fees, and future taxes.

Policy C1-6.2: Developer's Agreements. When applicable, the City shall utilize developer's agreements to ensure the timely and appropriate installation of needed capital facilities to service new development. Such agreements will be executed under the City's constitutional home rule power and/or Chapter 163 Florida Statutes, following the procedures set forth in Florida Statutes.

Policy C1-6.3: Phased Development. To ensure adequate capacity allocations for all developments, the City may require any development to use developer's agreements and/or require development to be phased.

Policy C1-6.4: Proportionate Impact Fees. City shall continue to use impact fees for transportation, water, wastewater, parks, and police and fire to ensure new developments contribute their proportionate share of capital project funding necessary to service new development.

Policy C1-6.5: Developer Responsibilities. New developments shall be responsible for installing all internal water and sewer systems, traffic circulation systems, and internal

recreation/open space facilities within their development. In addition, connections of internal systems to the City's designated major water and sewer trunk systems and traffic circulation network shall be the financial responsibility of the developer.

Objective C1-7: Concurrency. *The City shall conduct a concurrency evaluation as part of the review of all proposed developments within the City of Mascotte for their impact upon the City's municipal services.*

Policy C1-7.1: The concurrency evaluation system shall measure the potential impact of any proposal for a development permit or order upon the established minimum acceptable levels of service for sanitary sewer, solid waste, drainage, potable water, parks and recreation, and transportation facilities, unless the development permit or order is exempt from the review requirements of this section. Transit and public transportation facilities are exempted from concurrency evaluation.

Policy C1-7.2: Concurrency evaluation shall be based on professionally-acceptable techniques, methodologies, and procedures.

Policy C1-7.3: No development permit or order which contains a specific plan of development, including densities and intensities of development, shall be issued unless adequate public facilities are available to serve the proposed development as determined by the concurrency evaluation.

Policy C1-7.4: Transportation improvements, as determined by the concurrency evaluation, required by proposed developments may be satisfied by the following methods:

- The developer in good faith offers to enter into a binding agreement to pay for or construct its proportionate share of required improvements in a manner consistent with Florida Statutes.
- The proportionate-share contribution or construction is sufficient to accomplish one or more mobility improvements that will benefit a regionally significant transportation facility.

The proportionate share process shall be implemented in the Land Development Code.

Policy C1-7.5: Land Acquisition. The City shall include any declared land acquisition, including land acquired for parks, recreation and open space, within the Capital Improvement Schedule.

Policy C1-7.6: Facilities Inventory and Reporting. The City Manager shall maintain an inventory of the available capacity within the roads, potable water, sanitary sewer, solid waste, and parks and recreation public facility categories

Policy C1-7.7: Each year, the City Manager shall prepare a report for the City Council containing the current capacity within each public facility category, including any encumbrances or deficiencies.

Policy C1-7.8: The annual report shall also identify any public facilities that will require improvements to maintain adopted levels of service and recommend a schedule of improvements to avoid any reduction in the approval of development orders.

Policy C1-7.9: Any identified transportation facility, including roadways, that requires improvements to maintain adopted levels of service shall be added to the Capital Improvement Schedule.

Policy C1-7.10: The City shall encourage development in areas that already include the necessary infrastructure, such as the following:

- Infill within the downtown core,
- Near existing, proposed, or potential transit and public transportation facilities, and

- In other areas where impacts would be de minimis.

ELEMENT D - TRANSPORTATION

Goal D1: Provide a safe, efficient and convenient transportation system for motorized and non-motorized users of the Mascotte transportation network through the year 2035.

Objective D1-1: *Level of Service. The City shall adopt and adhere to level of service standards for arterial and collector streets.*

Policy D1-1.1: The City shall use the most recent FDOT Generalized Peak Hour LOS criteria as general basis for the City's level of service standards.

Policy D1-1.2: The minimum peak hour volume Level of Service (LOS) Standard for arterials and collectors roads not on the State Highway System shall be "C". Roadways on the State Highway System shall follow the LOS standards set by FDOT.

Policy D1-1.3: A lower LOS may be acceptable immediately before or after special events where the impacts of such events on the roadway are infrequent.

Policy D1-1.4: The City anticipates that all roadways will meet the LOS standards through the year 2035. However, the City will continue to promote alternative transportation methods, particularly public transportation, in an effort to reduce vehicular travel on roadways.

Policy D1-1.5: As part of the Lake-Sumter Metropolitan Planning Organization Long Range Transportation Plan, the City shall support context sensitive improvements to State Road 50 (from County Road 33 west), County Road 565 North, and County Road 565 South.

Policy D1-1.6: The City shall independently monitor State Road 50 (from County Road 33 west to the city limits), County Road 33, and County Road 565 North to ensure no further Level of Service deterioration.

Policy D1-1.7: The City shall continue to implement the Midway Avenue relocation plan in cooperation with the Lake County School Board to provide better access to Mascotte Elementary Charter School.

Policy D1-1.8: The City shall continue to coordinate with the Lake-Sumter MPO regarding needed improvements to County Road 33, from State Road 50 to the Underpass Road.

Policy D1-1.9: The City shall continue to partner with local developers, Lake-Sumter Metropolitan Planning Organization, Lake County and other government agency to construct new corridors to relieve arterial and collector road congestion.

Objective D1-2: *Roadway Network. The City shall undertake measures designed to assist in the free flow of traffic along major roads and strive to maintain and improve the LOS on those roadways if at any time they operate at a lower LOS than the adopted standard.*

Policy D1-2.1: The City shall coordinate with Lake-Sumter Metropolitan Planning Organization on a traffic management system (signal synchronization) for all future signalization along State Road 50, from the west city limits to the east city limits.

Policy D1-2.2: The City shall coordinate with Lake County and the Florida Department of Transportation on all connections and access points of driveways and roads to county and state roadways, respectively.

Policy D1-2.3: The City shall maintain a record of traffic counts and traffic related accidents for all roadways in the City's network, and update those records on an annual basis.

Policy D1-2.4: The City shall continue to monitor all collector and arterial roadway access deficiencies, and shall devise methods to alleviate those deficiencies.

Policy D1-2.5: The City shall update their disaster preparedness plan by addressing evacuation procedures, the need for signage, and the availability and need of shelters.

Policy D1-2.6: The City shall coordinate with the development community to identify new east-west corridors to relieve congestion and provide improved connectivity within future development in the northern part of the city.

Objective D1-3: Future Land Use, Housing and Population. *The City shall coordinate the transportation system with the adopted Future Land Use Map series and shall ensure that existing and proposed population densities, housing and employment patterns, and land uses are consistent with the transportation modes and services proposed to serve these areas.*

Policy D1-3.1: The City shall review roadway improvements, new construction and roadway extensions proposed by other agencies for consistency with the Future Land Use Map series of the Comprehensive Plan.

Policy D1-3.2: Applications for future land use amendments to more intensive designations shall be accompanied by a traffic study analyzing the impacts of the development allowed by the new category on the citywide transportation system.

Policy D1-3.3: During the development review process, the City shall review all Future Land Use and zoning map amendments to determine the impact of the amendment on the LOS for all roadways directly and indirectly affected by the amendment.

Policy D1-3.4: The Transportation Element shall be reviewed and updated as needed with each annexation and amendment to the Future Land Use Element.

Objective D1-4: Intergovernmental Coordination. *The City transportation system shall be coordinated with the work plans and programs of Lake County, FDOT, the Florida Transportation Plan, the Florida Department of Environmental Protection, and the Lake-Sumter Metropolitan Planning Organization.*

Policy D1-4.1: The City shall coordinate its future transportation needs by attending, when necessary, public hearings on the FDOT's Five-Year Transportation Plan and the Lake-Sumter Metropolitan Planning Organization Long-Range Transportation Plan.

Policy D1-4.2: The City shall review subsequent versions of the FDOT Five-Year Transportation Plan and the Lake-Sumter Metropolitan Planning Organization Long-Range Transportation Plan, in order to update or modify this element, as necessary.

Policy D1-4.3: Utilization of County and State Numerical Indicators. The City shall use County and State numerical indicators for measuring the achievement of City mobility goals. Numerical Indicators shall include:

- Modal Splits;
- Annual Transit Trips Per Capita; and
- Automobile Occupancy Rates.

Objective D1-5: Rights-of-Way. *The City shall provide for the protection of existing and future right-of-way (ROW).*

Policy D1-5.1: The City shall develop a priority listing of needed ROW for the purpose of orderly and economical land acquisition.

Policy D1-5.2: The City shall compile and maintain a listing of existing and projected needs for ROW within the urban area.

Policy D1-5.3: The City shall require additional building setbacks for new construction on roadway corridors identified as needing additional ROW.

Policy D1-5.4: The City shall establish standards for donation/dedication of ROW by developers.

Policy D1-5.5: Corridors with inadequate ROW shall be inventoried and the City shall coordinate with Lake County for reservation of adequate ROW.

Policy D1-5.6: The City shall require that roadways be dedicated to the public when there is a compelling public interest for the roadways to connect with existing public roadways.

Policy D1-5.7: New subdivisions shall be required to “stub-out” to adjoining undeveloped lands to promote road connectivity, and to connect to existing roadways that are “stubbed-out” at their boundaries.

Policy D1-5.8: The City shall establish access management standards in the Land Development Code to ensure appropriate access to the City’s transportation system. Standards may include the requirement of joint-use driveways and/or cross access easements to access sites.

Policy D1-5.9: The City shall preserve the movement function of the major thoroughfare system by requiring development of parallel roads or cross access easements to connect developments as they are permitted along major roads.

Policy D1-5.10: To the extent feasible, new roadways shall be aligned with the existing street network and be designed to follow the same urban fabric that exists within the City.

Objective D1-6: Multi-modal System. The City shall promote alternative modes of transportation to provide a safe and efficient multi-modal system and to provide for a possible reduction of individual motor vehicle travel.

Policy D1-6.1: In cooperation with the Lake-Sumter Metropolitan Planning Organization, the City shall pursue the development and construction of a transit hub near State Road 50 and County Road 33. The City shall coordinate with the Central Florida Regional Transit Authority (Lynx) to establish fixed bus route service to and from the City.

Policy D1-6.2: All new major roadways shall be designed as complete transportation corridors incorporating bicycle and pedestrian features, and planning for transit features to start creating a true multi-modal system.

Policy D1-6.3: The City should provide adequate ROW and construct bicycle ways along corridors to be specified in the bicycle plan.

Policy D1-6.4: Sidewalks shall be mandatory on all new roadway construction.

Policy D1-6.5: New residential developments with densities of one or more dwelling units per acre shall provide sidewalks on both sides of every street.

Policy D1-6.6: The City shall improve existing sidewalks and other pedestrian facilities. Priority will be given to those pedestrian facilities in the downtown core, high pedestrian activity areas, projected heavy recreational use areas, and along roadways between residential areas and schools.

Policy D1-6.7: The City will encourage wider sidewalks in high pedestrian/bicycle traffic areas.

Policy D1-6.8: Sidewalks shall be constructed, concurrently with new development by the developer.

Policy D1-6.9: Intersections shall be made pedestrian-friendly by limiting the crossing width; use of adequate lighting; adequate timing for traffic signals; and the provision of facilities for persons with disabilities.

Policy D1-6.10: The City shall require developers to construct internal trails for developments greater than 50 residential units. Said trail systems shall connect to the Lake County trail system and be consistent, when feasible, with the adopted Lake County Master Trail Plan.

Policy D1-6.11: The City shall develop citywide standards for maximum number of parking spaces to encourage walking, bicycling, ridesharing, and shared parking, and to keep the impervious surface area to a minimum.

Policy D1-6.12: The City shall require that new development be compatible and further the achievement of the Transportation Element. Requirements for compatibility may include, but are not limited to:

- Locating parking to the side or behind the development to provide pedestrian accessibility of building entrances and walkways to the street, rather than separating the building from the street by parking.
- Providing clearly delineated pedestrian routes through parking lots to safely accommodate pedestrian and bicycle circulation.

Policy D1-6.13: The City shall include landscaping and streetscaping as roadway design components in order to enhance the aesthetic and safety of the road for all users.

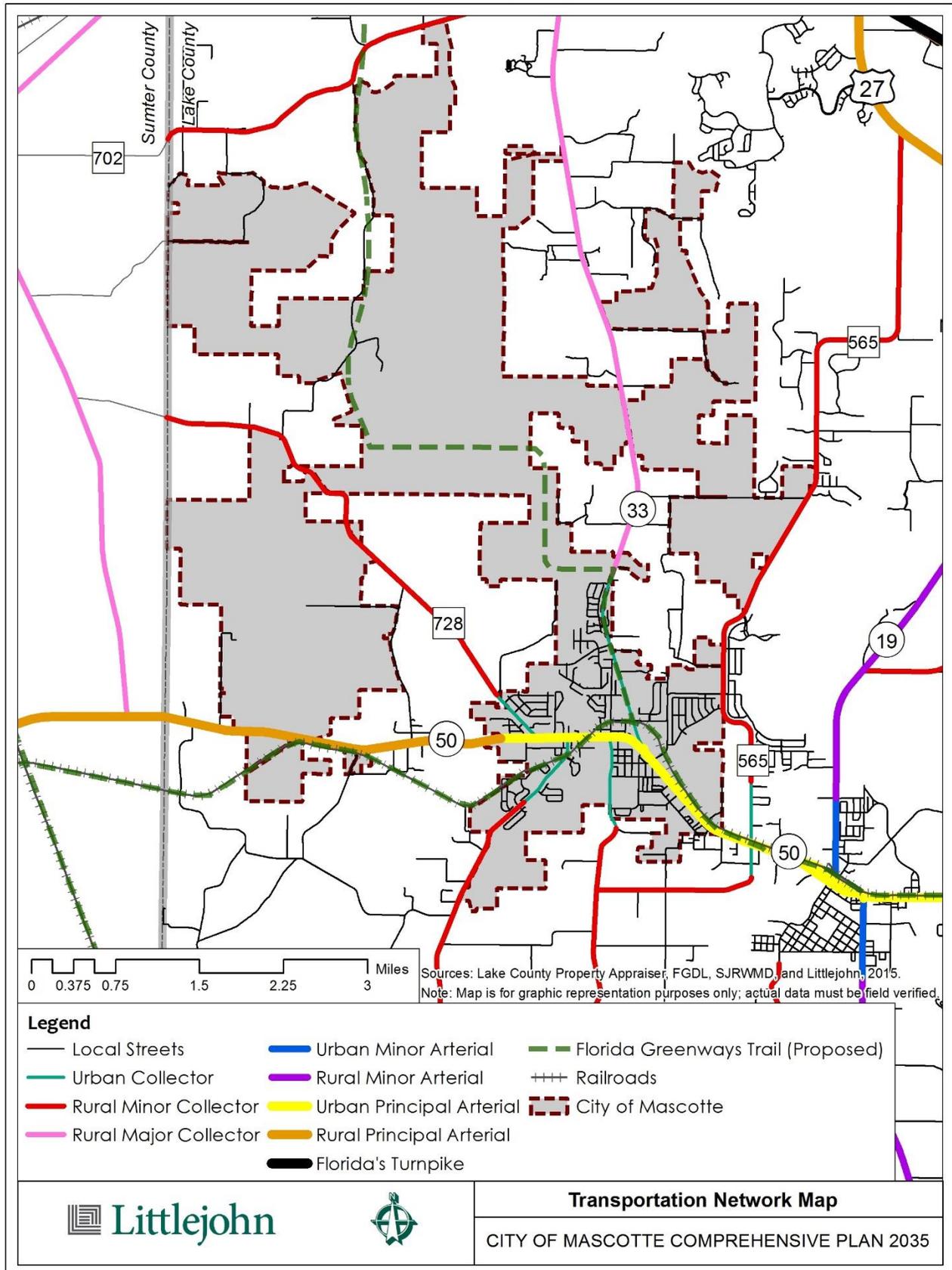
Policy D1-6.14: The City shall continue to pursue grant opportunities for median landscaping and road beautification.

Policy D1-6.15: Adequate pedestrian circulation and safety shall be considered as a required component of roadway system management, with implementation and required construction.

Policy D1-6.16: Way Finding. The City shall implement mechanisms to give direction and prevent confusion for all types of transportation system users.

Policy D1-6.17: Capital Improvements Schedule. The City shall implement a capital improvement plan, methods of funding, and fiscal controls for all major traffic and roadway projects.

MAP D - 1: FUTURE TRANSPORTATION NETWORK (2035)



ELEMENT E - PUBLIC FACILITIES

Goal E1: To plan for and assure an adequate supply of excellent quality potable water to meet the needs of all city residents and non-residential establishments within the City of Mascotte and within the City's service area through the year 2035.

***Objective E1-1: Maintain Level of Service.** Based upon adopted level of service standards, the City shall annually adopt programs and activities to correct existing deficiencies in the central potable water system.*

Policy E1-1.1: The City's Level of Service for potable water supply shall be 106 gallons per person per day.

Policy E1-1.2: When evaluating well capacity, the City shall use a peak factor of 200% of the average daily demand (ADD) in the calculation of the system's ability to meet the level of service standard.

Policy E1-1.3: When evaluating system high service pumping capacity, the City shall use a peak demand rate of 1.0 gpm per equivalent residential connection in the calculation of the system's ability to meet the level of service standard.

Policy E1-1.4: The City's central potable water system infrastructure shall be based on the following:

- Wellfield capacity shall be rated at the average daily demand and assuming the largest well-being out of service, as well as rated at maximum day demand with all wells operational,
- Water storage capacity should be at least 25 percent of the maximum day demand volume,
- High service pump capacity shall at least be equal to the peak hour demand or the maximum day demand plus largest fire flow, whichever is greater, and assuming the largest high service pump being out of service, and
- The backbone distribution system shall be designed for a minimum of forty (40) pounds per square inch (psi) delivery pressure.

Policy E1-1.5: The City will maintain its potable water treatment facilities in optimum condition by the implementation of a preventive maintenance program.

Policy E1-1.6: The City shall maintain a Potable Water System Master Plan, which shall be updated every five (5) years.

Policy E1-1.7: The City shall review water fee methodology and user rates annually during the budget process to ensure adequate funding for treatment, storage and distribution facilities.

Policy E1-1.8: The City shall develop a system of review of individual customer water meters to ensure proper readings of those meters.

Policy E1-1.9: The City shall institute a replacement or "change out" schedule for water meters in the field to ensure replacement at least every fifteen (15) years.

Policy E1-1.10: All improvements and/or additions to potable water facilities to correct deficiencies shall be compatible and adequate to meet the adopted level of service standards. These improvements and/or additions to potable water facilities shall comply, at a minimum, with standards recognized and approved by the Florida Department of Environmental Protection.

Objective E1-2: *Future Needs. Based upon population projections, the City shall ensure the supply and treatment of safe potable water to meet the adopted level of service standards.*

Policy E1-2.1: Based upon the adopted level of service the City will plan for replacement, expansion and extension of potable water facilities to meet future demands concurrent with new development.

Policy E1-2.2: The City will plan for adequate future treatment facilities, which at a minimum will meet all Federal and State drinking water criteria.

Policy E1-2.3: The City shall implement the capital improvement schedule for potable water facilities adopted in the Capital Improvements Element and the annual Capital Improvements Plan.

Policy E1-2.4: The City shall continue to monitor groundwater supply conditions in conjunction with the St. Johns River Water Management District, and in the event that additional water supplies are considered for development, the current District Water Supply Plan will be considered.

Policy E1-2.5: The City shall encourage and require the interconnection and looping of existing and proposed segments of the potable water distribution system as needed.

Objective E1-3: *Service Area Development. The City shall adopt a service area boundary for potable water and shall discourage leapfrog development and urban sprawl.*

Policy E1-3.1: The City's potable water service area shall be defined by the corporate limits of the City and those other areas located outside the corporate limits, which are established by the City's Chapter 180 Boundary and the Interlocal Service Boundary Agreement.

Policy E1-3.2: Before providing potable water service to properties located in unincorporated Lake County, the City shall require that the property owners receiving service execute and record an annexation agreement approved by the City Commission.

Policy E1-3.3: The City may provide wholesale potable water service to other cities and Lake County by written agreement.

Policy E1-3.4: The City shall be the provider of potable water to residents and non-residential establishments within the City's service area.

Policy E1-3.5: The City shall continue to maximize the use of the existing potable water treatment facilities connected to the central water system.

Policy E1-3.6: The City shall discourage urban sprawl through the following activities:

- The City shall require any new development within the City limits, regardless of the number of units or size of proposed development, to connect to the City's central potable water system for water service; and,
- The City will coordinate with Lake County to encourage that all new development within 1,000 feet of the City limits to connect to the central potable water system.
- The City shall only provide service to those areas included in the City's delineated utility service area;
- When reviewing applications for development orders within the City limits, the City shall consider impact on the environment, including the ability to be served by the City's existing water facilities.

Objective E1-4: Water Conservation. *The City shall maintain initiatives to conserve potable water resources, which ensure that existing level of service standards for potable water, do not fluctuate higher than twenty (20) gallons per person per day.*

Policy E1-4.1: Maintain an inverted water rate structure to ensure conservation of potable water and to provide an incentive for the use of treated wastewater for irrigation purposes should the City choose to implement a central sewer system.

Policy E1-4.2: Whenever possible and feasible, and in cooperation with the cities of Leesburg and Groveland through existing interlocal agreements, the City will establish and maintain a reclaimed wastewater effluent program whereby wastewater is treated to standards consistent with Florida Department of Environmental Protection (FDEP) requirements for “unrestricted public access” irrigation of private and public areas, so that potable water is not used for irrigation in areas where reclaimed water is available for such irrigation.

Policy E1-4.3: The City shall maintain specific requirements for the use of low consumption plumbing devices in the Code of Ordinances.

Policy E1-4.4: The City shall adhere to St. Johns River Water Management District emergency water shortage restrictions when mandated by the District.

Policy E1-4.5: The City shall require fifty (50) percent of the required landscaping area, as indicated in the Land Development Code, be drought tolerant plant materials.

Policy E1-4.6: The City shall maintain a leak detection program in order to discover and eliminate wasteful losses of potable water from the City’s central water supply and distribution system.

Policy E1-4.7: The City shall explore all financially feasible alternative water supply options that can be implemented by the City.

Policy E1-4.8: The City shall use all available lower quality sources of water in place of higher quality sources for landscape irrigation when technically, economically, and environmentally feasible.

Policy E1-4.9: The City shall participate in water conservation public information programs and shall encourage the use of water conserving plumbing fixtures and drought-resistant native vegetation for landscaping.

Policy E1-4.10: The City shall encourage the use of low impact development (LID) principles to minimize impacts to the nature environment and facilitate water conservation.

Goal E2: Provide adequate delivery and distribution of potable water to meet fire protection demand within the City of Mascotte and the City’s service area.

Objective E2-1: Fire Protection Capabilities. *The City shall continue to monitor, evaluate, repair and replace the existing water delivery and distribution system to ensure the system can deliver needed gallon per minute flows to meet fire protection demands.*

Policy E2-1.1: The City shall maintain an active water system and fire hydrant mapping and numbering program.

Policy E2-1.2: The City shall establish and maintain a hydraulic model of the City’s water distribution network such that the City’s water distribution system can be routinely analyzed with respect to fire flow delivery capabilities.

Policy E2-1.3: The City shall extend water distribution mains to areas within the City’s service area and provide adequate fire protection service to residents and non-residential

establishments located within the service area provided the residents/developers participate in the costs.

Policy E2-1.4: Fire flow levels of service shall be based upon delivery pressures of twenty (20) psi residual and minimum fire flows of 500 gpm for residential and 1,500 gpm for non-residential and multi-family developments.

Goal E3: Implement and promote stable working relationships with other governmental agencies to ensure protection of the quality and quantity of its water sources.

Objective E3-1: Intergovernmental Coordination. *The City shall coordinate with adjacent jurisdictions and applicable state and federal agencies to protect the quality and quantity of water sources.*

Policy E3-1.1: The City shall meet annually with adjacent governments, private utilities, and state and federal agencies to coordinate the provision of potable water series and service area boundaries.

Policy E3-1.2: The City shall coordinate with adjacent jurisdictions and applicable regional, state, and federal agencies to educate the community about conservation, suitable use, and protection of the quality and quantity of its water sources.

Policy E3-1.3: The City shall review and update the Water Supply Facilities Work Plan and supporting data and analysis within eighteen months of the update of the SJRWMD district water supply plan and will amend this element as necessary to incorporate any applicable policies.

Policy E3-1.4: The City shall issue no development orders or development permits with first consulting with the City of Mascotte's Public Services to determine whether adequate water supplies to serve the development will be available no later than the anticipated date of issuance by the City of a certificate of occupancy or equivalent. The City will also ensure that adequate water supplies and facilities are available and in place prior issuing a certificate of occupancy or its functional equivalent.

Policy E3-1.5: The City will participate in the development of updates to SJRWMD's water supply assessment and District Water Supply Plan and other water supply development-related initiatives facilitated by SJRWMD that affect the City.

Goal E4: To provide an effective system of wastewater collection, transmission, treatment, and disposal to meet the needs of all City residents and non-residential establishments within the City of Mascotte service area while protecting the environment and public health.

Objective E4-1: Maintain Level of Service. *Based upon adopted levels of service standards, the City shall annually adopt programs and activities to facilitate implementation of a wastewater utility to serve newer, higher density development as well as areas where septic systems are failing.*

Policy E4-1.1: Residential. The City's adopted level of service for sanitary sewer capacity shall be 80 gallons per capita per day or 240 gpd per ERU for residential development.

Policy E4-1.2: Non-residential. The City's adopted minimum level of service shall be 0.10 gallons per day per square foot of floor area for non-residential development.

Policy E4-1.3: When evaluating collection force main and lift station capacity, the City shall use a peak factor of 3.0 times the average daily flows (ADF).

Policy E4-1.4: All improvements and/or additions to sanitary sewer facilities shall be compatible and adequate to meet the adopted level of service standards.

Policy E4-1.5: All land use amendments shall require an analysis of the impact of such amendment on the adopted level of service standard and existing sanitary sewer facilities.

Policy E4-1.6: All expansions and other improvements of commercial and industrial uses that increase the demand on public infrastructure and require permitting shall comply with the adopted levels of services.

Policy E4-1.7: The City shall comply with bond covenants, if any, to ensure the maintenance and operations of facilities, and to provide recommendations for system maintenance and improvements.

Policy E4-1.8: The City shall encourage continuing education of operating staff to ensure proficiency with respect to optimization of sanitary sewer maintenance and operation processes.

Policy E4-1.9: Sanitary sewer facilities shall be replaced and existing deficiencies shall be corrected based upon the following priorities:

- Any project correcting an immediate threat to the health, safety, or welfare of the City's residents will receive priority over the expansion of a facility or the correction or replacement of a non-threatening facility.
- Any project that will correct an existing deficiency will receive priority over a project to expand the system.
- Projects that will result in the system exceeding the adopted level of service will be denied.

Objective E4-2: *Sanitary Sewer System. The City shall ensure that, when available, the City's sanitary sewer collection, conveyance, treatment, and disposal system is adequate to service the future land uses within the City's service area.*

Policy E4-2.1: The City shall, if available, provide sanitary sewer collection and conveyance services within the service area adopted as part of the Chapter 180 Service Boundary and the Interlocal Service Boundary Agreement. Wastewater treatment and disposal service shall be provided by the City of Leesburg and the City of Groveland through existing interlocal agreements. For purposes of this Comprehensive Plan, reference to "the City's sanitary sewer system," "central sewer system," and other similar terms means, collectively, wastewater treatment and disposal services provided to the City by the cities of Leesburg or Groveland and wastewater collection and conveyance services of the City of Mascotte.

Policy E4-2.2: The City shall, through existing interlocal agreements with the City of Leesburg and the City of Groveland, pursue the extension of sanitary sewer collection and conveyance systems within the service area.

Policy E4-2.3: In accordance with the Interlocal Service Boundary Agreement, the City shall notify the County of requested sewer service within unincorporated Lake County.

Policy E4-2.4: Regulations for sewer allocation vested rights and the period of vesting will be defined in the City's Code of Ordinances.

Policy E4-2.5: Following a determination of concurrency for sanitary sewer, and to ensure reserved capacity and adequate sanitary sewer facilities are in place prior to the impact of development, the City shall require payment of applicable sewer impact fees upon development approval prior to application for building permits.

Policy E4-2.6: For proposed new development, the City shall require either connection to the central sewer system based on the following criteria, or the installation of septic tanks.

- New residential subdivisions and commercial developments shall be required to connect to the City’s central sewer system when available. “Available” is defined by the City’s Code consistent with §§ 381.0065 and 381.00655, Florida Statutes. If the central sewer system is not available, septic tanks shall be installed, and dry lines may be required if the City and a developer enter into a development agreement requiring dry lines. Mandatory connection shall thereafter be required when the City sewer system is available.
- Individual properties will be required to connect when the City sewer system is available.

Policy E4-2.7: The City shall, when feasible, extend the sanitary sewer collection and conveyance system to provide service within the downtown core. The first priority shall be existing non-residential uses; the second priority shall be existing residential uses.

Policy E4-2.8: The City shall, when feasible, extend the sanitary sewer collection and conveyance system to previously-constructed residential developments that have “dry-line” systems installed.

Policy E4-2.9: The City shall coordinate the utility and transportation planning efforts to take advantage of the most economical construction and maintenance costs possible when installing, repairing and/or replacing utility lines, roads and sewers.

Policy E4-2.10: The City, in cooperation with the City of Leesburg and the City of Groveland through existing interlocal agreements, shall pursue the implementation of a reclaimed water system as deemed feasible.

Policy E4-2.11: In accordance with the Interlocal agreements, the City shall coordinate sewer connections, capacity needs, and future extensions with the cities of Groveland and Leesburg.

Objective E4-3: Maximize Existing Facilities. The City shall maximize the use of existing sanitary sewer facilities within its service area and shall promote compact efficient growth patterns.

Policy E4-3.1: The City shall seek to maximize the use of existing sanitary sewer infrastructure facilities in order to minimize urban sprawl by requiring new development to pay the total costs for the placement of infrastructure necessary to service the development, thus making infill development more cost effective.

Policy E4-3.2: The City’s Code of Ordinances shall incorporate means and methods to require connection to the City’s sanitary sewer system for existing development, once it becomes available, for those properties that lie within the service area.

Policy E4-3.3: When connection to the sanitary sewer system is feasible, the City will prohibit new development within the service area from utilizing septic tanks and prohibit the use of package wastewater treatment plants where central sewer service is available.

Policy E4-3.4: Within the City’s municipal boundaries, when existing central sanitary sewer service is determined to be unavailable to new development, the City may require the new development to extend the central sewer system at the developer’s expense to service subject property, subject to the following conditions:

- The connection between the new development and the existing sanitary sewer line must be along a legally dedicated right-of-way or recorded easement; and
- The existing line to be connected to must have available, unreserved capacity.

Policy E4-3.5: Maintain adequate sanitary sewer impact fees and user rates to ensure adequate funding for expansion, repair and/or replacement of collection and transmission systems.

Policy E4-3.6: The City shall review sewer user rates annually or as otherwise needed to ensure that the fees charged cover the cost of supplying the service.

Objective E4-4: Septic Tanks. *When feasible, the City shall mandate connection to the central sewer system, for any proposed new development and existing residences and non-residential establishments which are served by septic systems, and are deemed to be detrimental to the health, safety, and welfare of the general public.*

Policy E4-4.1: All septic tank systems shall be in compliance with Chapter 64E-6, Florida Administrative Code.

Policy E4-4.2: Development of new residential and non-residential projects on soils that are not suitable for septic tank systems will be required to provide central sanitary sewer systems.

Policy E4-4.3: The City shall coordinate with the Lake County Health Department to ensure that any development proposed in the City's service area will be required to connect to the City's sanitary sewer system when available at the times prescribed by the City's Code and pursuant to §§ 381.0065 and 381.00655, Florida Statutes. If the City's sanitary sewer system is not available, dry lines may be required if the City and a developer enter into a development agreement requiring dry lines.

Policy E4-4.4: The City will coordinate with the Lake County Health Department to require central sewer for developments in the City's service area that have soils unsuitable for septic tank systems.

Policy E4-4.5: The City will routinely coordinate information between the City and the Lake County Health Department and Lake County Building Department regarding failing septic tanks within the City and the City's service area.

Policy E4-4.6: The City shall monitor and keep a database of building permits requested for repair or replacement of existing septic tank and drain field systems within the City.

Goal E5: Provide a stormwater management system of appropriate capacity to protect public health, safety and welfare of the citizens of the City of Mascotte, and to meet current and future stormwater management demand, as well as decreasing inadequacies in the stormwater drainage system and water quality conditions.

Objective E5-1: Development Impacts. *The City shall protect natural resources and the existing municipal stormwater network from the impacts of development and construction.*

Policy E5-1.1: The City will continue collection of a stormwater utility fee to provide funding for the maintenance and operations of stormwater facilities within the City of Mascotte. The City shall review/update the stormwater utility fee every three to five years to accommodate current inflation and increased construction costs.

Policy E5-1.2: The City shall review detailed calculations for new projects prepared by a registered professional engineer which show that retention and detention will be accomplished to meet the adopted level of service, and that there will be no negative impacts to downstream water quality or quantity.

Policy E5-1.3: The City shall review the characteristics and limitations of soil types for new projects with regard to percolation and infiltration.

Policy E5-1.4: The City shall review the impact proposed stormwater systems will have on adjacent native vegetation and/or wetlands.

Policy E5-1.5: The City shall require that erosion and sediment control practices be utilized to protect water bodies, wetlands, and watercourses from siltation during construction activities.

Policy E5-1.6: The City shall require adequate easements for stormwater system maintenance and conveyance.

Policy E5-1.7: New development and redevelopment shall be required to accommodate upland flow that presently discharges through the site.

Policy E5-1.8: Necessary measures shall be taken to protect and maintain the natural drainage features within the City limits of Mascotte.

Policy E5-1.9: The cumulative effects of drainage from small developments, as it affects the overall drainage system, will be addressed during the site plan approval phase.

Policy E5-1.10: Drainage from new developments shall not adversely impact the natural drainage features within the City.

Policy E5-1.11: All new developments with a density greater than one unit per acre shall provide curb and gutter drainage systems.

Objective E5-2: Stormwater Master Plan. The City shall maintain a Stormwater Master Plan which establishes high water elevations, addresses existing deficiencies, and coordinates the construction of new and replacement facilities.

Policy E5-2.1: The City shall maintain a detailed inventory and analysis of the existing publicly owned and managed drainage facilities within its municipal boundaries in the City's Stormwater Master Plan.

Policy E5-2.2: The City shall update the Stormwater Master Plan every 5 years. Areas that have been annexed into or adjacent to the service area since the time of the last study shall also be included in this analysis.

Policy E5-2.3: The Stormwater Master Plan shall include review of stormwater quality discharged into surface water bodies and recommendations for needed improvements.

Policy E5-2.4: The Stormwater Master Plan shall establish priorities for stormwater system replacements, insuring correction of existing drainage facility deficiencies, and providing for future facility needs.

Policy E5-2.5: After completion, the City shall rely on the Stormwater Master Plan to prepare the City's annual budget for funding of stormwater facility replacement and deficiency upgrades.

Policy E5-2.6: The City shall utilize the Stormwater Master Plan for preparation of the 5-year Capital Improvement Plan to correct existing deficiencies and prepare for future stormwater demands.

Policy E5-2.7: New developments shall design stormwater management systems to meet the rules and criteria established by the City of Mascotte, the St. Johns River Water Management District, the Florida Department of Transportation, and Lake County (as applicable), and the East Central Florida Regional Planning Council.

Policy E5-2.8: The minimum acceptable Flood Protection Level of Service standards for the City of Mascotte shall be met in order to protect from flooding that would result from a 25-year, 24-hour storm event.

Objective E5-3: Correcting Facility Deficiencies. The City shall ensure that surface water management system deficiencies are corrected and that natural drainage features are protected.

Policy E5-3.1: The City shall coordinate with Lake County, Lake County Water Authority, and SJRWMD to encourage maintenance of conveyance and treatment features.

Policy E5-3.2: The City shall educate and inform citizens of their responsibility regarding maintenance and protection of stormwater collection systems.

Objective E5-4: Flood Control. *The City shall achieve and maintain the following adopted stormwater management level of service standards that shall meet or exceed state and federal regulations for stormwater quality and quantity.*

Policy E5-4.1: All new development and redevelopment shall provide stormwater retention, infiltration, and/or detention systems.

Policy E5-4.2: The level of service (LOS) standards for the drainage system facilities developed within the City of Mascotte shall be as follows:

- Open Channels and culverts external to development 25 year
- Open Channels and culverts internal to development 10 year
- Cross Drains 25 year
- Storm Sewers 10 year
- Major Detention/ Retention Structures 25 year (SJRWMD)
- Minor Detention/ Retention Structures 25 year
- Retention w/ Percolation or Detention w/ filtration 25 year

Policy E5-4.3: Stormwater treatment shall be required to serve the development through a stormwater treatment system, which is site-specific. Regardless of the area served, the stormwater treatment system must provide a level of treatment, which meets the requirements of the Florida Administrative Code (F.A.C.), the City of Mascotte Code of Ordinances and the criteria of the St. Johns River Water Management District.

Policy E5-4.4: Pollutant retardant structures that separate oils and greases from runoff shall be designed for all new commercial and industrial type projects.

Policy E5-4.5: Whenever feasible, natural systems shall be used in lieu of structural alternatives.

Policy E5-4.6: At a minimum, the existing stormwater management systems and current levels of service shall be maintained.

Objective E5-5: Intergovernmental Coordination. *The City of Mascotte shall educate citizens and coordinate with all applicable jurisdictions to address stormwater issues of mutual concern and to provide adequate levels of service.*

Policy E5-5.1: The Stormwater Master Plan shall be developed and updated in coordination with Lake County and other regulatory agencies, such as the, the St. Johns River Water Management District, and the Florida Department of Transportation.

Policy E5-5.2: The Stormwater Master Plan process will include public participation review of the plan by affected citizens and City Advisory Committees.

Policy E5-5.3: The City shall maintain a complaint monitoring system to log complaints and initiate work orders for corrective actions.

Policy E5-5.4: The City will support St. Johns River Water Management District's programs and stormwater regulations.

Policy E5-5.5: The City shall coordinate with the County, and the St. Johns River Water Management District to identify areas that require immediate flood protection and to investigate areas that lack water quality treatment.

Objective E5-6: Floodplain. *The City shall restrict development within the 100-year floodplain to those uses, which will not adversely affect the capacity of the floodplain to store water.*

Policy E5-6.1: The City Code of Ordinances shall require compensating storage volumes for floodwater displaced by development. Compensating storage volumes shall be provided above the high water table elevation and below the elevation of the 100-year flood.

Policy E5-6.2: The City shall require the finished floor elevation of all structures shall be protected from flooding through provisions included in the Land Development Code.

Policy E5-6.3: Where feasible, the floodplain shall be reserved for conservation, open space and recreational uses to preserve the natural flow of runoff.

Policy E5-6.4: The City shall strive to protect and /or acquire land with natural depressions within its Urban Service area.

Goal E6: To provide, maintain, and protect, the surficial and Floridan aquifers to ensure that recharge of the natural groundwater aquifer occurs in a manner which maintains sufficient quality and quantity of the public water supply to meet current and future demands.

Objective E6-1: Natural Recharge Protection and Conservation. *The City of Mascotte shall coordinate with other agencies and adopt measures in the Code of Ordinances that will ensure preservation of natural recharge to the City's groundwater resource and conservation of our potable water sources.*

Policy E6-1.1: Coordination. The City shall adhere to regulations and mapping established by St. Johns River Water Management District to protect areas of high recharge.

Policy E6-1.2: Coordination. The City shall continue to coordinate with Lake County, St. Johns River Water Management District, and state and federal agencies to achieve regional aquifer recharge protection objectives.

Policy E6-1.3: Coordination. The City shall coordinate with the SJRWMD on preparation of the regional Aquifer Protection Plan.

Policy E6-1.4: Education. The City shall educate residents on the benefits of water conservation and shall expand water conservation efforts.

Policy E6-1.5: Site Determination. For any application for development approval, the City shall require site specific determinations of whether a site lies within a prime aquifer recharge area as defined St. John's River Water Management District.

Policy E6-1.6: Wellfield Protection. The City shall protect wellfields by establishing a "primary protection zone" which shall include all land within a 500 foot radius of any existing wellhead and a "secondary protection zone" which includes all land within a 1,000 foot radius of any public wellhead. Development other than wellfield facilities or passive recreation shall be prohibited within the primary protection zone. Within the secondary protection zone the following land use activities shall be prohibited: sanitary landfills, animal feedlots, wastewater treatment facilities, petroleum and pesticide storage facilities, incinerators, and all other activities that store, handle, or generate hazardous materials or wastes. Above-ground or below-ground pipes which store or transfer pollutants or other contaminants as well as open drainage cuts below the seasonal high water table shall also be prohibited within the secondary protection zone.

Objective E6-2: Best Management Practices. *The City shall recognize the best management practice of promoting conservation of water.*

Policy E6-2.1: The City shall promote low or no water native landscaping, the use of solid waste compost, efficient irrigation systems, and the prohibition of exotic plant species, which will result in the conservation of water.

Policy E6-2.2: Stormwater. The City shall require that development within prime aquifer recharge areas maintain pre-development net retention to protect ground and surface water quality (Agricultural activities that use Best Management Practices adopted by US Natural Resources Conservation Service and the Florida Department of Environmental Protection are exempted).

Policy E6-2.3: The City shall require detention of stormwater runoff in compliance with state and water management requirements.

Policy E6-2.4: The City will maintain a leak detection and repair program for its potable water utilities.

Policy E6-2.5: The City shall pursue new techniques and innovative programs that will protect and conserve the City's potable water resources including, but not limited to, Low Impact Development (LID) principles, green design principles, or protection of vulnerable wetland systems that may be impacted by consumptive withdrawals.

Goal E7: To provide efficient and safe solid waste disposal facilities and collection services on a regular basis for all City residents and commercial establishments within the City of Mascotte to protect the environment and public health.

Objective E7-1: Solid Waste Disposal. *The City shall coordinate the disposal of solid waste throughout the planning horizon in a safe and efficient manner.*

Policy E7-1.1: Level of Service. The City's minimum level of service for municipal solid waste shall be 6.00 pounds per person per day, which will be utilized to plan for future demand.

Policy E7-1.2: Franchise Administration. The City Manager shall be responsible for franchise administration and coordination of billing matters.

Policy E7-1.3: Standards. All solid waste disposal contracted or performed by the City of Mascotte shall be operated in a manner that complies with all applicable city, regional, state and federal solid waste disposal standards throughout the planning period.

Policy E7-1.4: Mandatory Collection. Solid waste collection shall be mandatory for all residential and non-residential land uses within the City corporate limits through the use of contracted haulers and/or the City.

Policy E7-1.5: Monitoring. Throughout the planning period the City shall continue to monitor complaints regarding residential and commercial solid waste collection by the contracted hauler to ensure that the most efficient, orderly, sanitary and environmentally sound service is being provided.

Objective E7-2: Collection. *The City shall continue to provide for solid waste collection services to city residents and commercial establishments throughout the planning horizon.*

Policy E7-2.1: Alternative Evaluation. The City shall evaluate cost-effective collection alternatives, including the potential use of private or contracted haulers, to provide solid waste collection services to city residents and non-residential establishments throughout the planning horizon.

Policy E7-2.2: Equipment. The City, or the selected private provider, will provide adequate equipment to maintain a level of service standard for solid waste collection of 6.0 pounds per capita per day.

Policy E7-2.3: Collection Schedule. The City shall ensure the collection of refuse from residences at least twice each week.

Objective E7-3: Recycling. *The City shall require a reduction in municipal solid waste final disposal in landfill facilities by maintaining and promoting its recycling program.*

Policy E7-3.1: Curbside Pick-up. The City shall continue to have a collection process in place for curbside pickup of newspapers, glass, plastics, tin and aluminum.

Policy E7-3.2: Yard Waste. The City shall continue to have a collection process in place for curbside pickup of yard waste.

Policy E7-3.3: Waste Stream Reduction. The City of Mascotte will promote the efforts of Lake County towards the reduction of the solid waste stream.

Policy E7-3.4: Coordinate with Lake County. The City shall endeavor to coordinate with Lake County with respect to Solid Waste Management and Waste Recycling Programs.

Policy E7-3.5: Hazardous Waste. The City shall coordinate with the County to monitor and control the disposal of hazardous wastes in accordance with State law.

Policy E7-3.6: Amnesty Day. The City will help the County promote and support the County's Amnesty Day Programs.

ELEMENT F - PUBLIC SCHOOL FACILITIES

Goal F1: Ensure and maintain a public school system that offers a high quality educational environment, provides accessibility for its students, and ensures adequate school capacity to accommodate enrollment demand in the City.

***Objective F1-1: Level of Service.** Level of Service (LOS) standards shall be adopted through the incorporation of public school facilities level of service standards for each Lake County School Board School Concurrency Service Area. The City shall coordinate with the District School Board of Lake County to address school facility deficiencies within the period covered by the Five-Year Schedule of Capital Improvements and the long-term planning period.*

Policy F1-1.1: The LOS is defined as school enrollment as a percentage of school student capacity based upon the Florida Inventory of School Houses (FISH). The LOS standard is the maximum level of school utilization that will be permitted in the Lake County School District.

Policy F1-1.2: The LOS shall be consistent with the Interlocal Agreement for the Coordination of Planning Activities and based upon permanent capacity as determined by the FISH, the following LOS standards are established for each School Concurrency Area (SCA):

- The LOS for all schools shall be set at 100% of FISH permanent capacity. In instances where the CORE (dining) capacity is greater than the FISH permanent capacity, the school capacity shall then be increased to that of the CORE (dining) capacity and the level of service maintained at 100% of the school capacity. In no instance shall the school capacity increase more than 125% due to additional CORE (dining) capacity.

Policy F1-1.3: The adopted LOS standard shall become applicable to the City no later than June 1, 2008.

Policy F1-1.4: Individual schools are discouraged from operating in excess of the established LOS. Moreover, the issuance of development orders and building permits shall be strictly conditioned upon the availability of school capacity and the maintenance of the adopted LOS.

Policy F1-1.5: The LOS standards will be used to determine whether sufficient school capacity exists to accommodate future development projects and evaluate the sufficiency of the Five-Year Schedule of Capital Improvements. The Five-year Schedule of Capital Improvements shall be reviewed, updated and adopted annually thus ensuring those projects necessary to address existing deficiencies, and to meet future needs based upon our adopted level of service standards, are adequately planned for. Furthermore, coordination with the Lake County School Board's Five Year District Facilities Work Plan, the plans of other local governments, and as necessary, updates to the Concurrency Service Area map is required to ensure that the adopted Level of Service Standards for Concurrency Service Areas will be achieved and maintained.

Policy F1-1.6: In accordance with the Interlocal Agreement between Lake County, Lake County School Board and Municipalities for School Facilities Planning and Siting, future amendments to the Concurrency Service Areas (CSA's) may be accomplished by the School Board only after review and comment by the County and other municipalities within Lake County as provided in the Interlocal Agreement. Amendments of the CSA's shall be established to maximize available school capacity, taking into account transportation costs, desegregation plans, diversity policies, and the extent to which development approvals have been issued by a local government based on the availability of school capacity in a CSA contiguous to the CSA in which the development approval was issued. Amendment to the CSA's and attendance zones shall be designed to make efficient use of new and existing public school facilities in accordance with the Level of Service Standards set forth in the Interlocal Agreement.

Objective F1-2: Evaluation of Development Proposals. *Ensure that comprehensive plan amendments and other land use decisions are simultaneously evaluated with school capacity availability within the City.*

Policy F1-2.1: School Board findings and comments on the availability of adequate school capacity shall be considered when evaluating the decision to approve comprehensive plan amendments and other land use decisions as provided for in §163.3177(6)(a), F.S.

Policy F1-2.2: The School Board shall review potential new development student generation impacts and available school capacity. Where capacity will not be available to serve students from the property seeking development approval and proportionate share mitigation is not an option, the School Board shall not issue a favorable concurrency determination. The City may use lack of school capacity demonstrated by an unfavorable concurrency determination as a reason for denial.

Objective F1-3: Educational Facilities. *Ensure that the planning and construction of educational facilities are coordinated so that the timing is proper, the selected location is compatible with the surrounding area, the construction is concurrent with necessary services and infrastructure and the proposal is consistent with the comprehensive plan.*

Policy F1-3.1: The City shall coordinate with the School Board so that proposed public school facility sites are consistent with the applicable land use designations and policies of the comprehensive plan. Pursuant to §1013.33, F.S., the City will consider each site plan as it relates to environmental concerns, health, safety and welfare, and effects on adjacent property. In addition, road capacity and traffic concerns will also be evaluated. The City will also continue to pursue the development of mutually acceptable guidelines for the selection of future school sites including, but not limited to:

- Acquisition of school sites which allow for future expansions to accommodate future enrollment and other facility needs deemed beneficial for joint-uses, as identified by the Lake County School Board and the City;
- Coordination of the location, phasing, and development of future school sites to ensure that site development occurs in conjunction with the provision of required infrastructure to serve be school facility;
- Preferences for urban and urbanizing areas; and
- Provide for allowances for rural sites as deemed necessary and appropriate under certain circumstances.

The City will coordinate its comprehensive plan and adopted Future Land Use Map with the Lake County School Board's future conditions/long-range public school facilities map.

Policy F1-3.2: The City shall coordinate with the School District to evaluate and located potential sites where the co-location of schools with other public facilities, such as parks, libraries, and community centers can be selected.

Objective F1-4: Land Use. *Enhance community design through effective school facility design and siting standards and encourage the siting of school facilities so that they are compatible with the surrounding land use.*

Policy F1-4.1: The City shall closely coordinate with the School Board in order to provide consistency between the City's comprehensive plan and public school facilities programs, such as:

- Greater efficiency for the School Board and the City by locating schools to take advantage of existing and planned roads, water, sewer, parks and drainage systems;

- Improved student access and safety by coordinating the construction of new and expanded schools and sidewalk construction programs;
- The location and design of schools with parks, ball fields, libraries, and other community facilities to take advantage of shared use opportunities;
- The expansion and rehabilitation of existing schools to support neighborhoods.

Policy F1-4.2: Local governments and the school district shall coordinate emergency preparedness issues including, but not limited to, the use of school facilities as public shelters during emergencies.

Policy F1-4.3: Public schools shall provide bicycle and pedestrian access consistent with Florida Statutes. Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the City and County. Parking and sidewalks at public schools will be provided consistent with the comprehensive plan.

Policy F1-4.4: Schools shall be designed consistent with the comprehensive plan. Land uses in which schools will be an allowable use will be directed by the City's comprehensive plan and any subsequent zoning and land development codes must be consistent with the comprehensive plan.

Goal F2: It is the goal of the City to establish a process for the implementation of school concurrency by providing for capacity determination standards, applicability standards, and proportionate share mitigation.

Objective F2-1: Capacity Determination. Establish capacity determination standards.

Policy F2-1.1: The School Board shall determine whether adequate school capacity exists for a proposed development based on LOS standards.

Policy F2-1.2: The School District shall conduct concurrency review that includes findings and recommendations of whether there is adequate school capacity to accommodate the proposed development for each type of school within the City consistent with the LOS standard. The School District shall issue a concurrency determination based on the findings and recommendations.

Objective F2-2: Availability Standards. Establish availability standards.

Policy F2-2.1: The City shall not deny a subdivision plat or site plan for the failure to achieve and maintain the adopted level of service for the public school capacity where:

- Adequate school facilities will be in place or under construction within three (3) years after the issuance of the subdivision plat or site plan according to the School Board's five year Capital Improvement Plan at the time of approval;
- Adequate school facilities are available and the capacity impacts of development can be satisfied by utilizing available capacity in an adjacent Concurrency Service Area; or
- The developer executes a legally binding commitment to provide mitigation proportionate to the demand for public school facilities to be created by the actual development of the property subject to the final plat or site plan.

Policy F2-2.2: If the School District determines that adequate capacity will not be in place or under construction within three (3) years after the issuance of final subdivision or site plan approval according to the Lake County School Board's five year Capital Improvement Plan at the time of approval and mitigation is not an acceptable alternative, the School District shall issue a School concurrency Determination stating that capacity is not available. If the School District determines that adequate capacity does not exist, but mitigation, through proportionate share mitigation is an option, the development will remain active pending the conclusion of mitigation negotiations.

Objective F2-3: Proportionate Share Mitigation. Establish Proportionate Share Mitigation.

Policy F2-3.1: The City will establish proportionate share mitigation alternatives which are financially feasible and will achieve and maintain the adopted LOS standard consistent with the adopted Lake County School Board's financially feasible Capital Improvement Plan.

Policy F2-3.2: In the event that mitigation is an acceptable alternative to offset the impacts of a proposed development. where the adopted LOS standards would otherwise be exceeded, the following options listed below, for which the School District assumes operational responsibility through incorporation in the adopted School Board's financially feasible Capital Improvements Program and which will maintain the adopted LOS standards, shall include but not limited to:

- The donation, construction, or funding of school facilities created by the proposed development.
- The creation of mitigation banking based on the construction of a public school facility in exchange for the right to sell capacity credits.
- Establish proportionate share mitigation alternatives which are financially feasible and will achieve and maintain the adopted LOS standard consistent with the adopted Lake County School Board's financially feasible Capital Improvement Plan.

Policy F2-3.3: Proposed mitigation shall be directed toward a permanent capacity improvement identified in the School Board's financially feasible 5-Year Capital Improvement Program. Consideration may be given by the School Board to place an additional improvement required for mitigation on its Capital Improvement Program. The proposed mitigation must satisfy the demand created by the proposed development consistent with the adopted LOS standards or identified as an amendment to the adopted Capital Improvement Program. Portable classrooms will not be accepted as mitigation.

Policy F2-3.4: Mitigation shall be directed to projects on the school Board's financially feasible Capital Improvement Program that the School Board agrees will satisfy the demand created by that development approval, and shall be assured by a legally binding development agreement between the School Board, the relevant local government, and the applicant executed prior to the issuance of the subdivision plat, site plan, or functional equivalent. If the school agrees to the mitigation, the School Board must commit in the agreement to placing the improvement required for mitigation on its Capital Improvement Program. This development agreement shall include landowner's commitment to continuing renewal of the development agreement upon its expiration.

Policy F2-3.5: The applicant's total proportionate-share mitigation obligation to resolve a capacity deficiency shall be calculated by multiplying the number of new student stations required to serve the new development by the average cost per student station. The average cost per student station shall include school facility development costs and land costs. The applicant's proportionate-share mitigation obligation will be credited toward any other impact fee or exaction imposed by local ordinance for the same need on a dollar-for-dollar basis, at full-market value.

Policy F2-3.6: The process to determine proportionate share mitigation obligation shall be as follows:

Step 1: Determine the number of students to be generated by the development.

Number of Dwelling Units in the proposed development (by unit type)

MULTIPLIED BY

Student Generation Rate (by type of DU and by School Type provided by the school board)

EQUALS

Number Students Stations needed to serve the proposed development

Step 2: Comparing the available capacity to the number of student stations calculated in Step 1 to assess the need for mitigation.

Available Capacity within Service Area

MINUS

The Number of new Students Stations needed to accommodate the proposed development

EQUALS

The shortfall (negative number) or surplus (positive number) of capacity to serve the development

Step 3: Evaluating the available capacity in contiguous service areas.

If Step 2 results in a negative number, repeat that step for one or more contiguous service areas. If this step still results in a negative number, then proceed to step 4 to calculate the proportionate share mitigation.

Step 4: Calculating proportionate share mitigation.

Needed additional Student Stations from Step 3 (deficit)

MULTIPLIED BY

Average cost per Student Station

Policy F2-3.7: The student generation rates used to determine the impact of a particular development application on public schools shall be consistent with Lake County School Board and Florida Department of Education Standards. The student generation rates shall be reviewed and updated every two (2) years in accordance with professionally accepted methodologies.

ELEMENT G - OPEN SPACE AND RECREATION

Goal G1: Provision of Open Space, Parks, and Recreation. To provide adequate open space, parks, and recreation facilities to serve the needs of all Mascotte residents.

Objective G1-1: *Level of Service Standards for Parks.* To ensure adequate lands are provided for parks, the City shall utilize level of service standards for parks and other criteria specific to population, park size and location. For purposes of implementing this Objective, the City may utilize parklands under the jurisdiction of Lake County and public parks provided within residential developments.

Policy G1-1.1: The level of service (LOS) standard for parks shall be as follows:

- Overall Parkland: four (4) acres per 1,000 residents. This standard includes both passive and active City parks and recreational facilities, and includes Community, Neighborhood, and Mini-parks.

Policy G1-1.2: The City of Mascotte shall utilize the following guidelines for determining the type and location for parklands:

- Community Park - A facility designed to serve the needs of more than one neighborhood. This facility type shall serve a minimum of 5,000 City residents and is located no greater than three (3) miles from those residents. The minimum size of any new community parks should be five (5) acres. Typical facilities found in community parks are designed to serve the entire family and typically include both passive and active recreation opportunities such as playground areas, recreation buildings, sports fields, paved multipurpose courts, picnic areas, open or free play areas, swimming pools, and landscaping.
- Neighborhood Park - A facility that serves an entire neighborhood or area with a minimum of 2,500 city residents and is located no greater than three-fourths (3/4) of a mile from those residents. The minimum size of a neighborhood park should be two (2) acres. Typical facilities provided include playground areas, recreation buildings, sports fields, paved multi-purpose courts, picnic areas, open or free play areas, and landscaping.
- Mini-Park - A small park serving a concentrated or limited population of 500 to 2,500 residents within a radius of up to six (6) blocks. A minimum size of one-quarter (1/4) acre for each stand-alone park is recommended. Mini-parks primarily offer passive recreation and typical facilities provided include playground areas, benches, open space, picnic tables, and landscaping.

Policy G1-1.3: The Land Development Code shall address standards for park development and improvements. Standards shall include buffering, landscaping, parking, and the amount of area available for facilities.

Policy G1-1.4: Those lands identified in this element as “Parks” shall perpetually be held in public ownership for recreation purposes.

Policy G1-1.5: The City shall include any declared land acquisition for recreational space within the Capital Improvement Schedule.

Policy G1-1.6: The City shall explore the potential for the construction of public boat launches (for non-motorized watercraft) on the shores of Dukes Lake, Sunset Lake, Little Bluff Lake and Big Bluff Lakes.

Policy G1-1.7: To maximize the use of existing and future sites, the City shall evaluate the feasibility of providing lights at active-based parks. However, no lights shall be installed if they would have a negative impact on a residential neighborhood.

Objective G1-2: Parks and Recreation Master Plan. *The City shall prepare and maintain a Parks and Recreation Master Plan to identify future additions of activity-based recreational facilities to existing and future parks.*

Policy G1-2.1: The City shall prepare and maintain a Parks and Recreation Master Plan indicating the status of activity-based recreational facilities in the City.

Policy G1-2.2: The City shall use the State recommended standards for recreational facilities (fields and courts) as guidelines for the provision of facilities within existing and new City parks. These facilities are not required to be budgeted and constructed.

Policy G1-2.3: The Parks and Recreation Master Plan shall include areas for general open space (other than water bodies).

Policy G1-2.4: The Parks and Recreation Master Plan shall include an implementation plan indicating which activity-based recreational facilities will be added to existing and future parks in the City.

Policy G1-2.5: Consistent with the Capital Improvements Schedule process, the City of Mascotte shall budget for acquisition and actively negotiate to obtain property to ensure adequate park space in the future.

Policy G1-2.6: The City shall coordinate with the Florida Department of Environmental Protection to identify available grant funds for recreation and open space land acquisition and for development of recreation facilities.

Policy G1-2.7: The City shall actively pursue coordination with Lake County to ensure the County Future Land Use Map provides for areas to be reserved for neighborhood and community parks in the area of Mascotte.

Policy G1-2.8: Maximize the use of existing recreation space by promoting recreation activities and programs.

Objective G1-3: LOS Updates. *The City shall review and, if necessary, update the Parks level of service standards every five years.*

Policy G1-3.1: The City Manager shall provide a written report every five (5) years justifying or proposing amendments to the level of service standards for parks and recreation facilities.

Policy G1-3.2: At the time the first written report is prepared, the City shall consider the need to adopt detailed level of service standards for specific activity-based recreational facilities (fields and courts).

Policy G1-3.3: Minimum land requirements needed to comply with the above LOS standard shall be monitored and evaluated at least once a year.

Objective G1-4: Park Maintenance. *The City shall maintain and improve all City parks in a manner that is consistent with the recreation needs of the City residents, and maximizing the potential of the individual facilities.*

Policy G1-4.1: The City's parks and recreational facilities shall be renovated and/or upgraded as needed to provide improved recreational opportunities.

Policy G1-4.2: The City shall continue to maintain existing lights for evening recreation activities.

Policy G1-4.3: The City shall maintain an inventory of the location, size, condition and amenities available at each public park. This inventory shall be updated every year.

Objective G1-5: Accessibility. All recreation and open space areas shall be evaluated as to the accessibility to all Mascotte residents regardless of physical condition, age, or economic condition as outlined in the Uniform Federal Accessibility Standards.

Policy G1-5.1: All city parks and open space shall be located so as to provide unobstructed access, when reasonably possible, through the following procedures:

- Existing facilities shall be evaluated and improved if necessary.
- Any new roadway or sidewalk construction required to access future sites shall be improved to Land Development Regulation engineering standards.

Policy G1-5.2: Any park undergoing renovation shall incorporate wheelchair and bicycle access.

Policy G1-5.3: Bicycle racks shall be provided at all recreation sites. The type and quantity of such facilities shall be determined by the City's Parks and Recreation Coordinator.

Objective G1-6: Private Parks and Recreation Facilities. The City shall coordinate the provision of open space by private interests.

Policy G1-6.1: Park dedication requirements for residential development (see Policy A2-1.6), whether in the form of land or cash in-lieu of land, shall be addressed by the City at the time of the development review process.

Policy G1-6.2: Impact fees for recreation, parks and open space shall be evaluated every 5 (five) years to determine the appropriate fee to be charged to the development community.

Objective G1-7: Joint Use of Facilities. The City shall continue to coordinate with developers and other agencies to avoid duplication of recreation facilities, including provisions for joint use of private, as well as school board, recreation facilities to meet the recreation demands of the City's citizens.

Policy G1-7.1: The City shall coordinate ways and means for private developers to provide public recreation facilities within their developments.

Policy G1-7.2: The City shall utilize the level of service review to recommend recreation improvements located within private development.

Policy G1-7.3: The City shall strengthen coordination with the Lake County School Board, to allow the use of school board facilities by the general public.

Policy G1-7.4: To avoid duplication of services, the City shall coordinate recreation planning activities with local and State governments.

Policy G1-7.5: The City shall review updates of the Countywide Parks and Recreation Master Plan, as they are done, and make the necessary updates to this element to achieve consistency.

Policy G1-7.6: The City shall pursue an interlocal agreement with Lake County for the purpose of using Lake County parks for organized recreation activities for Mascotte residents.

ELEMENT H - CONSERVATION

Goal H1: To protect, maintain, and conserve the natural resources of Mascotte for continued environmental quality and the well-being of all citizens.

***Objective H1-1: Air Quality.** The City shall maintain and enhance air quality.*

Policy H1-1.1: On an annual basis, the City shall obtain a revised list of any identified air pollution generators in and surrounding Mascotte from the Florida Department of Environmental Protection.

Policy H1-1.2: The City of Mascotte shall protect air quality by complying with or exceeding air standards established by the Florida Department of Environmental Protection.

Policy H1-1.3: Mascotte shall coordinate with Lake County and other local municipalities to prevent land uses adjacent to the City which would adversely impact air quality within Mascotte based on future land use compatibility.

Policy H1-1.4: The City of Mascotte shall require the highest air quality standards of industrial, commercial, and agricultural activities occurring in and around the City.

Policy H1-1.5: The City shall participate in air quality public information programs and shall encourage alternative forms of transportation.

***Objective H1-2: Groundwater Resources.** The City shall conserve, use best management techniques, and protect future and existing groundwater resources for potable water usage.*

Policy H1-2.1: The City shall require the installation of water conserving devices in all new construction, such as water conserving water closets, showerheads, faucets, etc. within its building codes.

Policy H1-2.2: To reduce groundwater consumption and runoff related to landscape irrigation, the City shall require new development to plant and/or preserve native drought-resistant vegetation for landscaping.

Policy H1-2.3: The City shall also promote the upgrade of existing commercial and residential landscaping to native drought-resistant species through education and pursuing matching grant programs.

Policy H1-2.4: The City shall support, assist and otherwise cooperate with, the Central Florida Water Initiative and the St. Johns River Water Management District in the implementation of the District's Water Shortage Plan.

Policy H1-2.5: The City shall notify the St. Johns River Water Management District of the presence of any abandoned free-flowing artesian wells identified within its jurisdiction and to record their existence.

Policy H1-2.6: The City, in cooperation with the City of Leesburg and the City of Groveland through existing interlocal agreements, shall pursue providing the implementation of a reclaimed water system as deemed feasible for non-potable water for irrigation.

Policy H1-2.7: The City shall not allow sink formations to be filled or excavated, and no debris placed adjacent to the sink, until the Florida Sink Hole Research Institute, or a surrogate state agency, has completed a site investigation to determine appropriate actions to protect property and groundwater quality.

Policy H1-2.8: The City shall prevent the storage of chemicals in the 100-year floodplain and in areas of high aquifer recharge.

Policy H1-2.9: The City shall participate in water conservation public information programs and shall encourage the use of water conserving plumbing fixtures and drought-resistant native vegetation for landscaping.

Policy H1-2.10: To ensure an adequate supply of potable water, the City shall evaluate the implementation of the Florida Water StarSM program for all new construction.

Policy H1-2.11: The City shall continue participation with the planning and development of the Central Florida Water Initiative Regional Water Supply Plan.

Policy H1-2.12: During the development of alternative water supply projects, the City shall continue to be engaged with the Central Florida Water Initiative and shall evaluate each project to determine its benefit to the City's water resource needs.

Policy H1-2.13: Within 18 months of the approved and updated Regional Water Supply Plan, the City shall incorporate alternative water supply projects that have been identified and determined beneficial by the City into the comprehensive plan.

Objective H1-3: Wetlands. *The City shall maintain and enforce Land Development Code that include performance criteria designed to protect and conserve wetlands from physical and hydrologic alterations as well as specifically direct incompatible land uses away from wetlands. These Policies within this Objective shall not apply to the Green Swamp Area of Critical State Concern.*

Policy H1-3.1: The City shall include in the LDR a requirement that any development that contains land meeting the definition of a wetland, as defined in Florida Statutes, shall conduct a wetland delineation. A delineation of the upland wetland boundary shall be established based upon an onsite field survey by a professional biologist or registered engineer provided by the applicant and coordinated with the St. Johns River Water Management District, the Florida Department of Environmental Protection, and/or the US Army Corps of Engineers. Furthermore, the development shall through a comprehensive planning process identify the types, values, functions, size, conditions, and specific locations of the wetlands on the site.

Policy H1-3.2: The City shall require that all new development obtain a stormwater management permit and, as necessary, other required permits from the St. Johns River Water Management District (SJRWMD), Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (ACOE).

Policy H1-3.3: The City will coordinate with SJRWMD, FDEP, and the ACOE regarding all stormwater management and other required permit applications.

Policy H1-3.4: The City shall require and enforce an undisturbed buffer, twenty-five (25) feet in width, adjacent to all wetlands and lakes. The area of wetlands in question shall include all contiguous wetlands located on the site and adjacent to the site. Buffers without native vegetation shall be revegetated with indigenous habitat to protect the quality of the adjacent isolated wetland, wetland system, lake, river or stream.

Policy H1-3.5: Wetlands shall be protected from physical or hydrologic alterations in order to maintain natural functions of the wetlands and lakes. No development shall be permitted in wetlands other than open space, restricted access to the property (where unavoidable, and kept to minimum width), bird sanctuary, natural preserve, or other similar land uses approved by the City pursuant to Land Development Code designed to carry out the intent of the Comprehensive Plan. The City shall continue to enforce existing regulations that address the following issues:

- Criteria and stipulations for protecting wetlands and managing the development review criteria;
- Protection of wetlands and fragile transition areas;

- Compensatory mitigation where proposed upland development presents a potential hazard to wetland functions.

The City's existing regulations require uses and activities in wetlands to comply with design and performance criteria which also regulate retention of natural drainage characteristics, minimization of alteration or modification, stormwater, and wetland buffers.

Policy H1-3.6: Transition areas shall be defined as the area separating wetland areas and their undisturbed buffers, from upland areas and in which development activities may be regulated to protect wetlands. The transition zone is an area having a direct groundwater or surface water influence. The transition area provides a buffer between wetlands and upland development or other land alteration activities. The purpose of the transition zone is to ensure the continuing function of respective wetland communities. The City shall retain the right to prohibit development within the wetland transition area. The boundary of a wetland transition area shall be established by field investigation. At a minimum the following uses shall be prohibited within the wetland transition areas:

- All industrial uses;
- Sanitary landfills;
- Wastewater treatment facilities;
- Incinerators;
- Animal feedlots;
- Petroleum or pesticide storage facilities;
- Above-ground or below-ground pipes (such as, gas/petroleum lines) for pollutants or contaminants;
- Any land use that stores, handles, or generates hazardous material or waste.

Policy H1-3.7: The City shall enforce performance criteria designed to protect and preserve wetlands, wetland transition areas and water management areas. The City shall enforce its stormwater management and wetland preservation regulations to provide for the dedication of conservation easements or reservations where the City finds that the dedication is reasonable in order to protect the value and function of a wetland or to further the objective of stormwater management plan.

Objective H1-4: *Wetlands within the Green Swamp Area of Critical State Concern. Within one year of the adoption of this Objective, the City shall further protect wetlands within the Green Swamp Area of Critical State Concern by enacting land development code regulations that implement the following Policies.*

Policy H1-4.1: Upland Buffer. No new development shall be located within fifty feet (50 ft.) of the furthest upland extend of any wetlands or water body.

Policy H1-4.2: Wetland Impacts. Wetland impacts shall only be allowed when there is no other alternative, such as when providing access to a parcel will result in unavoidable wetlands impacts and the denial of said impacts would result in a taking. Impacts shall be properly mitigated through the appropriate agency with jurisdiction.

Policy H1-4.3: Unaltered State. Wetlands and upland buffers shall be maintained in their natural and unaltered state. However, controlled burns, selective thinning, and ecosystem restoration and maintenance are permissible activities within the wetlands and upland buffers, provided they are performed in accordance with current Silvicultural Best Management Practices published by the Division of Forestry. Any isolated wetlands of less than one acre shall be exempt from these requirements.

Policy H1-4.4: Wetland Delineations. An application for development within the Green Swamp Area of Critical State Concern must include a wetlands delineation or statement that no wetlands are located on the parcel. The delineation or statement shall be prepared by a

professional biologist or registered engineer provided by the applicant and coordinated with the St. Johns River Water Management District, the Florida Department of Environmental Protection, and/or the US Army Corps of Engineers. Furthermore, an application for development shall identify the types, values, functions, size, conditions, and specific locations of the wetlands on the site.

Objective H1-5: Surface Water. *The City shall protect surface water from all known and identifiable pollution sources.*

Policy H1-5.1: The City shall require new developments to use the best stormwater management techniques to control sediments, silt, and pollution carried by urban runoff before discharging into open waters

Policy H1-5.2: The design of stormwater management systems, including low impact development (LID) projects, shall meet the rules and criteria established by the City of Mascotte, the St. Johns River Water Management District, the Florida Department of Transportation (if applicable), and the East Central Florida Regional Planning Council.

Policy H1-5.3: On an annual basis, the City shall identify those components of the Mascotte drainage system that may be contributing to the overall degradation of surface water quality, and develop a priority listing for the mitigation of components.

Policy H1-5.4: The City shall not allow on-site sanitary sewer systems to directly discharge into any lake, nor shall a system use surface waters for back-up or overflow discharge.

Policy H1-5.5: The City shall pursue funding sources which are available from the State of Florida to acquire land along lakefront areas for recreation or conservation purposes

Policy H1-5.6: The City shall participate in the Florida Lake Watch Program with Lake County.

Policy H1-5.7: The City shall manage development along lake shoreline areas and lakefront littoral region through the establishment of both a Shoreline Protection and a Lakefront Littoral Zone. Both Zones shall be established as part of any new surface water management system, which consists of lakes and designated wetland areas. The Land Development Code shall provide appropriate development setbacks to preclude encroachment into these zones.

Objective H1-6: Floodplains. *The City shall ensure long-range protection of the functionality of the City's floodplains. The Policies within this Objective shall not apply to the Green Swamp Area of Critical State Concern.*

Policy H1-6.1: Regulations for development within the floodplains and floodways will be maintained in the City's Land Development Code to prevent flooding.

Policy H1-6.2: On-site waste disposal systems shall be located outside of the floodplain to avoid impairment to them or contamination from them during flooding.

Policy H1-6.3: The City shall prohibit septic tanks, wastewater treatment plants, and spray fields within the 100 Year Flood Zone.

Policy H1-6.4: Where feasible, the floodplain shall be reserved, undisturbed, for conservation, open space and passive recreational uses to preserve the natural flow of runoff.

Policy H1-6.5: When development is proposed within the Flood Zone, to maintain reasonable use of and value of property, compensatory mitigation shall be required to maintain its natural flow regime.

Policy H1-6.6: The 100 Year Flood Zone shall be delineated within the Future Land Use Map Series, and its demarcations shall be determined by the most recent Flood Insurance Maps prepared by the Federal Emergency Management Agency.

Objective H1-7: Floodplain within the Green Swamp Area of Critical State Concern. *Within one year from the adoption of this Objective, the City shall further protect the floodplain within the Green Swamp Area of Critical State Concern by enacting land development code regulations that implement the following Policies.*

Policy H1-7.1: Definition and Determination. Floodplain (or known as “flood hazard area”) shall be defined as that area that lies within Zone A or Zone AE as delineated by the FEMA Flood Insurance Rate Map.

Policy H1-7.2: Development. For parcels that include land both outside the floodplain and within the floodplain, no development shall be allowed within the floodplain.

Objective H1-8: Wildlife and Vegetation Protection. *The City shall appropriately use and protect wildlife and native wildlife habitat.*

Policy H1-8.1: The City shall work closely with the Florida Fish and Wildlife Conservation Commission (FFWCC) and private landowners to increase the public’s knowledge of habitat protection and best management practices to protect endangered and threatened species, as well as species of special concern.

Policy H1-8.2: The City shall notify the Florida Game and Fresh Water Fish Commission to the presence of any roosting, nesting, or frequented habitat areas for endangered or threatened wildlife occurring within its jurisdiction.

Policy H1-8.3: The City shall coordinate during the development review process with the appropriate state and federal agencies for technical assistance in environmental issues regarding wildlife, and native wildlife habitat.

Policy H1-8.4: The City shall regulate the following activities in areas identified as being environmentally sensitive and in areas containing endangered and/or threatened wildlife, to ensure that such areas are preserved:

- The removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, or materials of any kind;
- The changing of existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics;
- The disturbance of the environmentally sensitive area’s water level or water table by drainage, impoundment, or other means;
- The dumping or discharging of material, or the filling of an environmentally sensitive area with material;
- The placing of fill or the grading or removal of material that would alter topography;
- The destruction or removal of plant life that would alter the character of an environmentally sensitive area or wildlife habitat; and
- The conduct of an activity that results in a significant change of water temperature, a significant change of physical or chemical characteristics of environmentally sensitive area water sources, or the introduction of pollutants.

Policy H1-8.5: Native Vegetation Protection regulations shall mandate fair and equitable restoration and/or compensatory mitigative measures in order to compensate for loss of vegetation and to enhance stabilization of fragile slopes and/or lake shorelines

Policy H1-8.6: The City shall encourage new developments to protect existing native vegetation in common areas and buffer zone.

Policy H1-8.7: The City shall encourage additional planting of native plant species to enhance sparse vegetation in common areas and buffer zone.

Policy H1-8.8: The City shall cooperate with and assist Federal and State environmental and wildlife preservation agencies in their efforts to protect fish populations within the City's lakes and to promote environmental management activities, which enhance fish propagation through natural processes or by managed fish restocking.

Policy H1-8.9: The City shall coordinate with the Lake County Water Authority to control any aquatic weed, algae blooms, or other aquatic plant proliferation occurring within the City's lakes.

Policy H1-8.10: The City, through its Land Development Code will ensure the protection of areas of native vegetation, wildlife habitat, and endangered and threatened species.

Policy H1-8.11: Developers shall be required to identify wildlife habitat, and endangered and threatened species as part of the development review process, and shall be required to submit mitigation measures for review as part of the City's development review process.

Policy H1-8.12: Annually, the City shall maintain updated maps from FFWCC showing the locations of habitat for endangered and threatened species and species of special concern, and unique natural areas.

Policy H1-8.13: The City shall coordinate with Lake County to ensure the protection of environmentally sensitive areas that cross jurisdictional boundaries.

Objective H1-9: Soil Management. *The City shall appropriately manage soils data and protect against soils erosion and uses inconsistent with soils.*

Policy H1-9.1: The City's Land Development Code shall continue to require that all site developments properly install and maintain erosion and sedimentation control devices, and that developers submit an erosion and sediment control plan before start of construction.

Policy H1-9.2: All disturbed soil areas will be permanently stabilized upon completion of development activities, in order to reduce soil erosion.

Policy H1-9.3: Whenever possible, native trees, shrubs and ground cover will be maintained on development sites to prevent soil erosion.

Policy H1-9.4: The City shall notify the local office of the U.S. Soil Conservation Service of any major soil erosion problems that may occur within the City's jurisdiction.

Policy H1-9.5: The City shall maintain soils records to be used in determining appropriate development usage.

Policy H1-9.6: The City shall not allow septic tanks in soils that do not adequately percolate.

Objective H1-10: Mining. *The City shall regulate mining activities to prevent incompatible land uses from locating adjacent to each other.*

Policy H1-10.1: As no significant deposits of valuable minerals are present within the City of Mascotte, the City shall not encourage mining activities.

Policy H1-10.2: Major wind current patterns shall be considered for locating mining activities to ensure that dust particles and odors do not negatively impact adjacent land uses.

Policy H1-10.3: Mining, borrow pits, or any other resource extraction (including sand mining, peat mining, limerock mining, and phosphate mining) shall be prohibited in the Green Swamp Area of Critical State Concern.

Objective H1-11: Hazardous Waste. *The City shall coordinate with the appropriate agencies to ensure that sources of hazardous waste are identified and monitored.*

Policy H1-11.1: The City shall continue to utilize the Lake County fire and emergency management services and the State Emergency Response Commission for Hazardous Materials, for its monitoring of hazardous waste generators within the City.

Policy H1-11.2: The City shall coordinate with Lake County to provide and promote citizen education programs and materials regarding hazardous waste and the proper method of disposal of common household hazardous waste materials.

Policy H1-11.3: The City shall reserve all rights and privileges to deny development of any commercial or industrial activity that is a threat to the quality of ground water or to the health and safety of City residents.

Objective H1-12: Historical, Archeological and Cultural. *The City shall conserve significant sites and protect existing historical structures.*

Policy H1-12.1: The City shall coordinate with the State Division of Historic Resources in continuing to identify, protect, analyze, and explain the City's historical, archaeological, and cultural resources. Such efforts shall include determination of their worth and vulnerability, as well as determination of specific applicable preservation management policies.

Policy H1-12.2: The City shall prohibit development activities in or adjacent to historic archaeological sites that depreciate or eliminate their historical value.

Policy H1-12.3: The City shall promote and support local efforts, including those fostered by the Lake County Historical Society, to effectively pursue registration of historically significant sites under Federal and State certified historical master files.

ELEMENT I - INTERGOVERNMENTAL COORDINATION

Goal I1: Implement and promote stable working relationships with other governmental agencies to ensure efficient, effective, and thorough delivery of governmental services.

Objective I1-1: *Coordination of Plans.* The City of Mascotte Comprehensive Plan shall strive to be consistent with the growth management plans of applicable agencies, such as the State Plan, the East Central Florida SRPP, Lake-Sumter Metropolitan Planning Organization's Long Range Transportation Plan, the Interlocal Service Boundary Agreement, and Lake County's Comprehensive Plan.

Policy I1-1.1: Coordinate with affected governmental agencies on the review of development applications in a manner consistent with the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes.

Policy I1-1.2: Review the Comprehensive Plans of Lake County and other local municipalities to determine the impact of those adopted plans on the future growth and development of the City of Mascotte; such review shall occur on an annual basis, and whenever major Plan changes are made by those jurisdictions.

Policy I1-1.3: Participate in the ECFRPC's Strategic Regional Policy Plan review and update process as mandated by State Statute.

Policy I1-1.4: Continue coordination in planning efforts with Lake County, Groveland, and Leesburg through the sharing of relevant planning data and analysis, notification of development occurring within the City, and review of the impacts, including land use compatibility and impacts on City levels of service standards, of proposed development on adjacent local governments during the City's development review process.

Policy I1-1.5: Coordinate with the water resource protection efforts of the SJRWMD's Water Shortage Plan.

Policy I1-1.6: Gain standing and representation on Lake County Comprehensive Plan land use amendments, which would prove not to be consistent with the Future Land Use Element of the City's Comprehensive Plan.

Policy I1-1.7: Participate in the Long Range Transportation Plan process with the Lake-Sumter Metropolitan Planning Organization.

Policy I1-1.8: The City shall provide the following information and services to affected local governments and agencies:

- Provide planning data and analysis when requested,
- Review the actions of other local governments as to the impact of such actions on City levels of service, and
- Notification to affected local governments and governmental agencies of pending City actions regarding the provision of services and comprehensive plan amendments.

Policy I1-1.9: The City, as part of the development review process, shall provide the County and adjacent municipalities, the opportunity to comment on the siting of facilities with region wide significance.

Policy I1-1.10: *Informal Mediation Process.* The City shall coordinate with the County and adjacent municipalities to establish an informal mediation process for solving local intergovernmental coordination problems among local governments and other units of government providing services but not having regulatory authority over the use of land.

Policy I1-1.11: Formal Mediation Process. Where formal mediation fails to resolve local conflicts, the City shall determine if the issue warrants intervention of an unbiased mediation forum. Such mediation shall be granted to the East Central Florida Regional Planning Council, unless it is evident that the ECFRPC will not represent a fair or unbiased mediator. Upon such determination, the City shall coordinate with the Florida Department of Community Affairs to resolve intergovernmental conflict with another Regional Planning Council serving as the mediator.

Policy I1-1.12: Resolution through other means. Where Informal and Formal Mediation Processes fails to resolve local conflicts, The ECFRPC's conflict resolution process will be used for any disputes that cannot be otherwise resolved.

Objective I1-2: Joint Planning Areas. *The City will continue to coordinate and if needed complete execution of agreements with adjacent local governments to improve land use compatibility between the respective governments.*

Policy I1-2.1: The City will continue to pursue Joint Planning opportunities with Lake County outlining the following:

- Establishment of a joint planning area for the purpose of annexation and identification of infrastructure service areas.
- The City would not exercise municipal jurisdiction over any lands unless they are annexed. The County Comprehensive Policy Plan would control those lands until annexed.
- Agreement to coordinate the provision of utilities to avoid duplication/overlap of facilities and services.
- Agreement to establish procedures for annexation, so that upon approval of an annexation ordinance, the City's comprehensive plan and Land Development Code shall apply. Concurrent with the annexation, the City may establish an initial zoning and rezone the annexed property consistent with the City comprehensive plan and the interlocal agreement.
- Agreement to apply, where possible, to City development standards.

Policy I1-2.2: The City shall coordinate with Lake County, other municipalities within Lake County, Sumter County, and the City of Center Hill, through interlocal agreements, if necessary, to improve the notification process regarding new development proposals within one mile of the common boundary that may impact the other jurisdiction in the provision of public facilities.

Objective I1-3: Informal Coordination. *The City will appoint representatives to attend meetings regarding growth management, schools, parks, infrastructure and other related issues to coordinate on the City's behalf and maintain records of correspondence at such meetings.*

Policy I1-3.1: The City will strive to increase interaction with the ECFRPC, such as attendance at council meetings.

Policy I1-3.2: The City will attend and coordinate efforts through the Lake County Planner's Forum.

Policy I1-3.3: The City will coordinate land use amendment impacts with other local municipalities.

Policy I1-3.4: The City will coordinate with Lake County in an effort to compare the respective Land Use Code, and where there are inconsistent regulations, work towards eliminating such inconsistency, to the extent possible.

Objective I1-4: School Coordination. *The City will participate in full cooperation and coordination with the Lake County School Board, as needed, to coordinate planning activities and maximize the use of available public funds.*

Policy I1-4.1: The City of Mascotte shall continue to coordinate with the School Board for Public School Facility Planning as required through the Interlocal Service Agreement.

Policy I1-4.2: The City shall continue to coordinate with the Lake County School Board to provide planning for adequate sites and infrastructure for future public education facilities within the City of Mascotte, through the following activities:

- The School Board shall provide facilities plans and population projections on an annual basis to ensure that consistency is maintained between the two.
- The School Board shall provide the City with any plans to site schools within the corporate limits or joint planning area.
- The City shall provide to the School Board all application for land use plan amendments that have the potential of increasing residential density and that may affect student enrollment, enrollment projections, or school facilities.
- The City shall allow a member of the School Board to sit on the Local Planning Agency and comment on proposals that have the potential to increase density.
- Take part in the Lake County Educational Concurrency Review Committee established by the County, School Board and municipalities that shall meet at least annually but more often if needed, and will hear reports and discuss issues concerning school concurrency.
- Take part in The Joint Staff School Concurrency Review Group, comprised of Staff of the County, Cities, and School Board, that shall meet at least quarterly to discuss issues concerning school concurrency. These issues shall include but not be limited to land use, school facilities planning, including such issues as population and the student projections, level of service, capacity, development trends, school needs, co-location and joint use opportunities, and ancillary infrastructure improvements needed to support schools and ensure safe student access. The School Board staff shall be responsible for making meeting arrangements.
- During pre-development program planning and school site selection activities, the City shall coordinate with the Lake County School Board to collocate schools with other public facilities, such as parks, libraries, and community centers to the maximum extent possible.

Objective I1-5: Annexation Coordination. *The City will prioritize and manage annexations that are going to provide for the most effective implementation of public services and provide opportunities to prevent sprawling development patterns.*

Policy I1-5.1: All annexation policies shall be consistent with the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes.

Objective I1-6: Transportation Coordination. *The City shall coordinate transportation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-6.1: The City will coordinate transportation planning efforts with the Lake-Sumter Metropolitan Planning Organization.

Policy I1-6.2: On an annual basis, the City will notify the Lake-Sumter Metropolitan Planning Organization of population changes in the City to coordinate the voting opportunities of the Lake-Sumter Metropolitan Planning Organization's Elected Body board.

Policy I1-6.3: The City shall actively participate in the Florida Department of Transportation's 5-Year Transportation Improvement Program by submitting data that would impact S.R. 50 for inclusion in the program on an annual basis.

Objective I1-7: Infrastructure Coordination. *The City shall coordinate infrastructure issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-7.1: Subject to the utilities policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City of Mascotte shall notify Lake County of any requests for utility service connections or extensions within unincorporated Lake County.

Policy I1-7.2: The City will request Lake County to notify the City of Mascotte of any requests for development of lands within the unincorporated portion of the City's utility service area.

Policy I1-7.3: Subject to the utilities policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City shall continue to coordinate with the City of Groveland, City of Leesburg, and Lake County regarding the utility service area boundaries.

Policy I1-7.4: Infrastructure Level of Service Coordination. The City shall exchange information with such entities on issues impacting concurrency and level of service throughout the process of developing the concurrency management system and especially in the determination of effective levels of service.

Policy I1-7.5: Subject to the fire hydrant policies within the Interlocal Service Boundary Agreement entered into with other cities and the County pursuant to Part II, Chapter 171, Florida Statutes, the City shall coordinate with Lake County on the installation of fire hydrants on City water mains that are located within unincorporated Lake County.

Objective I1-8: Conservation Coordination. *The City shall coordinate conservation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-8.1: Continue coordination with Federal, State, Regional, and private environmental agencies to ensure adequate technical support for all environmental issues in which the City requires technical expertise.

Policy I1-8.2: The City shall continue to participate and support programs and projects of State, Regional, and County agencies which seek to preserve environmentally sensitive lands, promote usable open space for all citizens, preserve habitats for endangered species, and protect groundwater supplies, potable water supplies, and surface water quality.

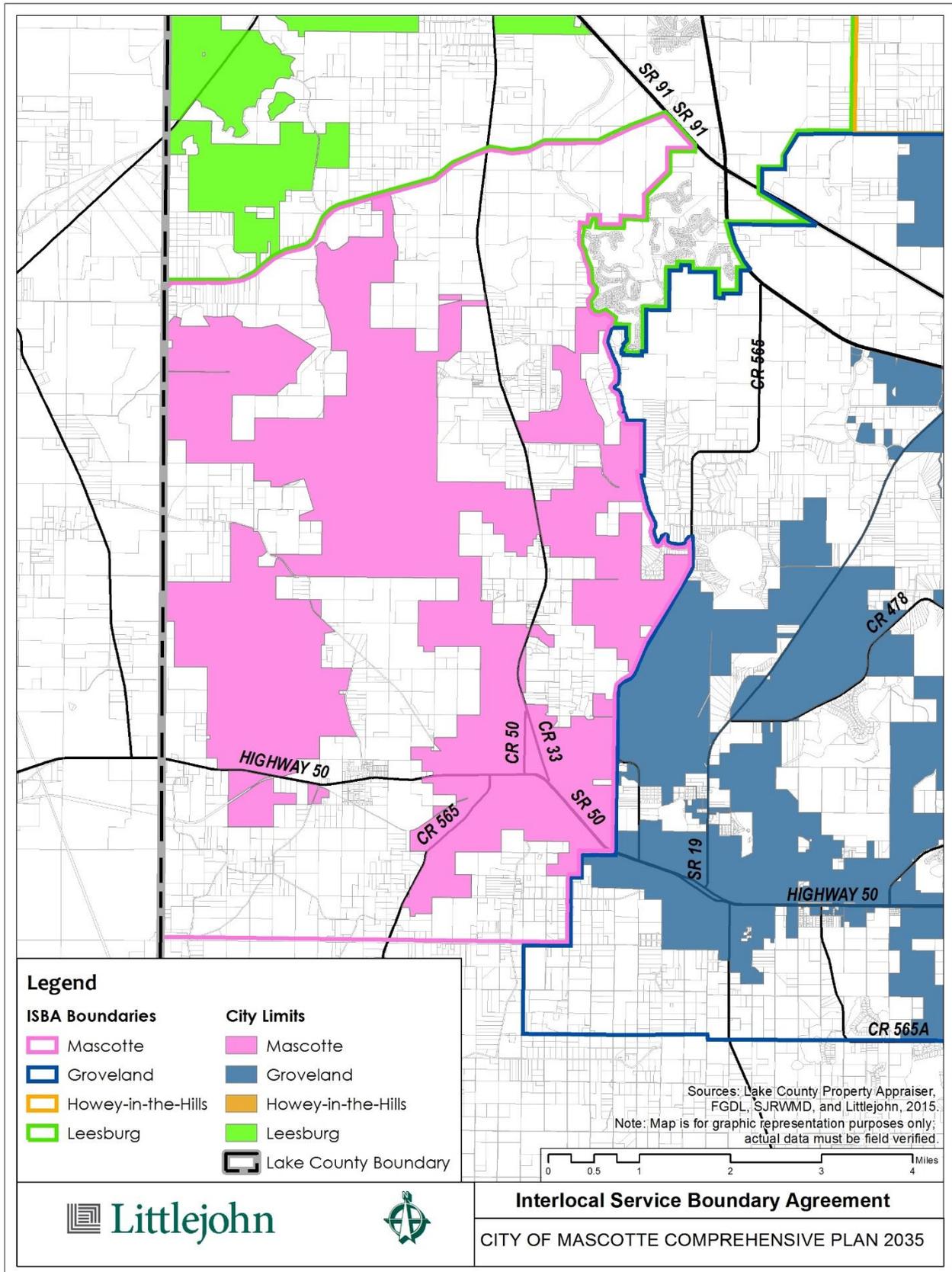
Objective I1-9: Parks and Recreation Coordination. *The City shall coordinate parks and recreation issues with affected governmental agencies and jurisdictions to aid in meeting the objectives of other elements of this Plan.*

Policy I1-9.1: Coordinate with Lake County to recommend the provision of adequate land use acreage on the County and City Future Land Use Maps for regional, community and neighborhood park recreational space.

Policy I1-9.2: If opportunities arise, implement and maintain interlocal agreements with the Lake County School Board and Lake County for the provision and maintenance of shared recreational facilities within the City.

Policy I1-9.3: Coordinate greenways and trails with the County and State, and pursue funding mechanisms for implementation of these needed improvements.

MAP I - 1: INTERLOCAL SERVICE BOUNDARY AGREEMENT



MAPS ADOPTED PREVIOUSLY

APPENDIX M: MEETING MINUTES

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APPENDIX N: CITY OF MASCOTTE OPERATING BUDGET 2020-2021

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