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**VILLAGE OF ESTERO, FLORIDA**

**ORDINANCE NO. 2024 - 09**

**AN ORDINANCE OF THE VILLAGE COUNCIL OF THE VILLAGE OF ESTERO, FLORIDA, ADOPTING AN AMENDMENT TO THE VILLAGE OF ESTERO COMPREHENSIVE PLAN TO CHANGE THE TEXT TO REFERENCE THE VILLAGE’S 10-YEAR WATER SUPPLY FACILITIES WORK PLAN AND LANDSCAPE IRRIGATION CONSERVATION MEASURES AS PROVIDED ON ATTACHMENT “A” AND MADE A PART HEREOF; PROVIDING FOR TRANSMITTAL OF THE AMENDMENT TO THE STATE OF FLORIDA AND OTHER REVIEWING AGENCIES AS REQUIRED BY STATUTE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; AND PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, pursuant to Section 163.3177(5)(c)3., Florida Statutes, the Comprehensive Plan shall, within 18 months after the applicable water management district approval of its updated regional water supply plan, be amended to reference a 10-year water plan for water supply projects; and

**WHEREAS**, the Plan was amended in 2020 to reflect the South Florida Water Management District regional water supply plan; and

**WHEREAS**, the South Florida Water Management District approved an updated regional water supply plan on December 19, 2022; and

**WHEREAS**, the Village must amend the Comprehensive Plan again to reflect the most recent water supply plan; and

**WHEREAS**, the Village engaged Kimley-Horn and Associates, Inc. to prepare its work plan, entitled “The Village of Estero 10-Year Water Supply Facilities Work Plan” dated October 2024 (“Work Plan”) (Attachment “A”); and

**WHEREAS**, the Work Plan addresses water supply and conservation programs necessary to serve existing and new development in the Village for a minimum 10-year period; and

44           **WHEREAS**, the Village does not own or operate its own water supply facilities, but  
45 the two providers (Lee County Utilities and Bonita Springs Utilities) both have adequate  
46 capacity and allocation to serve Estero through the 10-year planning period; and  
47

48           **WHEREAS**, the Village Planning Zoning and Design Board, at a duly noticed public  
49 hearing held on June 11, 2024 recommended that the Comprehensive Plan Amendment be  
50 adopted by the Village Council on first reading for transmittal pursuant to Section 163.3184 of  
51 the Community Planning Act; and  
52

53           **WHEREAS**, the Village Council, at a duly noticed meeting, held a first reading on this  
54 Ordinance on June 19, 2024, considered the recommendation of the Village Planning Zoning  
55 and Design Board and the comments of the public, and voted to transmit the Amendment to  
56 the State Land Planning Agency and other review agencies as provided in Section 163.3184,  
57 Florida Statutes; and  
58

59           **WHEREAS**, advisory comments were received from the South Florida Water  
60 Management District on July 24, 2024; and  
61

62           **WHEREAS**, the staff has considered the comments and made revisions where  
63 appropriate.  
64

65           **NOW, THEREFORE**, be it ordained by the Village Council of the Village of Estero,  
66 Florida:  
67

68           **Section 1. Recitals.**  
69

70           The foregoing “Whereas” clauses are hereby ratified and incorporated as a part of this  
71 Ordinance.  
72

73           **Section 2. Adoption of the Comprehensive Plan Amendment.**  
74

75           The Village Council adopts the Comprehensive Plan Amendment as proposed below,  
76 incorporated and made a part of this Ordinance.  
77

78           Policy INF- 1.3.2. The Village has developed a Water supply Facilities Work  
79 Plan within 18 months after the South Florida Water Management District  
80 approved an update to the required water supply plan (titled the *2022 Lower  
81 West Coast Water Supply Plan Update*). The Village’s Plan (*The Village of  
82 Estero 10-year Water Supply Facilities Work Plan October, 2024*)  
83 incorporated by reference herein, addresses issues that pertain to water  
84 supply for utilities and requirements needed to serve current and future  
85 development in the Village. The Work Plan indicates that the Village does  
86 not own or operate its own water supply facilities, and because the water  
87 suppliers (Lee County Utilities and Bonita Springs Utilities) have adequate

88 capacity and allocation to serve Estero through the planning period, Estero  
89 does not need to undertake any capital improvement projects.

90  
91 Policy CCM-1.10.2 Comply with the Mandatory Year Round Landscape  
92 Irrigation Conservation Measures as detailed in Village Ordinance No. 2021-  
93 05 and cooperate with emergency water conservation measures of the South  
94 Florida Water Management District.

95  
96 **Section 3. Transmittal.**

97  
98 The Village Manager or his designee shall transmit the adopted Comprehensive Plan  
99 Amendment and other materials as required by statute to the State Land Planning Agency and  
100 other reviewing agencies as provided by Section 163.3184, Florida Statutes.

101  
102 **Section 4. Severability.**

103  
104 If any provision of this Ordinance or its application to any person or circumstance is  
105 held invalid, the invalidity does not affect other provisions or applications of this Ordinance  
106 which can be given effect without the invalid provision or application, and to this end the  
107 provisions of this Ordinance are severable.

108  
109 **Section 5. Conflict.**

110  
111 All ordinances, resolutions, official determinations or parts thereof previously adopted  
112 or entered by the Village or any of its officials and in conflict with this Ordinance are hereby  
113 repealed to the extent inconsistent herewith.

114  
115 **Section 6. Effective Date.**

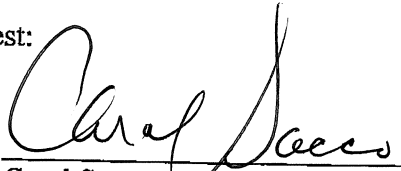
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117 This ordinance shall take effect upon adoption at second reading, except that the  
118 effective date of the Comprehensive Plan Amendment shall be thirty-one (31) days after the  
119 State Land Planning Agency notifies the Village that the plan amendment package is complete  
120 or, if timely challenged, thirty-one (31) days after the state Land Planning Agency, or the  
121 Administration Commission enters a final order determining the adopted Plan Amendment to  
122 be in compliance.

123  
124 **PASSED** on first reading this 19<sup>th</sup> day of June, 2024.

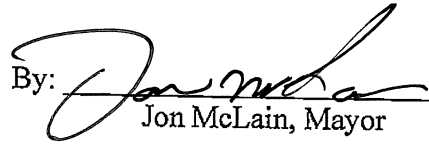
125  
126 **PASSED AND ADOPTED BY THE VILLAGE COUNCIL** of the Village of Estero,  
127 Florida this 6th day of November, 2024.

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Attest:

  
\_\_\_\_\_  
Carol Sacco, MMC, Village Clerk

VILLAGE OF ESTERO, FLORIDA

By:   
\_\_\_\_\_  
Jon McLain, Mayor

Reviewed for legal sufficiency:

By:   
\_\_\_\_\_  
Nancy Stroud, Esq., Village Land Use Attorney

Attachment "A": The Village of Estero 10-Year Water Supply Facilities Work Plan October, 2024

The Village of Estero  
10-Year Water Supply  
Facilities Work Plan

Prepared For:



October 2024

Kimley»»Horn

# The Village of Estero 10-Year Water Supply Facilities Work Plan

Estero, Florida

*Prepared for:*

The Village of Estero

*Prepared by:*

Kimley-Horn and Associates, Inc.

1514 Broadway, Suite 301  
Fort Myers, Florida 33901  
239-673-2725

## **EXECUTIVE SUMMARY**

The purpose of the Village of Estero’s 10-Year Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government’s jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the pertinent water management district approves a regional water supply plan or its update for a region including the local government in question. The 2022 Lower West Coast Water Supply Plan Update was approved by the South Florida Water Management District (SFWMD) on December 19, 2022. The LWCWSP covers Lee and Collier Counties, as well as portions of Hendry, Glades and Charlotte Counties. The Village of Estero (Estero) falls within the planning area for the LWCWSP.

The Work Plan considers a planning period through 2035, and uses population projections for the Village of Estero based on BEBR medium and 2020 Census data. Lee County Utilities (LCU) and Bonita Springs Utilities (BSU) supply potable water to the Village of Estero. Kimley-Horn coordinated with LCU and BSU staff to determine approximate populations served by each utility and the associated raw and finished water demands for each through 2035. Based on the analysis in the Work Plan, both utilities should have adequate water treatment plant capacity and permitted allocations from the SFWMD to serve the Village of Estero through 2035. Both utilities have several capital improvement projects planned over the next 5 years to support continuous water supply to their service areas at the per capita demands described in the Work Plan.

Because the Village of Estero does not own or operate its own water supply facilities, and because both BSU and LCU have adequate capacity and allocation to serve Estero through the planning period, Estero does not need to undertake any capital improvement projects or enter into agreements with the utility providers to ensure continued water supply at the current level of service.

An assessment of the existing Goals, Objectives and Policies (GOPs) in the Village of Estero Comprehensive Plan was performed in preparation of the Work Plan to identify those that address water supply sources and facilities, as well as conservation and reuse programs.

Under the current statutory requirements, the Village of Estero will be required to update the Work Plan within 18 months of approval of the next LWCWSP.

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## List of Abbreviations

ASR	Aquifer Storage and Recovery
BEBR	Bureau of Economic and Business Research
BSU	Bonita Springs Utilities
CUP	Consumptive Use Permit
DEO	Department of Economic Opportunity
DSAP	Detailed Specific Area Plan
EAR	Evaluation and Appraisal Report
ELU	Existing Legal User
ERC	Equivalent Residential Connection
FDEP	Florida Department of Environmental Protection
FDOH	Florida Department of Health
F.S.	Florida Statutes
GOPs	Goals, Objectives and Policies
GPD	Gallons Per Day
IAS	Intermediate Aquifer System
LCU	Lee County Utilities
LOS	Level of Service
LOSA	Lake Okeechobee Service Area
LWCWSP	Lower West Coast Water Supply Plan
LPRO	Low Pressure Reverse Osmosis
MDL	Maximum Developable Limit
MFL	Minimum Flows and Levels
MG	Million Gallons
MGD	Million Gallons Per Day
ORC	Objections, Recommendations, and Comments
RO	Reverse Osmosis
SAS	Surficial Aquifer System
SFWMD	South Florida Water Management District
USACOE	United States Army Corps of Engineers
WSP	Water Supply Plan
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

## 1.0 Introduction

The purpose of the Village of Estero’s 10-Year Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government’s jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the pertinent water management district approves a regional water supply plan or its update for a region including the local government in question. The *2022 Lower West Coast Water Supply Plan Update* was approved by the South Florida Water Management District (SFWMD) on December 19, 2022. The LWCWSP covers Lee and Collier Counties, as well as portions of Hendry, Glades and Charlotte Counties. The Village of Estero (The Village or Estero) falls within the planning area for the LWCWSP. Therefore, the deadline for local governments within the Lower West Coast water supply planning area to amend their comprehensive plans to adopt a Work Plan is June 19, 2024.

Kimley-Horn and Associates, Inc. (Kimley-Horn) prepared this Work Plan based on information obtained from government entities and other parties. While Kimley-Horn has used reasonable care to avoid reliance upon faulty or incomplete information, Kimley-Horn is not able to verify the accuracy of all data and information provided by these government entities and other parties.

According to State guidelines, the Work Plan and associated comprehensive plan amendments must address the development of traditional and alternative water supplies, bulk sales agreements and conservation and reuse programs that are necessary to serve existing and new development for at least a 10-year planning period.

The Village’s Work Plan is divided into six sections addressing the state guidelines, as well as figures.

Section 1 – Introduction

Section 2 – Background Information

Section 3 – Data and Analysis

Section 4 – Regional Issues

Section 5 – Capital Improvement Element

Section 6 – Goals, Objectives, Policies

Figures

## 1.1 Statutory History

The Florida Legislature enacted bills in the 2002, 2004, 2005, 2011, 2012, 2015 and 2016 sessions to address the state's water supply needs. These bills, especially Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapter 163 and 373 Florida Statutes (F.S.) by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between the local land use planning and water supply planning.

## 1.2 Statutory Requirements

Per the enacted legislation, each local government must comply with the following requirements:

- 1.2.1 Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district's regional water supply plan, [163.3177(4)(a), F.S.].
- 1.2.2 Ensure that its future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177(6)(a)2.d, F.S., effective July 1, 2005]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to DEO for review. The submitted package must also include an amendment to the Capital Improvements Element, if necessary, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.
- 1.2.3 Ensure that adequate water supplies and facilities are available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving building permits, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180(2), F.S., effective June 2, 2011]. This "water supply concurrency" is now in effect, and local governments should be complying with the requirements for all new development proposals. In addition, local governments should update their comprehensive plans and land development regulations as soon as possible to address these statutory requirements. The latest point at which the comprehensive plan must be revised to reflect the concurrency requirements is at the time the local government adopts the plan

amendments to implement the recommendations of the Evaluation and Appraisal Report (EAR) or functional equivalent.

- 1.2.4 For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:
  - 1.2.4.1 Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s.373.0361(7), F.S. [s. 163.3177(6)(c)3, F.S.].
  - 1.2.4.2 Identify the traditional and alternative water supply projects, and the conservation and reuse programs necessary to meet current and future water use demands within the local government's jurisdiction [s. 163.3177(6)(c)3, F.S.]; and
  - 1.2.4.3 Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities, including development of alternative water supplies, identified in the element as necessary to serve existing and new development. [s. 163.3177(6)(c)3, F.S.]
- 1.2.5 Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five-year period. Per s. 163.3177(3)(b), F.S., modifications to update the Five-Year Capital Improvements Schedule may be accomplished by ordinance and may not be deemed to be amendments to the local comprehensive plan.
- 1.2.6 To the extent necessary to maintain internal consistency after making changes described in Sections 1.2.1 through 1.2.5 above, revise the Conservation and Coastal Management Element based on projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan, the applicable District Water Management Plan, as well as applicable consumptive use permit(s). [s. 163.3177(6)(d)3, F.S.]

If the established planning period of a comprehensive plan is greater than the ten years, the plan must address the water supply sources necessary to meet and achieve the

existing and projected water use demand for established planning period, considering the appropriate regional water supply plan. [s. 163.3167(9), F.S.]

- 1.2.7 To the extent necessary to maintain internal consistency after making changes described in Sections 1.2.1 through 1.2.5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities ' plans, and with other units of local government providing services. [s. 163.3177(6)(h)1., F.S.]

## **2.0 Background Information**

### **2.1 Overview**

The Village of Estero was incorporated in 2014 with a total area of approximately 26.5 square miles. Estero is located within Lee County, east of Estero Bay and the Gulf of Mexico, north of the City of Bonita Springs, and west and south of unincorporated Lee County. The North Branch of the Estero River originates in Estero and runs through the northern and central part of the Village, converging with the South Branch of the Estero River. Halfway Creek originates in the southern part of Estero and runs through the southern and western portions of the Village. Corkscrew Road and Estero Parkway represent local east-west travel corridors, while US-41 and I-75 are regional north-south travel corridors across this part of the State.

The Village of Estero has a sizable seasonal population, equaling approximately 49% of the permanent population based on 2018 population estimates. Approximately half of the population is aged 62 years or older, significantly higher than both Lee County as a whole (30%) and the State of Florida (22%).

The Village of Estero contracted with Metro Forecasting Models to develop population estimates for the Village's Comprehensive Plan in 2017. An explanation of the methodology used by Metro Forecasting Models (MFM) can be found in the Attachments to the Village of Estero Comprehensive Plan Data and Analysis adopted June 13, 2018. Based on the 2010 census, MFM estimates 30% of the total housing stock consists of seasonal housing units. For 2018, MFM estimates a permanent population of 34,631 for the Village of Estero, and a peak seasonal population of 51,738 (49.4% increase over permanent population). This swing in seasonal population remains constant through 2040 projections, when MFM predicts permanent and peak seasonal populations of 49,916 and 74,575, respectively (49.4% increase over permanent population).

Per the 2016 Existing Land Use data in the Comprehensive Plan Data and Analysis, the Village of Estero land use pattern is balanced with single family residential (17.3%), commercial (15.7%), recreation (12.5%), and natural conservation and buffer areas (24.1%) comprising the major land use types. Vacant land and water represent 10.7% and 8.5% of the existing land use area, respectively. Mobile homes, multi-family residential, industrial, mixed use, schools, semi-public and public buildings, and agriculture each represent less than 2% of the existing land use. The utility land use category represents 5.1%.

The Comprehensive Plan Data and Analysis identifies the largest developable vacant land by future land use categories as Village Neighborhood 1 (356 acres, 25.19% of total vacant), Village Center (300 acres, 21.23%), Transitional Mixed Use (228 acres, 16.14%), and Village Neighborhood 2 (121 acres, 8.56%). Wetlands represent the second largest category at 333 acres and 23.57% of total vacant, but this is a low-density land use category at 1 dwelling unit per 20 acres, and this category generally requires permitting and mitigation in order to develop. All other vacant land by future land use category is less than 100 acres and 5% of total vacant. Under currently allowed densities, vacant lands could accommodate up to 2,167 single family and 6,780 multi-family housing units, equivalent to roughly 30,030 additional persons based on the MFM household size ratios. The Village of Estero puts emphasis on open space and recognizes the potential for transitional mixed use and infill along existing corridors through future land use categories of Mixed Use and Village Center. The Village also discourages urban sprawl through the Future Land Use Element.

The Village of Estero falls within the public water supply services areas for Bonita Springs Utilities (southern portion of the Village) and Lee County Utilities (northern portion of the Village). The Village of Estero does not own or operate its own public water supply facilities.

## 3.0 Data and Analysis

### 3.1 Population Information

The countywide population projections provided by Bureau of Economic Research (BEER) do not provide the distribution of people residing in the municipalities and the unincorporated areas, nor do they account for seasonal populations. The distribution and seasonal information are important to consider when planning for water supplies, as it helps identify where growth is occurring and determine the peak demands on public facilities and services. The Village of Estero contracted with Metro Forecasting Models to develop population estimates for the Village's Comprehensive Plan in 2017. An explanation of the methodology used by Metro Forecasting Models (MFM) can be found in the Attachments to the Village of Estero Comprehensive Plan Data and Analysis adopted June 13, 2018. Based on the 2010 census, MFM estimates 30% of the total housing stock consists of seasonal housing units.

For 2023, the Village of Estero received a permanent population estimate of 37,507 from BEBR, or an increase of 568 persons since the 2020 Census estimate of 36,939. This does represent a slight decrease in population (335 persons) between 2022 and 2023, attributed to the impacts of Hurricane Ian, which struck Lee County in September 2022. Based on permanent to seasonal resident proportions developed by MFM in the Attachments to the Village of Estero Comprehensive Plan Data and Analysis, a peak seasonal population of 56,035 (49.4% increase over permanent population) is estimated for 2023. This swing in seasonal population is assumed to remain constant through 2040 projections, when MFM predicts permanent and peak seasonal populations of 49,916 and 74,575, respectively (49.4% increase over permanent population). Assuming the Village of Estero remains a constant percentage of the overall Lee County population (4.68% based on 2023 population estimates), the Village's 2040 permanent resident population projection is 47,114 using published 2024 BEBR medium projections. This represents a decrease of 2,800 persons in the year 2040 compared to the MFM projections. The Village of Estero annexed a small piece of property to the north of Coconut Road consisting of approximately 25 residential units.

A significant amount of the Village of Estero's seasonal population is comprised of seasonal residents (i.e., "snowbirds"), whose seasonal period extends from approximately November through April. Historically, Estero has had a larger seasonal vacancy/occupancy rate than Lee County as a whole. Vacancy rates are based on the number of vacant units for sale or rent, plus those occupied seasonally, divided by the total housing inventory. Vacancy rates within the Village of Estero are estimated at 30% based on 2020 Census data. In their analysis, MFM expects single and multi-family vacancy rates to decline to 0.275 and 0.227, respectively, by 2040. Seasonal



tourism associated with recreational activities, such as outdoor sports and shopping, also increases the seasonal population. Seasonal population may be accommodated in vacant housing units or in hotels.

Table 1 provides permanent population projections for the Village of Estero through 2035, as well as an estimated seasonal population. The projections are based on BEBR medium projections for Lee County, as described above.

**Table 1 -- Population Projections**

	<b>2023</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Village of Estero <sup>1</sup>	37,507	39,142	42,518	45,134
Countywide Permanent Population <sup>2</sup>	800,989	835,900	908,500	964,400
Estero Seasonal Population <sup>3</sup>	18,528	19,336	21,004	22,296
Countywide Seasonal Population <sup>4</sup>	144,178	150,500	163,500	173,600
Village of Estero Peak Population	56,035	58,478	63,522	67,430
Countywide Peak Population	945,167	986,400	1,072,000	1,138,000

<sup>1</sup> From 2023 Official Population Estimate (Permanent Residents): April 1, 2023, from BEBR

<sup>2</sup> BEBR medium population projection as reported in the Florida Population Studies Projections of Florida Population by County, Volume 57, Bulletin 198, January 2024

<sup>3</sup>Based on 49.4% seasonal occupancy rate from Metro Forecasting Models estimates used in The Village of Estero Comprehensive Plan

<sup>4</sup>Based on 18% seasonal occupancy rate for Lee County, rounded to nearest hundred from Lee County Public Facilities Level of Service and Concurrency Report, November 2022

The SFWMD LWCWSP (2022 Update) uses permanent county resident populations from the 2020 Decennial Census as the basis of population projections. Utility service area or DSS populations from 2017 to 2020 were estimated based on Census block data for those areas and BEBR medium annual growth rates and published 2021 population estimates. In some cases, modifications were made to service area populations based on information from local land use planning maps and local government Comprehensive Plans. Population projections to 2045 were calculated using Future Utility Service Area distributions of population served with the 2020 Decennial Census data.

The LWCWSP provides population projections for the Bonita Springs Utilities and Lee County Utilities services areas, the two utilities that provide public water supply to the Village of Estero. Due to the lag time in document preparation between the SFWMD's LWCWSP and the Village's 10-Year Water Supply Facilities Work Plan, updated population projections by BEBR have become available. Thus, slight differences may exist between the population projections used in this Work Plan and those of the SFWMD LWCWSP (2022 Update).

**3.2 Maps of Current Future Areas Served**

The map depicting current boundaries of the Village of Estero and the BSU and LCU service areas is Figure 1, which is provided in Section 6.0. LCU serves the portion of the Village of Estero north of Williams Road, and BSU serves the portion of the Village to the south of Williams Road. The Village of Estero falls wholly within either the BSU or LCU service area. There are no anticipated changes to the service areas that would affect the Village of Estero within the planning period.

**3.3 Potable Water Level of Service Standard**

Lee County Utilities has a level of service (LOS) of 250 gallons/day/equivalent residential connection (gpd/ERC). Facilities serving only multi-family or mobile homes have an LOS of 200 gpd/ERC. Facilities serving only recreational vehicles or travel trailer residential structures have an LOS of 100 gpd/ERC. BSU has a stated LOS of 235 gpd/ERC at a minimum pressure of 20 pounds per square inch (psi) at the meter anywhere within the system. The Village of Estero has adopted the LOS of either LCU or BSU for connections to their respective service areas.

**3.4 Population Information**

Table 2 shows the population and potable water demand projections for the utilities serving areas within the Village of Estero. Locations of seven (7) small public water systems, which provide water to small commercial establishments, remote locations, and a motel, were obtained from the Florida Department of Health (last updated March 2018) for the Village of Estero, as shown on Figure 1 and on Table 3 below.

**Table 2-- Population and Demands**

Water Supply Utility Service Within Local Government’s Jurisdiction								
Utility Service Area	Population Projections				Water Supply Demands (MGD)			
	2023	2025	2030	2035	2023	2025	2030	2035
Lee County Utilities	24,713	25,803	28,053	29,797	2.82	2.94	3.20	3.40
Bonita Springs Utilities	12,502	13,047	14,173	15,045	1.43	1.49	1.62	1.72
Self-Served	292	292	292	292	0.044	0.044	0.044	0.044
Village-wide Permanent Pop.	37,507	39,142	42,518	45,134	4.28	4.47	4.85	5.15
Village-wide Seasonal Pop.	18,528	19,336	21,004	22,296	2.11	2.21	2.40	2.54
Village-wide Peak Population	56,035	58,478	63,522	67,430	6.39	6.67	7.25	7.69

**Table 3 -- FDOH Limited Use Drinking Water Systems Within The Village of Estero**

Limited Use Drinking Water Systems			
Name	Program	Entity ID	Address
Estero Groves Remote Line Switch	Registered LU Commercial	474724	20720 Highland Ave.
Cypress Park Motel	LU Commercial	474268	21271 Cypress Pkwy Circle
Lee Property #1	Registered LU Commercial	1295995	20251 S. Tamiami Trail
Happehatchee Center	LU Commercial	1426699	8791 Corkscrew Rd.
Lee Property #2	Registered LU Commercial	474284	20241 S. Tamiami Trail
Jay Properties Florida/ Greenway Landscape S	LU Commercial	474398	20190 S. Tamiami Trail
Gess Family Partnership & Gulf Coast Driving Range <sup>1</sup>	LU Commercial	474553	9000 Williams Rd.

1. The Village of Estero recently purchased the property and has closed the driving range.

### 3.5 Water Supply Provided by Local Government

#### Village of Estero—Lee County Utilities Service Area

Lee County Utilities operates five (5) interconnected water treatment plants (WTPs) countywide. The majority of the potable water demand within the Village of Estero LCU service area comes from the Pinewoods WTP and wellfield, located within the boundary of the Village, although the Corkscrew, Green Meadows, North Lee and Olga WTPs can also supply water to this area as needed. Figure 2 shows the water supply facilities from both LCU and BSU in and near the Village of Estero.

According to the SFWMD public water supply permit (No. 36-00122-W), raw water for the Pinewoods WTP is sourced from the Water Table aquifer, Sandstone aquifer and Lower Hawthorn aquifer (an alternative water supply source) via 23 existing wells ranging from 8 to 16 inches in diameter, and eight (8) proposed wells 14 inches in diameter. The annual and maximum month allocations for the permit are 2,685.8 and 268.4 MG, respectively, then further limited by source. Treated water from the Pinewoods WTP is distributed to LCU’s interconnected system. The Pinewoods Wellfield and WTP are located within the Village of Estero. This permit will come up for renewal in 2034, at which time Lee County may request an increase in allocation to meet the projected demands of the service area.

SFWMD permit 36-00152-W for the North Lee wellfield authorizes annual and maximum month allocations of 5,667.50 and 587.30 MG, respectively, via withdrawals from 20 existing wells open to the Lower Hawthorn aquifer and 21 additional proposed wells.

LCU's largest SFWMD permit for public water supply, 36-00003-W, includes the Green Meadows and Corkscrew wellfields, and Olga treatment facility, which is authorized for withdrawals from the C-43 (Caloosahatchee River). Permit 36-00003-W authorizes annual and maximum month allocations of 12,508 and 1,355 MG, respectively. In addition to surface water withdrawals from the C-43, LCU's Green Meadows and Corkscrew wellfields withdraw groundwater from the Surficial, Sandstone and Upper Floridan aquifers from a combined total of 98 existing production wells. Forty-four (44) proposed wells, open to the Surficial, Sandstone and Upper Floridan aquifers, remain on the permit, along with four (4) proposed surface water pumps. Additionally, the permit includes aquifer storage and recovery (ASR) facilities at the Olga and Corkscrew WTPs. This permit will come up for renewal in 2031, at which time Lee County may request an increase in allocation to meet the projected demands of the service area.

According to the 2020 U.S. Census, the average number of persons per household for the area served by LCU is 2.44. The population in the Village of Estero served by LCU is estimated at 25,963 permanent residents and 38,789 combined permanent and seasonal residents in 2023. This population is assumed to grow at the same rate as the Village of Estero during the 10-year planning period (through 2035). The location of the LCU service area within the Village of Estero is shown on Figure 1.

According to the SFWMD water use permit staff reports for 36-00003-W and 36-00122-W, the annual allocation is based on a raw water per capita rate of 118 gallons per day (gpd). Permit 36-00003-W includes losses to the ASR system at the Corkscrew wellfield in the maximum monthly allocation. Permit 36-00152-W assumes a raw water per capita rate of 116 gpd and includes an allocation for backup supply of the Olga WTP (covered under permit 36-00003-W) in the amount of 1,616 million gallons per year and 152 million gallons per month.

The following table provides an analysis of the available water treatment plant capacity and SFWMD permitted allocation. The analysis shows a WTP surplus to treat additional; raw water and a surplus of SFWMD permitted raw water allocation through the 10-year planning period.

**Table 4 -- Lee County Utilities Water Treatment Plants**

	2023	2025	2030	2035
Total Population Served (LCU WUPs 36-00003-W, 36-00122-W, 36-00152-W) <sup>1</sup>	405,127	420,816	454,250	482,200
Population Served Village of Estero <sup>2</sup>	38,789	40,498	44,029	46,765
Finished Drinking Water Demand per Capita (GPD) <sup>3</sup>	100	100	100	100
Finished Water Ave. Daily Demand (MGD)	40.51	42.08	45.43	48.22
Estero Finished Water Ave. Daily Demand (MGD)	3.88	4.05	4.40	4.68
Available Facility Capacity (MGD)	52.9	57	57	57
Facility Capacity Surplus (Deficit) <sup>4</sup>	12.39	14.92	11.58	8.78
Raw Water SFWMD Allocation (MGD Annual Ave.)	57.15	57.15	57.15	57.15
Raw Water Ave. Daily Demand (MGD) <sup>5</sup>	47.40	49.24	53.15	56.42
Estero Raw Water Ave. Daily Demand (MGD)	4.54	4.74	5.15	5.47
Raw Water Permitted Surplus (Deficit) <sup>6</sup>	9.75	7.91	4.00	0.73

<sup>1</sup> Based on ERC data provided in Lee County Public Facilities Level of Service and Concurrency Report 2021; 2023 Lee County Water Supply Facilities Work Plan, December 2023; 2020 Census data and 2024 BEBR population projections.

<sup>2</sup>Total population (permanent plus seasonal) within Village of Estero not served by BSU or DSS.

<sup>3</sup>Average of calculated finished per capita water demands from 36-00003-W, 36-00122-W and 36-00152-W staff reports.

<sup>4</sup>Calculated by subtracting Finished Water Ave. Daily Demand from Available Facility Capacity.

<sup>5</sup>Average of raw per capita water demands from 36-00003-W, 36-00122-W and 36-00152-W staff reports (117 gpd), includes Village of Estero.

<sup>6</sup>Calculated by subtracting Raw Water Ave. Daily Demands from Raw Water SFWMD Allocation.

For the period from 2025 to 2035, the projected population within the Village of Estero served by LCU represents between 9.6 and 9.7% of the projected population served by the utility. Population projections based on Lee County’s 2021 Public Facilities Level of Service and Concurrency report, based on reported ERC and the average number of persons per household from 2020 Census data as shown in Table 4, are approximately 38.6 to 48.2% higher than population projections for the utility included in the LWCWSP. These values represent peak population served. The analysis should be considered conservative within the context of the LWCWSP.

Based on the population projections and demand estimates, Lee County Utilities should have adequate plant capacity and permitted raw water allocation through 2030, even assuming no increase in allocation requested for permit 36-00003-W at the time of the 2031 renewal and permit 36-00122-W at the time of the 2034 renewal.

Lee County Utilities System PWS Summary Table	
SFWMD Permit Numbers	36-00003-W, 36-00122-W, 36-00152-W
Permit Expiration Dates	6/15/2031, 12/1/2034 & 8/26/2040, respectively
Raw Water Sources	Water Table, Surficial, Sandstone, Mid-Hawthorn, Lower Hawthorn & Upper Floridan aquifers, SFWMD Canal C-43
Annual Allocations (MG)	12,508; 2,685.76 & 5,667.50, respectively
Maximum Monthly Allocations (MG)	1,355; 268.76 & 587.30, respectively
Treatment Type	Reverse osmosis, nanofiltration, lime softening
Treatment Efficiency	80 (RO)-95% (lime softening)
Treatment Capacity (MGD)	52.9 (combined), 57 after 2025
Storage Volume (MG)	36.5 in tank; 3.2 ASR at Corkscrew
Interconnect or Bulk Sales Agreement	Interconnects with the Cities of Fort Myers (5) and Cape Coral (2), Bonita Springs Utilities (1); provides water to the Town of Fort Myers Beach

### 3.6 Water Supply Provided by Other Entities

#### Village of Estero—Bonita Springs Utilities Service Area

Bonita Springs Utilities (BSU) operates reverse osmosis and lime softening water treatment plants to supply its service area. The BSU WTP on East Terry Street near I-75 supplies potable water to the portion of the Village of Estero south of Williams Road. Figure 2 shows the water supply facilities for both LCU and BSU in and near the Village of Estero.

According to the LWCWSP, the per capita finished water rate is 153 gpd based on historical use from 2016 to 2020. Data used in the Water Demands Projection technical memorandum prepared by Black and Veatch in support of the 2020 permit modification (application #200930-1), bases the requested allocation on a finished water usage of approximately 89 gpdpc, based on a population per ERC of 2.35 persons. Based on a system efficiency of 100% for the portion of water supplied by the Lower Tamiami aquifer, per correspondence with BSU, and an efficiency of 75% for the Floridan Aquifer System, the weighted average per capita raw water rate is approximately 100 gpd, per the Black and Veatch memo. The SFWMD permit modification bases the allocation on a raw water per capita use rate of 100 gpd, so a raw water per capita rate of 100 gpdpc is used in Table 5.

BSU previously had allocations from the Lower Tamiami aquifer permitted under SFWMD water use permit 36-00008-W and allocations from the Upper Floridan aquifer permitted under water use

permit 36-04062-W. A modification to permit 36-00008-W approved in 2022 combined the two permits such that permit 36-00008-W now covers both the Lower Tamiami and Upper Floridan aquifer wellfields and the allocation for the entire BSU service area in a single permit.

According to the SFWMD public water supply permit (No. 36-00008-W), raw water for the BSU WTP is sourced from the Lower Tamiami aquifer and Upper Floridan aquifer (an alternative water supply source) via 19 existing Lower Tamiami aquifer wells ranging from 8 to 14 inches in diameter, 15 wells existing Upper Floridan aquifer wells ranging from 12 to 16 inches in diameter, four proposed eight-inch diameter Lower Tamiami aquifer wells, and 16 proposed 14-inch diameter Upper Floridan aquifer wells. The annual and maximum month allocations for the permit are 5,986 and 618.3 MG, respectively, then further limited by source. The permit has a temporary 5-year allocation of 7.26 MGD from the Lower Tamiami aquifer that expires in 2027. The permitted allocation is intended to supply the service area through 2041.

The following table provides an analysis of the available WTP capacity and the SFWMD permitted allocation. The analysis shows a WTP surplus to treat additional raw water and a surplus of SFWMD permitted raw water allocation through the 10-year planning period.

**Table 5 – Bonita Springs Utilities Water Treatment Plants**

	2023	2025	2030	2035
Functional Population Served	121,220	125,876	137,073	145,688
Functional Population Served Village of Estero <sup>2</sup>	16,811	19,493	21,174	22,477
Finished Drinking Water Demand per Capita (GPD) <sup>3</sup>	89	89	89	89
Finished Water Ave. Daily Demand (MGD)	10.79	11.20	12.20	12.97
Estero Finished Water Ave. Daily Demand (MGD)	1.50	1.73	1.88	2.00
Available Facility Capacity (MGD)	19.06	21	21	21
Facility Capacity Surplus (Deficit) <sup>4</sup>	8.27	9.80	8.80	8.03
Raw Water SFWMD Allocation (MGD Annual Ave.)	16.4	16.4	16.4	16.4
Raw Water Ave. Daily Demand (MGD) <sup>5</sup>	12.12	12.59	13.71	14.57
Estero Raw Water Ave. Daily Demand (MGD)	1.68	1.95	2.12	2.25
Raw Water Permitted Surplus (Deficit) <sup>6</sup>	4.28	3.81	2.69	1.83

<sup>1</sup> Based on population projections from BSU, includes seasonal component.

<sup>2</sup> Approximately 17% of the total BSU population served, with seasonal component added.

<sup>3</sup> Average of calculated finished per capita water demands from 36-00008-W staff report and files from application 200930-1.

<sup>4</sup> Calculated by subtracting Finished Water Ave. Daily Demand from Available Facility Capacity.

<sup>5</sup> Raw per capita water demand from 36-00008-W staff report (100 gpd), includes Village of Estero.

<sup>6</sup> Calculated by subtracting Raw Water Ave. Daily Demands from Raw Water SFWMD Allocation.

Based on the population projections and demand estimates, Bonita Springs Utilities should have

adequate plant capacity and permitted raw water allocation through 2035, based on a WTP expansion to 21.0 MGD after 2025.

Bonita Springs Utilities System PWS Summary Table	
SFWMD Permit Number	36-00008-W
Permit Expiration Dates	3/1/2042
Raw Water Sources	Lower Tamiami & Upper Floridan aquifers,
Annual Allocation (MG)	5,986.00
Maximum Monthly Allocation (MG)	618.30
Treatment Type	Reverse osmosis, lime softening
Treatment Efficiency	75 (RO)-100% (lime softening)
Treatment Capacity (MGD)	19.06, 21.0 after 2025
Storage Volume (MG)	13
Interconnect or Bulk Sales Agreement	Interconnects with Lee and Collier Counties

Small Public Water Systems

A small number (n = 7) of small public water systems are located within the Village of Estero and provide water to small commercial establishments, remote locations, and a motel. The Limited Use Commercial Systems are small and serve transient populations, as regulated by the Department of Health. A list of these small public water systems was obtained from the Florida Department of Health GIS files available through the Florida Geographic Data Library. Locations of small public water systems are shown as points on Figure 1 and listed in Table 3.

Self-Supply

A small of individual water users within the Village of Estero have permitted wells for domestic self-supply, as reported by the Lee County Well Construction Database. These facilities may include those serving small public water systems. For the purposes of this Work Plan, self-supply and small public water systems are grouped together within the self-supply category, given the small number of each.

**3.7 Future Water Supply Demands**

Future growth is anticipated to be driven by the three regional commercial centers and the growth of Florida Gulf Coast University (campus located outside of Estero to the northeast). These factors have been accounted for in the population projections provided in Section 3.4. The biggest project of note within the planning period is the Woodfield multiuse development, which will consist of



multifamily housing, commercial space, a civic building and a hotel. At buildout, expected to occur within the next five years, the project will have average daily demands of 190,700 gpd supplied by BSU.

### **3.8 Potential Future Water Suppliers**

No potential future water suppliers within the Village of Estero are anticipated during the planning period.

### **3.9 Agriculture and Landscape/Golf Water Supply Demands**

The LWCWSP predicts agricultural demands will remain steady in Lee County through 2035 and then decrease slightly thereafter. Landscape irrigation will increase countywide, and golf course irrigation is projected to remain constant. Several properties within the Village of Estero have water use permits through the SFWMD for landscape irrigation, including multiple planned communities with and without golf courses, mixed use and commercial properties, schools, and parks. Only four active agricultural/nursery water use permits fall within the Village of Estero due to the small percentage of land use in that category. All of these permits have allocations for less than 3 million gallons per month.

Consistent with trends for Lee County as a whole, landscape irrigation will likely increase over the planning period, proportional to the anticipated growth, and rely on irrigation wells and onsite lake withdrawals for supply. Growth will likely occur as in-fill of existing developments and conversion of currently vacant lands. Many existing residential/golf course communities occupy former agricultural lands, and landscape/recreation irrigation demands have replaced former agricultural irrigation demands in these locations.

### **3.10 Commercial/Industrial Water and Power Generation Supply Demands**

According to the LWCWSP, Lee County will have an increase of 3.19 MGD between 2020 and 2035 for commercial and industrial self-supplied demand. Traditional groundwater sources are expected to meet demands, provided the water use permitting conditions are met.

Alternative sources will be evaluated as part of the water use permitting process. Some industrial applications require potable-quality water. Potable water to serve these users are included in this Work Plan. If not on-line or available, potable water will be self-supplied. Thirteen small industrial water use permits exist within the Village of Estero, but none has an allocation for greater than 3 million gallons per month.

**3.11 Conservation**

The following conservation measures have been incorporated by the Comprehensive Plan for the Village of Estero, in addition to complying with elements of the water conservation plan developed by both LCU and BSU for their respective service areas. The Village of Estero has the following language related to conservation in its current Comprehensive plan.

Florida Friendly Landscaping

The Village will promote Florida-friendly landscaping techniques in the land development code and provide education on water conservation through creative landscaping, and promote the conservation and use of native plant species through Florida-friendly landscaping techniques on Village projects.

Water Conservation Rate Schedule

Both LCU and BSU have tiered rate structures to promote water conservation.

Irrigation Restrictions

The Village of Estero adopted an ordinance in 2021 restricting landscape irrigation to two days per week year-round, with alternating days for even and odd addresses between 4:00 p.m. and 10:00 a.m. The Village of Estero educates residents on the ordinance via its web site.

Rain Sensors and Conservation of Irrigation Water

The Florida Building Code requires the installation of rain sensors for automatic sprinkler systems. Irrigation systems should conserve water and be designed to eliminate application of water to impervious areas.

Ultra Low Volume Plumbing Fixtures

Both LCU and BSU require installation of ultra low volume (ULV) plumbing fixtures in all new construction. Maximum flow volumes are:

Toilets: 1.6 gal/flush at 80 psi

Showerheads: 2.5 gpm at 80 psi

Faucets: 2.2 gpm at 60 psi

#### Water Loss Accounting

Both BSU and LCU estimate water losses due to hydrant flushing, line breaks and dead-end main flushing; test and calibrate meters annually; and conduct annual leak detection surveys.

#### Public Information

LCU, BSU and the Village of Estero provide websites that include information on water supply and water shortage declarations, and a contact number for residents to report leaks, in addition to resources for water conservation published by the SFWMD.

### **3.12 Reuse**

Both LCU and BSU provide reuse water to customers. All public access reuse water generated by BSU is sold to Resource Conservation Systems, which supplies irrigation water to communities located within the Village of Estero, such as the Brooks, and Bonita Springs. LCU also provides reuse water to communities within the Village of Estero and elsewhere within its service area. LCU continues to identify projects to maximize its reuse water usage.

## 4.0 Regional Issues

The LWCWSP identifies regional water supply issues which may impact the Village of Estero's water supply planning, including seasonal availability of surface water supplies and associated establishment of minimum flows and levels (MFLs) and recovery strategies, peak freshwater discharges to the Caloosahatchee Estuary, and increased withdrawals from the Surficial and Intermediate aquifer systems. The LWCWSP also discusses limited freshwater availability in the Surficial Aquifer System (SAS) and Intermediate Aquifer System (IAS), and MFLs and maximum developable limits (MDLs) to address management of those resources. A discussion of regional issues, as they pertain to the Village of Estero, is provided below.

### 4.1 Lower West Coast Water Supply Plan

#### *Lake Okeechobee Service Area (LOSA) MFLs, Recovery Strategy and Restricted Allocation*

Due to the implementation of the United States Army Corps of Engineers (USACOE) Lake Okeechobee federal recovery strategy, the SFWMD developed an MFL recovery strategy in 2008 to address predicted exceedances of the MFL. As part of the recovery strategy, restricted allocations in the LOSA were implemented in response to the predicted MFL exceedances and decline in the level of certainty for existing legal users (ELUs) of the resource. The restricted allocations limit new withdrawals from Lake Okeechobee.

Of the main water suppliers for the Village of Estero, only LCU withdraws surface water from the C-43, part of LOSA, at its Olga facility, as authorized under SFWMD permit #36-00003-W. LCU's C-43 allocation constitutes 7.6% of its total permitted withdrawals, which were evaluated as part of the last permit renewal approved in 2011. The last permit renewal included discussion of the MFL and Water Availability Rule, which states that the permitted allocation is calculated as the base condition water use. Additionally, LCU has implemented an ASR program to increase storage capacity at Olga in order to mitigate impacts to operations due to seasonal variations in flow and salinity. The permit received a 20-year duration. Additionally permit 36-00152-W provides allocation for backup supply of the Olga WTP in the amount of 1,616 million gallons per year and 152 million gallons per month.

Neither LCU nor the Village of Estero proposes any increase in withdrawals from the LOSA system to meet projected water demands.

*Limited Fresh Groundwater Resources in the SAS and IAS*

According to the LWCWSP, there is limited availability of fresh groundwater in the Lower Tamiami (SAS), Sandstone (IAS) and Mid-Hawthorn (IAS) aquifers due to concerns over impacts to wetlands and ELUs, and saline water intrusion. MFLs and MDLs have been established for these aquifers since 2001. Parts of Lee, Collier and Hendry Counties are most affected by the MFLs and MDLs. The SFWMD will review requests for additional withdrawals from these sources on a case-by-case basis during the permitting process. Water suppliers to the Village of Estero, both LCU and BSU, do source water from the Sandstone and Lower Tamiami aquifers, respectively, within the reduced threshold areas. To meet increased water demands, both water suppliers have expanded into the Upper Floridan aquifer, not considered a fresh groundwater source, while limiting withdrawals from the freshwater aquifers discussed above.

The Village of Estero has several policies to limit consumption from freshwater aquifers, both through discouraging overuse of potable water and limiting quantities of freshwater used for irrigation within the Village of Estero. Such policies include:

INF-1.2.3 The Village shall base all future development and use of groundwater resources on determinations of the safe yield of the aquifer system(s) in order not to impair the native groundwater quality or create other environmental damage. Criteria for safe-yield determinations will be determined by the SFWMD, the agency charged with permitting these activities.

INF-1.2.5 Coordinate with Lee County and utility providers to identify water needs consistent with projections of human population and the needs of natural systems in order to determine the future demands for groundwater.

INF-1.2.6 Continue to encourage the developer driven expansion of infrastructure to provide reuse water service when sufficient supply is available.

INF-1.2.7 When and where available, reuse water should be the first option for meeting irrigation needs of a development. Where reuse water is not available, surface water or low quality groundwater should be used for irrigation. All other potential water sources must be eliminated prior to selecting potable water as the sole source for meeting the irrigation needs of a development.

CCM-1.10.1 Work with Lee County and utility providers to identify water needs consistent with projections of human population and the needs of natural systems in order to determine the future demands for groundwater. The Village will support appropriate measures to ensure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.

CCM-1.10.2 Comply with the Village of Estero's Mandatory Year-Round Landscape Irrigation Conservation ordinance and cooperate with emergency water conservation measures of the South Florida Water Management District.

CCM-1.10.4: Promote Florida Friendly landscaping techniques in the Land Development Code and provide education on water conservation through creative landscaping, and promote the conservation and use of native plant species through Florida-friendly landscaping techniques on Village projects.

*Caloosahatchee River (C-43) MFL and Estuary Impacts*

The Caloosahatchee River has had an MFL established at the S-79 structure in Lee County since 2001. On multiple occasions, the MFL has not been met. Additionally, peak freshwater discharges from Lake Okeechobee during the wet season affect the health of the estuary, as do inadequate flows during the dry season. Additional storage capacity is needed to address water availability issues. As discussed previously, only LCU withdraws a small portion of its overall allocation from the Caloosahatchee River (C-43), which is established per historical base condition water use, with no proposed increases from this source.

The Village of Estero has multiple utility extension projects planned within the next 5 to 10 years designed to extend utility service to communities currently served by package plants and septic systems. Removal of these systems is intended to improve water quality in both the Estero River and Estero Bay.

The Village of Estero also has policies intended to reduce the potential for damaging wet season flows to the estuary through attenuation of runoff and improved water quality. Such policies include:

ICE-1.4.3 Participate with other appropriate governments to prepare and implement water management plans, including the Estero Bay Agency on Bay Management, Charlotte Harbor National Estuary Program, the Charlotte Harbor Management Plan, DEP aquatic preserve management plans, water supply plans, and other water resource management plans.

CCM-1.3.11 The Village shall develop a stormwater master plan to readdress recurring flood issues which takes into account an anticipated increase in flooding from rainfall and storm surge.

CCM-1.9 The Village coordinate with County, state and federal agencies to manage the quality of the Village's surface waters with priority on the Estero Bay ecosystem so as to maintain or improve water quality and wildlife health and diversity; to reduce or maintain current pollution loading and system imbalances in order to conserve estuarine productivity; and to provide the best use of estuarine areas.

CIE-1.2.7 & INF-1.1.1 The following surface water management standards are adopted as minimum acceptable levels of service:

- A. The existing surface water management system in the Village will be sufficient to prevent the flooding of designated evacuation routes (U.S. 41, Corkscrew Road, Three Oaks Parkway,

Interstate 75, and Ben Hill Griffin Parkway) from the 25-year, 3-day storm event (rainfall) for more than 24 hours.

- B. Regulation of Private and Public Development All new private and public developments shall be constructed with floor slabs at a minimum of one (1) foot above the 100-year, 3-day storm event flood plain level and shall be safe from flooding from a 100-year, 3-day storm event (rainfall). In such new public and private developments, roads and parking lot travel ways shall be constructed at a minimum of the 25-year, 3-day storm event flood plain level.

Surface water management systems in new private and public developments (excluding widening of existing roads) must be designed to SFWMD standards (to detain or retain excess stormwater to match the predevelopment discharge rate for the 25-year, 3-day storm event [rainfall]).

Stormwater discharges from development must meet relevant water quality and surface water management standards as set forth in state rules including but not limited to requirements listed in Numeric Nutrient Criteria and Total Maximum Daily Loads and Basin Management Action Plans.

New developments must be designed to avoid increased flooding of surrounding areas. Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.

The Village land development regulations shall provide a process to determine how this policy shall apply to the remainder of partially developed permitted projects or subdivisions on a case by case basis.

- C. Design trunk conveyance crossings of arterial roads to be free of flooding from 25- year, 3-day storm events at a minimum.
- D. Other standards may be added by amendment to this comprehensive plan for development impacting water bodies that have water quality impairments identified by Florida Department of Environmental Protection, including but not limited to the following water bodies: 3258C4 - Mullock Creek (Marine Segment); 3258C – Mullock Creek; 3258D1 - Estero River (Marine Segment); 3258D2 - Estero River; 3258H2 - Spring Creek (Marine Segment).

INF-1.1.2 Prepare a Stormwater Master Plan that is geographically based on watersheds using best available data related to rainfall, soils, topography, drainage patterns and water quality.

The Stormwater Master Plan will evaluate future conditions (including build-out within the watershed) and long-duration storms, identify existing wetlands and natural areas, and promote the protection of natural channels and conveyances. The Stormwater Master Plan will also provide recommendations on mitigation activities for the enhancement of existing stormwater management

facilities and/or natural conveyances and recommend other programmatic and regulatory action items to be implemented within the land development code with the intent to reduce increased flooding from future conditions within the watershed and enhance water quality.

INF-1.1.4 The Village shall endeavor to protect, secure and restore, where feasible, natural flowway systems including, without limitation, the Main, South and North Branches of the Estero River and the Halfway Creek flowway, through regulations or incentives to assure their continued environmental function.

INF-1.1.7 Provide sufficient performance and/or design standards for development protective of the function of natural drainage systems, including the following provisions to be addressed in the land development code:

- A. Provide sufficient performance and design standards to require post-development runoff to approximate the total characteristics of the natural flow prior to development.
- B. Floodplains must be managed to minimize the potential loss of life and damage to property by flooding.
- C. Floodways should be kept as unobstructed as possible.
- D. Natural flow patterns will be restored by public investment where such action is of significant public or environmental benefit, and feasible.
- E. To maintain flowways, the Village may coordinate with landowners at time of new development or redevelopment to establish flowage easements while allowing concentration or clustering of development on the remainder of the property.
- F. The Village will maintain regulations which provide for the management and protection of floodplains, consistent with state and federal regulations.
- G. Through the land development code, the Village will require developments to have and maintain an adequate surface water management system that is consistent with the criteria adopted per recommendations of the Stormwater Master Plan, provide for acceptable programs for operation and maintenance, and post-development runoff conditions which reflect the natural surface water flow in terms of rate, direction, quality, hydroperiod, and drainage basin.
- H. Channelization of natural streams and rivers is prohibited; channelization of other natural watercourses is discouraged.
- I. Through the land development code, the Village will adopt appropriate regulations to protect the natural functions of riparian systems from incompatible development practices along their banks.



## 5.0 Capital Improvements

### 5.1 Work Plan Projects

The Village of Estero has several planned capital improvement projects relating to water supply within the next 5 years in the form of utility extension projects for communities within the Village currently served by package plants. Both LCU and BSU, the potable water suppliers to the Village of Estero, also have planned capital improvement projects over the period from 2023 through 2035.

### 5.2 Work Plan Projects

The following Table 6 is a Five-Year Schedule of Capital Improvements for water supply projects proposed by LCU and BSU in the next five years. These projects will be funded as shown below.

**Figure 6 -- 5-Year Capital Improvement Projects**

Estimated Cost in Millions of Dollars								
Description	2024-25	2025-26	2026-27	2027-2028	2028-35	Water Source	Funding Provider	C&O Time-frame
<b>Village of Estero</b>								
Package WWTP UEP Design & Permitting	\$0.11					Wastewater	Grant Reimbursable	2024-2025
Broadway W UEP Design & Permitting	\$0.148					Wastewater	Grant Reimbursable	2024-2025
Broadway E UEP Design & Permitting	\$0.698					Wastewater	Grant Reimbursable	2024-2025
See See Street UEP Design & Permitting	\$0.048					Wastewater	Grant Reimbursable	2024-2025
Cypress Park UEP Design & Permitting	\$0.281					Wastewater	Grant Reimbursable	2024-2025
Estero Bay Village UEP		\$1.924				Wastewater	Grant Reimbursable	2025-2026
Sunny Groves UEP	\$2.90					Wastewater	Grant Reimbursable	2024-2025
Cypress Bend UEP	\$1.70					Wastewater	Grant Reimbursable	2024-2025
Estero River Heights UEP	\$10.77					Wastewater	Grant Reimbursable	2024-2025
Charring Cross UEP	\$5.50					Wastewater	Grant Reimbursable	2024-2025
Sherrill & Luetich UEP			\$7.74			Wastewater	Grant Reimbursable	2026-2027
Broadway E-Highlands UEP		\$4.20				Wastewater	Grant Reimbursable	2025-2026
Cypress Park UEP	\$0.272					Wastewater	Grant Reimbursable	2024-2025
<b>Total Estimated Costs</b>	<b>\$22.427</b>	<b>\$6.124</b>	<b>\$7.74</b>					

(From Village of Estero Capital Improvement Plan—FY 2024-2025)

Estimated Cost in Millions of Dollars								
Description	2024-25	2025-26	2026-27	2027-2028	2028-35	Water Source	Funding Provider	C&O Time-frame
<b>Lee County Utilities</b>								
FMB WRF Capacity Restoration	\$41	\$46	\$46	\$40	\$31	Reuse	Enterprise	2024-2030
Green Meadows 2 <sup>nd</sup> DIW	\$7	\$7.5				UFA	Enterprise	2024-2026
NLC WTP Expansion to 15 MGD	\$10					UFA	Enterprise, Debt	2023-2025
NLC WTP Wellfield Expansion	\$3.725	\$8.5	\$7.225			UFA	Enterprise	2024-2027
SE Wellfield Expansion	\$3.5	\$10.5	\$4	\$1.5	\$20	Multiple	Enterprise	2024-2030
SEWRF	\$32.5	\$55	\$48.2	\$15		Reuse	Enterprise	2023-2028
Three Oaks 2 <sup>nd</sup> DIW	\$7.5	\$7.5				Reuse	Enterprise	2023-2027
Three Oaks WRF Expansion	\$3					Reuse	Enterprise	2023-2025
<b>Total Estimated Cost</b>	<b>\$108.23</b>	<b>\$135</b>	<b>\$105.43</b>	<b>\$56.5</b>	<b>\$51</b>			

(From published Lee County Annual Budget FY2023-2024)

Estimated Cost in Millions of Dollars								
Description	2024-25	2025-26	2026-27	2027-2028	2028-35	Water Source	Funding Provider	C&O Time-frame
<b>Bonita Springs Utilities</b>								
Diversification of LTA Wellfield	\$0.5	\$0.5	\$0.5			LTA	BSU	2025-2027
RO WTP and UFA Wellfield Expansion Ph III	\$6	\$5				UFA	BSU	2024-2026
<b>Total Estimated Cost</b>	<b>\$6.5</b>	<b>\$5.5</b>	<b>\$0.5</b>					

(From Bonita Springs Utilities)

## 6.0 Goals, Objectives and Policies

An assessment of existing Goals, Objectives and Policies (GOPs) in the Village of Estero Comprehensive Plan was performed in preparation of this Work Plan to determine those that address water supply sources and facilities, as well as conservation and reuse programs. Goals are indicated in **bold**, Objectives in *italic*, and Policies in plain type.

### 6.1 Infrastructure Element

*INF-1.2: Protect groundwater supplies from those activities having the potential for depleting or degrading those supplies.*

INF-1.2.1 The Village shall implement Lee County's wellfield protection ordinance through the land development code to protect the quality of water flowing into potable water wellfields.

INF-1.2.2 The Village shall coordinate with the Lee County staff hydrogeologist for review and comment on all development applications near public utility potable water wellfields, with particular attention to proposed land uses within a 10-year travel time from the wellheads.

INF-1.2.3 The Village shall base all future development and use of groundwater resources on determinations of the safe yield of the aquifer system(s) in order not to impair the native groundwater quality or create other environmental damage. Criteria for safe-yield determinations will be determined by the SFWMD, the agency charged with permitting these activities.

INF-1.2.4 For maximum protection of groundwater resources, coordinate with applicable utility providers to identify future wellfields and/or relocation site(s) for existing wellfields well in advance of need. Coordinate with SFWMD, water suppliers, and Florida Department of Environmental Protection to avoid duplication and to assist in data collection.

INF-1.2.5 Coordinate with Lee County and utility providers to identify water needs consistent with projections of human population and the needs of natural systems in order to determine the future demands for groundwater.

INF-1.2.6 Continue to encourage the developer driven expansion of infrastructure to provide reuse water service when sufficient supply is available.

INF-1.2.7 When and where available, reuse water should be the first option for meeting irrigation needs of a development. Where reuse water is not available, surface water or low quality groundwater should be used for irrigation. All other potential water sources must be eliminated prior to selecting potable water as the sole source for meeting the irrigation needs of a development.

*INF-1.3: Coordinate with the South Florida Water Management District to ensure that the Village Comprehensive Plan remains consistent with the District's regional water supply plans.*

INF-1.3.1 No building permit will be issued unless potable water supply will be available to meet current and projected growth demands, or surety is given that it will be available prior to occupancy.

INF-1.3.2 The Village shall develop a Water Supply Facilities Work Plan within 18 months after the South Florida Water Management District approves an update to the regional water supply plan.

INF-1.3.3 The Village shall continue to evaluate the latest water supply plans issued by the South Florida Water Management District to ensure consistency in the Village Comprehensive Plan and the Village's Water Supply Facilities Work Plan.

INF-1.3.4 The Village shall coordinate with other government agencies and private suppliers of potable water during the water supply planning process to include the review of land use changes, addressing population projections, and acceptable level of service standards.

*INF-1.5: The Village of Estero shall coordinate with utility providers to ensure the provision of acceptable levels of potable water service.*

INF-1.5.1 The minimum acceptable level of service standard for potable water connections to Lee County Utilities will be:

An available supply and treatment capacity of 250 gallons per day per equivalent residential connection (ERC), except that facilities serving only multi-family or mobile home residential structures must have a capacity of 200 gallons per day and facilities serving only recreational vehicle or travel trailer residential structures must have a capacity of 100 gallons per day.

INF-1.5.2 The minimum acceptable level of service standard for potable water connections to Bonita Springs Utilities will be:

An available supply and treatment capacity of 235 gallons per day per equivalent residential connection (ERC) and delivery of potable water at a minimum pressure of 20 pounds per square inch (psi) at the meter anywhere in the system.

INF-1.5.3 Utility providers are encouraged to construct and install sufficient treatment facilities and distribution systems that will meet or exceed the minimum acceptable service standards and with the capacity to deliver water at a pressure of 40 pounds per square inch (wp PSI static) at the meter anywhere on the individual system (excluding fire flow conditions). All utility providers must advise planning and engineering staff of the Village regarding system expansions or modifications and must regularly provide summaries to the Village on compliance with water treatment and quality standards.

INF-1.5.4 No development order for new development will be issued unless potable water service, at the minimum acceptable level of service, is available at the property line, or surety is given that it will be installed prior to occupancy.

INF-1.5.6 The costs of new or augmented potable water infrastructure that is developed by a utility provider will be borne by those who benefit from the improved supply.

INF-1.5.7 New development will pay through appropriate financial mechanisms its fair share of the costs of providing standard potable water for that development.

## **6.2 Conservation and Coastal Management Element**

CCM-1.10.1 Work with Lee County and utility providers to identify water needs consistent with projections of human population and the needs of natural systems in order to determine the future demands for groundwater. The Village will support appropriate measures to ensure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.

CCM-1.10.2 Comply with the Mandatory Year Round Landscape Irrigation Conservation Measures as detailed in the Village of Estero's Mandatory Year-Round Landscape Irrigation Conservation ordinance and cooperate with emergency water conservation measures of the South Florida Water Management District.

CCM-1.10.3 Develop and implement a Water Supply Facilities Work Plan, as required by the State of Florida. The Village shall use the document as the Village's guide to water supply facility planning with a minimum planning horizon as specified by the State of Florida. A copy of the adopted Water Supply Facilities Work Plan will be maintained and kept on file by the Village.

CCM-1.10.4 Promote Florida-friendly landscaping techniques in the land development code and provide education on water conservation through creative landscaping, and promote the conservation and use of native plant species through Florida-friendly landscaping techniques on Village projects.

CCM-1.10.6 Support and comply with Lee County's wellfield protection ordinance protecting the quality of water flowing into potable water wellfields.

### **6.3 Intergovernmental Coordination Element**

*ICE-1.3: The Village shall coordinate with the South Florida Water Management District to ensure that the Village Comprehensive Plan remains consistent with the District's latest regional water supply plan.*

ICE-1.3.1 Continue to evaluate the latest water supply plans issued by the South Florida Water Management District to ensure consistency in the Village Comprehensive Plan and the Village's Water Supply Facilities Work Plan.

ICE-1.3.2 Coordinate with other government agencies and private suppliers of potable water during the water supply planning process to include the review of land use changes, addressing population projections, and acceptable level of service standards.

ICE-1.4.3 Participate with other appropriate governments to prepare and implement water management plans, including the Estero Bay Agency on Bay Management, Charlotte Harbor National Estuary Program, the Charlotte Harbor Management Plan, DEP aquatic preserve management plans, water supply plans, and other water resource management plans.

### **6.4 Capital Improvements Element**

*CIE-1.2: Level of service (LOS) standards will be the basis for planning the provision of required public facilities within the Village. Some of these standards will be the basis for determining the*

*adequacy of public facilities for the purposes of permitting new development. The level of service standards will be the basis for facility design, for setting impact fees, and (where applicable) for concurrency management.*

CIE-1.2.3 The minimum acceptable level of service standard for potable water connections to Lee County Utilities will be:

An available supply and treatment capacity of 250 gallons per day per equivalent residential connection (ERC), except that facilities serving only multi-family or mobile home residential structures must have a capacity of 200 gallons per day and facilities serving only recreational vehicle or travel trailer residential structures must have a capacity of 100 gallons per day.

CIE-1.2.4 The minimum acceptable level of service standard for potable water connections to Bonita Springs Utilities will be:

An available supply and treatment capacity of 235 gallons per day per equivalent residential connection (ERC) and delivery of potable water at a minimum pressure of 20 pounds per square inch (psi) at the meter anywhere in the system.

CIE-1.3.7 Development orders and permits will not be issued unless the required public facilities and services (transportation, schools, water, sewer, drainage, and solid waste) necessary to support such development at the adopted LOS standards are available concurrent with the associated impacts.

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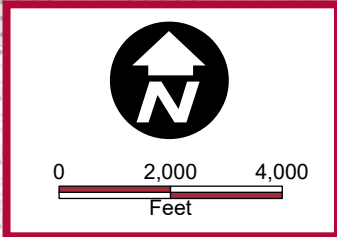
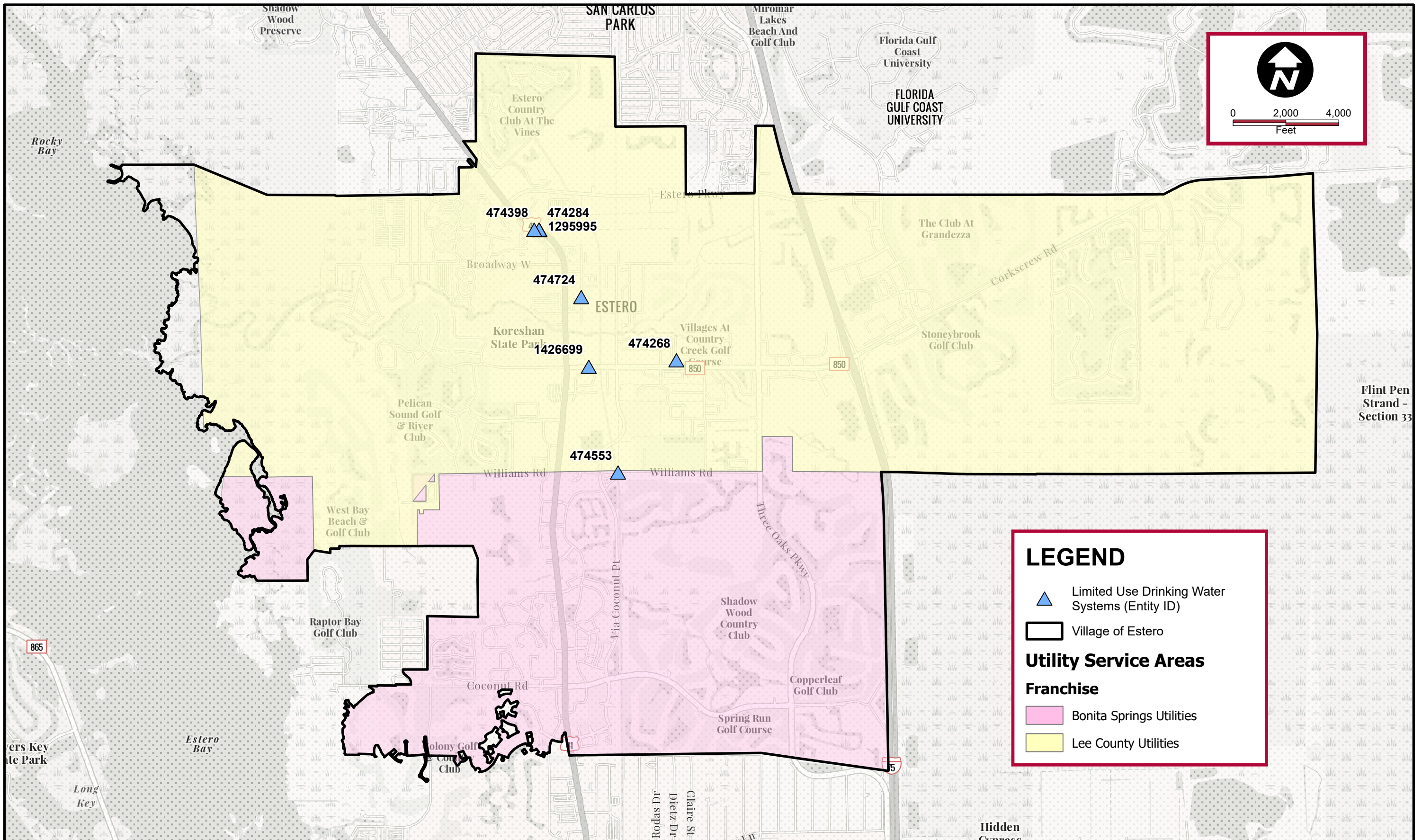
# FIGURES

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**LEGEND**

- ▲ Limited Use Drinking Water Systems (Entity ID)
- Village of Estero

**Utility Service Areas**

**Franchise**

- Bonita Springs Utilities
- Lee County Utilities

No.	REVISIONS	DATE	BY

**Kimley»Horn**

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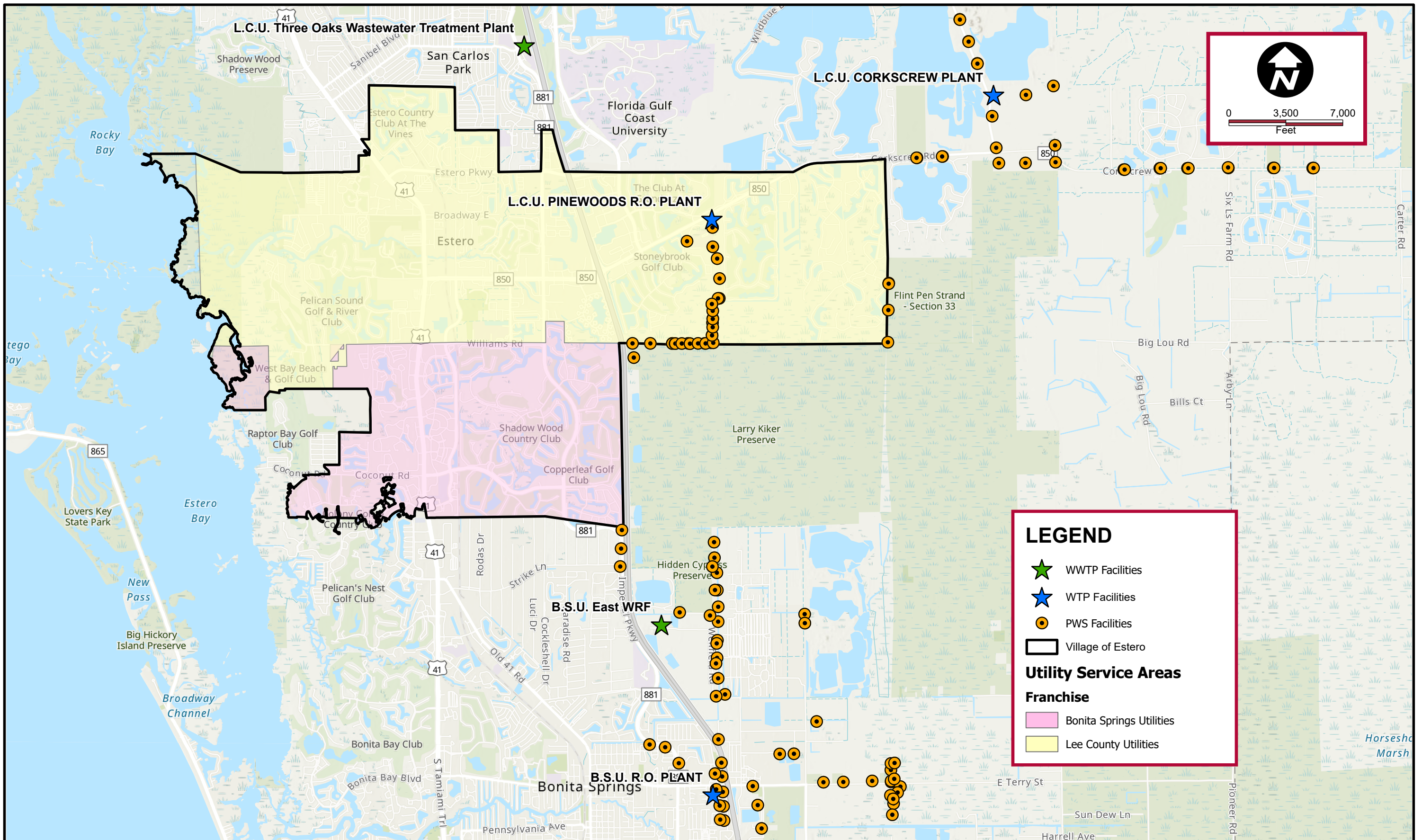
KHA PROJECT 148870007
DATE APRIL 2024
SCALE AS SHOWN
DESIGNED BY KKA
DRAWN BY CAJ
CHECKED BY KKA

**VILLAGE OF ESTERO  
10-YEAR WATER SUPPLY  
FACILITIES WORK PLAN**

**Utility Service Areas**

FIGURE  
**1**

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No.	REVISIONS	DATE	BY

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KHA PROJECT 148870007
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CHECKED BY KKA

**VILLAGE OF ESTERO  
10-YEAR WATER SUPPLY  
FACILITIES WORK PLAN**


**Public Water Supply Facilities**