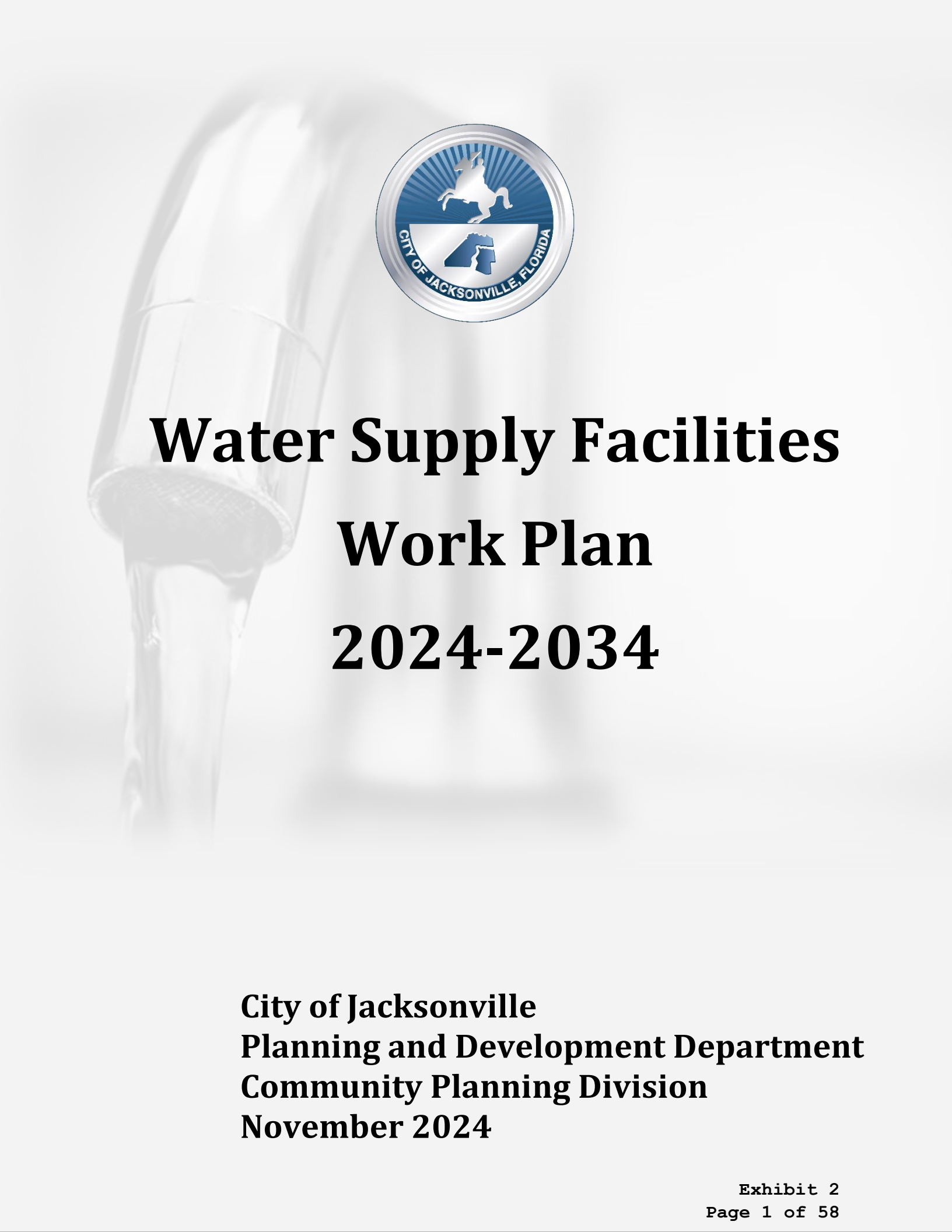


Water Supply Facilities Work Plan 2024-2034

City of Jacksonville
Planning and Development Department
Community Planning Division
November 2024

Contents

LIST OF FIGURES 2
LIST OF TABLES 2
LIST OF APPENDICES 2
1.0 INTRODUCTION 3
2.0 BACKGROUND 3
2.1 Location 3
2.2 Service Area 3
2.3 Water Supply Related Agreements 5
3.0 DATA AND ANALYSIS 6
3.1 Water Sources 6
3.1.1 Self-Supply 6
3.2 Consumptive Use Permit 10
3.3 Potable Water Production and Treatment Facilities 11
3.4 Reclaimed Water System 12
3.4.1 Reclaimed Water Agreement(s) 15
4.0 Population and Water Demand Projections 16
4.1 Population Projections 16
4.2 Projected Water Demands 17
4.3 Projected Reclaimed Water Demand 19
5.0 CAPITAL IMPROVEMENT PROJECTS 19
6.0 FUTURE WATER SUPPLY PLANNING AND COORDINATION 20
6.1 Water Conservation 20
6.2 Provision of Water Supplies 21
6.3 Water Source Protection 22
6.4 Alternative Water Sources 22

LIST OF FIGURES

Figure 1: JEA Water Service Area 4
Figure 2: JEA Water Mains 7
Figure 3: Water Self-serve Areas 8
Figure 4: Septic Tanks and Septic Tank Phase Out Areas, Duval County 9
Figure 5: Septic Tank Phase Out Prioritization Areas, Duval County 10
Figure 6: JEA Water Production vs. CUP Limit 12
Figure 7: Reclaimed Water Service Grids 14
Figure 8: Water Demand Projections 18

LIST OF TABLES

Table 1: Water Agreement Description, Provisions, and Status 5
Table 2: Projected Population for Water Self-Service Areas 7
Table 3: Population Projections for Duval County 16
Table 4: Population Projections, JEA Service Area 17
Table 5: Water Demand by Grid 19
Table 6: Water Conservation Coordination 21
Table 7: Concurrent and Future Water Provision 22
Table 8: Water Source Protection Coordination 22
Table 9: Alternative Water Source Coordination 23

APPENDICES

Appendix 1: 10-Year Capital Improvement Projects, North and South Grid FY2024-2034 24
Appendix 2: Reclaimed Water Proposed Capital Improvement Projects FY2024-2034 28
Appendix 3: 301 Villages Water, Wastewater and Reuse Water Facilities 30

1.0 INTRODUCTION

According to the Community Planning Act Water Resources Act, Sections 373.709 and 163.3177(6)(c)4, Florida Statutes (F.S.), each local government is required to amend its local government comprehensive plan to update and/or include a 10-year water supply facilities work plan following the approval of an updated regional water supply plan (*North Florida Regional Water Supply Plan*, December 2023). The mandated 10-year water supply facilities work plan is specifically developed to address the following:

- Projects for water supply;
- Projects for water supply treatment, storage, and distribution facilities; and
- Water conservation and reuse.

The Water Supply Facilities Work Plan and related Comprehensive Plan amendments are reviewed and approved by the Florida Commerce Department and the St. Johns River Water Management District (SJRWMD). This Work Plan includes an evaluation of the present and projected growth and water demand as well as an analysis of the existing production/treatment facilities and their capacities to meet the City's existing and projected water demands for a 10-year planning period, 2024-2034. The City's first Water Supply Facilities Work Plan was completed in 2019.

2.0 BACKGROUND

2.1 Location

The City of Jacksonville, Duval County, Florida is located along the Atlantic Ocean in the northeastern part of Florida. It is bordered on the north by the Nassau River, Nassau County; on the south by Clay County and St. Johns County; on the east by the Atlantic Ocean; and on the west by Baker County.

Duval County has a total area of approximately 850 square miles. The entire county, with the exception of four (4) incorporated areas, form the Consolidated City of Jacksonville. Three (3) of the incorporated areas; i.e. Jacksonville Beach, Neptune Beach, and Atlantic Beach are located between the Intracoastal Waterway and the Atlantic Ocean. The fourth incorporated area, the Town of Baldwin, is located at the intersection of U.S. 301 and U.S. 90 in the western section of the City.

2.2 Service Area

JEA serves as the City's primary water utility. The service territory includes virtually all of Duval County; approximately 143 square miles in St. Johns County; approximately 620 square miles in Nassau County; and a small number of customers in Clay County. Within Duval County, nine (9) utilities also supply potable water; these utilities are listed below.

- City of Baldwin
- Normandy Villages Utility Company
- Neighborhood Utilities, Inc.
- Commercial Utilities, Grace and Company
- Regency Utilities, Inc.
- City of Atlantic Beach
- City of Neptune Beach
- Jacksonville Beach Utility
- First Coast Regional Utilities

In FY 2023, JEA's Water System consisted of 29 major and 10 minor water treatment plants (WTPs) and two repump facilities and is divided into two major distribution grids: the North Grid and the South Grid (one on each side of the St. Johns River). The system includes four (4) minor distribution grids: Ponte Vedra, Ponce de Leon, Mayport and Nassau County. The major distribution grids are fully interconnected, which provides the Water System with a high degree of redundancy.

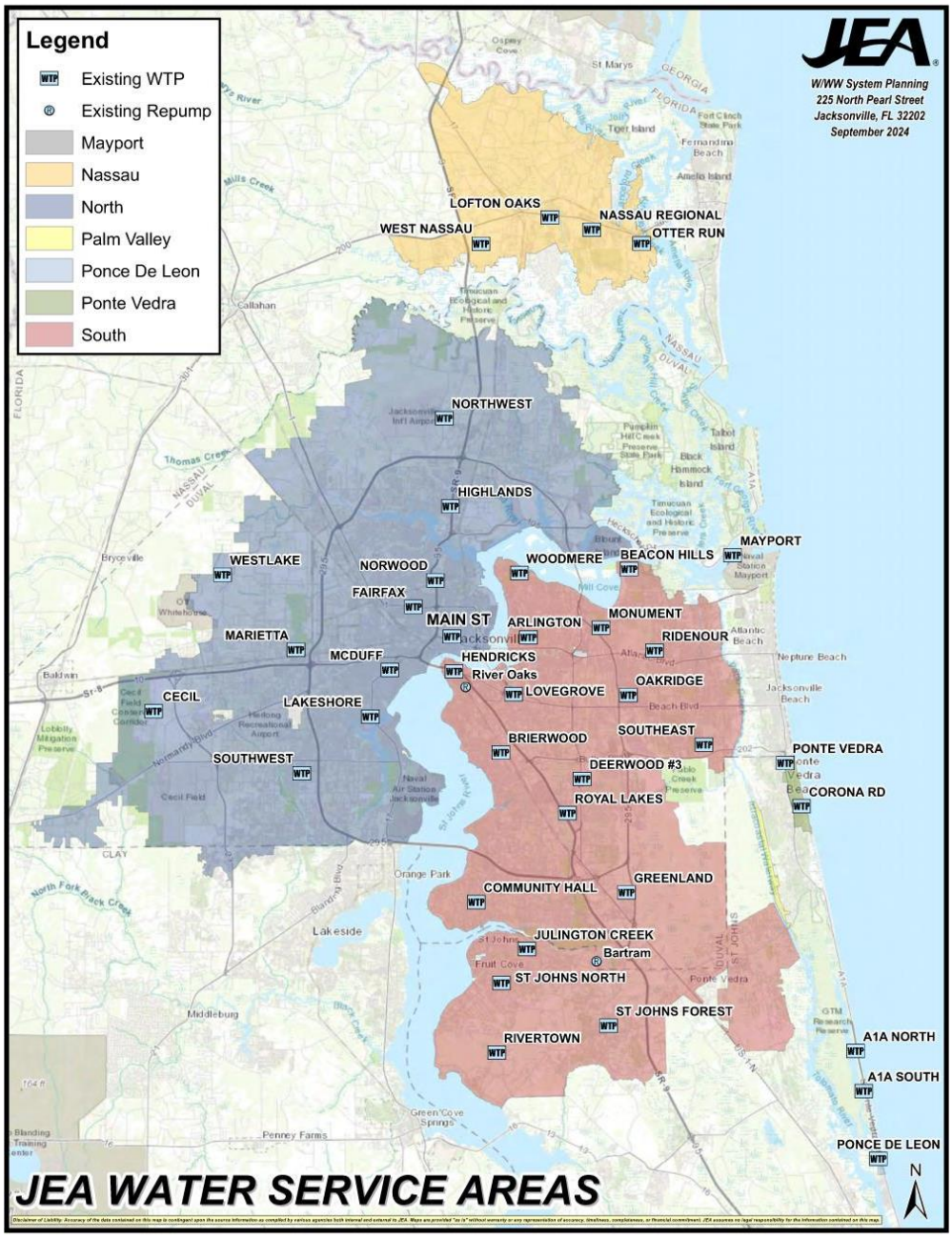


Figure 1: JEA Water Service Area
Source: JEA

2.3 Water Supply Related Agreements

JEA was established in 1968 to own and manage the electric utility, which had been owned by the City since 1895. The City's Charter was amended in 1997 to authorize JEA to own and operate other utility systems, including the Water and Sewer System. The Charter authorizes JEA to construct, acquire, establish, improve, extend, enlarge, maintain, repair, finance, manage, operate and promote its utilities systems, and to furnish electricity, water, sanitary sewer service, natural gas and other utility services as authorized therein within and outside of the City and for said purposes to construct and maintain electric lines, pipelines, water and sewer mains, natural gas lines and related facilities along all public highways and streets within and outside of the City. Should any additional water and sewer utility system be undertaken by JEA in the future, such utility system may, at the option of JEA, constitute an additional utility function or with approval by the Jacksonville City Council be added to, and may become a part of, the Water and Sewer System or the District Energy System. The Charter also confers upon JEA the power to sue, to enter into contracts, agreements and leases, and to sell revenue bonds to finance capital improvements and to refund previously issued evidences of indebtedness of JEA.

Pursuant to a 30-year interlocal agreement with St. Johns County, JEA made an up-front payment in December 2001 to the county which JEA expected to realize in providing retail sales of water and wastewater services (excluding reclaimed water) for the next 10 years in St. Johns County. Under the terms of the interlocal agreement, subsequent utilities were purchased and the county granted JEA the right to: 1) provide water and wastewater service to those customers in an acquired franchise area within St. Johns County, 2) provide water and wastewater service to additional areas in the county not currently served by either the St. Johns County Water and Sewer Department or other water and wastewater utilities and 3) acquire, at JEA's sole discretion, other private utilities in northern St. Johns County.

Pursuant to a 30-year interlocal agreement with Nassau County, JEA made an up-front payment in December 2001 to the county which JEA expected to realize in providing the sale of water and wastewater services (excluding reclaimed water) for the next 10 years. Under the terms of the interlocal agreement, Nassau County granted JEA the right to: 1) provide water and wastewater service to those customers in an acquired franchise area within Nassau County and 2) provide water and wastewater service to additional areas in the county not currently served by either Nassau County or other water and wastewater utilities.

	DESCRIPTION	PROVISIONS	STATUS
City of Atlantic Beach	Sewer Agreement – provides for sewage treatment and disposal for the Village of Mayport	JEA constructed the collection and delivery facilities for discharge to the City's treatment facility and pays monthly based on the flow	No revisions currently proposed
Nassau County	Water, Sewer, and Reuse Interlocal Agreement – provides water and wastewater (including reuse) services within Nassau County	JEA acquired service territory in Nassau County	No revisions currently proposed
St. Johns County	Water MOU – various agreements including a wholesale water and wastewater agreement; service area boundary adjustments	Wholesale water service commitment to the County of 2,250,000 gpd; allow JEA to construct and operate up to 3 wells in the River Town DRI with an average daily flow withdrawal of 0.75 MGD by year 2012 and 1.5 MGD by year 2022	No revisions currently proposed

Table 1: Water Agreement Description, Provisions, and Status

Source: JEA

JEA does not have any potable water agreements with Clay County, the Town of Baldwin, Naval Air Station Jacksonville (NAS JAX), or Naval Station Mayport (NS Mayport). JEA has a wastewater agreement with the City of Atlantic Beach but does not have a potable water agreement with them.

3.0 DATA AND ANALYSIS

Water use is defined as current or historic levels of water withdrawn from fresh (ground and surface) water sources and is expressed in average million gallons per day (mgd) unless otherwise noted. Water demand projections are estimates of the amount of water that will be needed in the future (withdrawn from fresh, ground and surface, water sources) to meet the needs of an increasing population and to meet the needs of the aforementioned water use categories, and is expressed in average mgd unless otherwise noted. Reclaimed water is treated wastewater that has received at least secondary treatment and basic disinfection and is expressed in average mgd unless otherwise noted.

3.1 Water Sources

Groundwater is currently the City of Jacksonville's primary water source. Water supply is from the Floridan Aquifer, one of the most productive aquifers in the world, with high quality water. The Floridan Aquifer covers most of Florida and parts of Georgia and South Carolina. Groundwater wells are used to extract water from the Floridan Aquifer to supply potable water to JEA customers. In FY 2023 the Water System had 139 wells supplying the various water plants. Each plant consists of wells, aerators, ground storage tanks, water quality treatment and pH control and chlorination facilities. The permitted maximum daily treatment capacity of the overall Water System is 324 mgd.

The Floridan Aquifer should be capable of meeting JEA's needs well into the future, provided that JEA continues its three-part program and ground water quality program. The three-part program is the basis of JEA's water capital improvement plan and includes: (i) continued expansion of the reuse system, (ii) measured conservation program and (iii) water transfers from areas with a higher supply on JEA's north grid to areas with a lower supply on JEA's south grid via river crossing pipelines. JEA has also implemented a groundwater quality management program to mitigate the effects of (non-lateral) saltwater intrusion into specific wells on the systems south grid that includes routine well monitoring, backplugging of specific wells, and reducing or replacing wells that show continued increases in chlorides.

Total finished water storage capacity of the Water System is 84 million gallons (FY 2023). All water storage facilities are located at the various water treatment plants, including two repump facilities. The Water System does not utilize elevated storage tanks.

JEA also uses reclaimed water for irrigation where feasible. Ten of the 11 Wastewater Treatment Facilities (WWTFs) that JEA operates and maintains produce reclaimed water within the wastewater service area covering four (4) counties – Nassau, Duval, St. Johns, and Clay.

3.1.1 Self-Supply

Portions of Duval County, while within the overall JEA service area boundary, are currently served by individual water wells and septic systems. Within Duval County, the extent of JEA water mains is shown in Figure 2. Areas outside of the service extent of these mains are served by private wells.

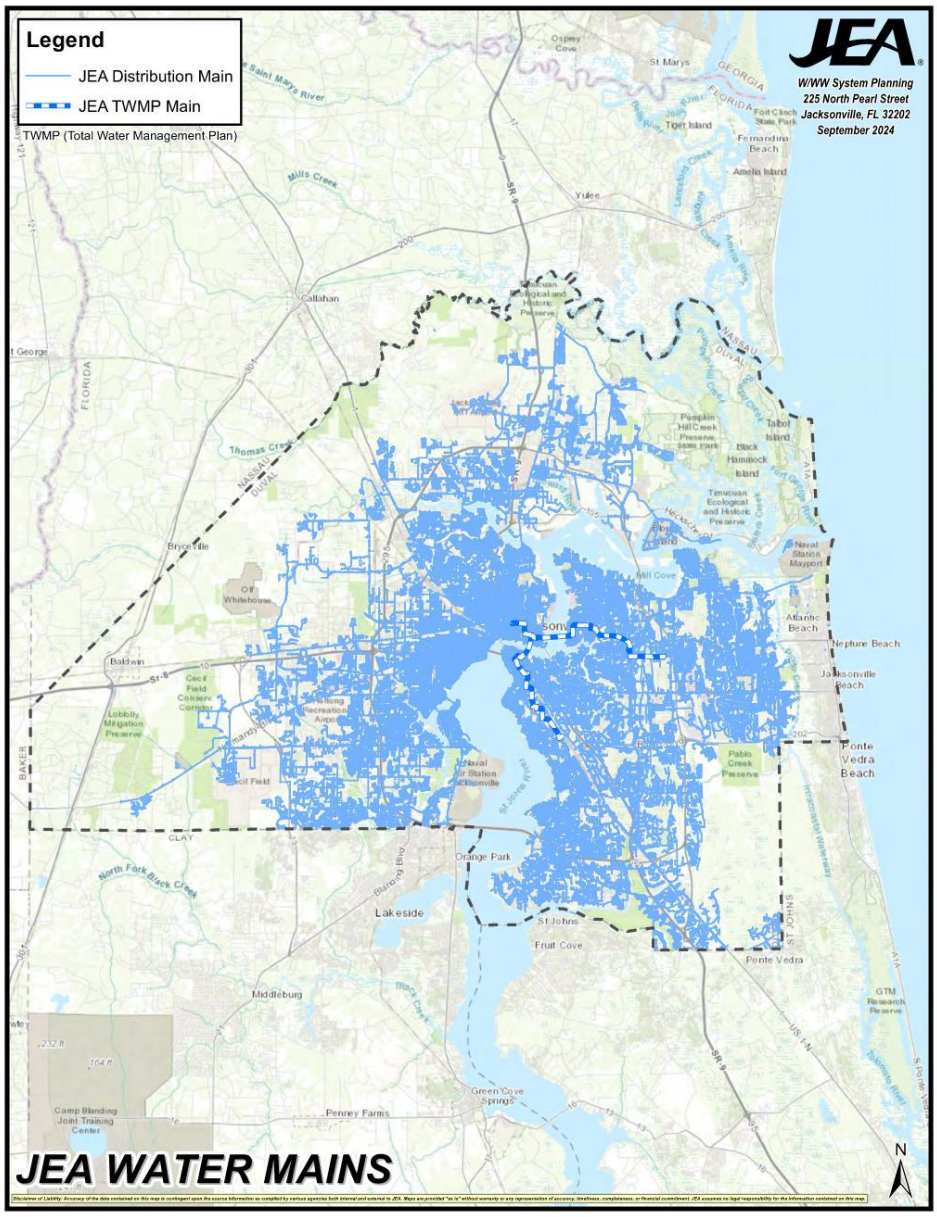


Figure 2: JEA Water Mains
Source: JEA (September 2024)

There are an estimated 30,000 private wells within Duval County; locations identified as having individual water wells are shown in Figure 3. These areas are expected to remain as self-supply areas, with the following population projections for those areas.

	2020	2025	2030	2035	2040	2045
Projected Population	76,408	87,419	100,519	110,853	120,121	128,271

Table 2: Projected Population for Water Self-Service Areas, shown in Figure 3
Source: JEA

As shown in Figure 3, the private individual wells are most likely to be located in areas that are more rural. There are no current countywide plans by JEA to remove private wells and connect those areas to the centralized water system.

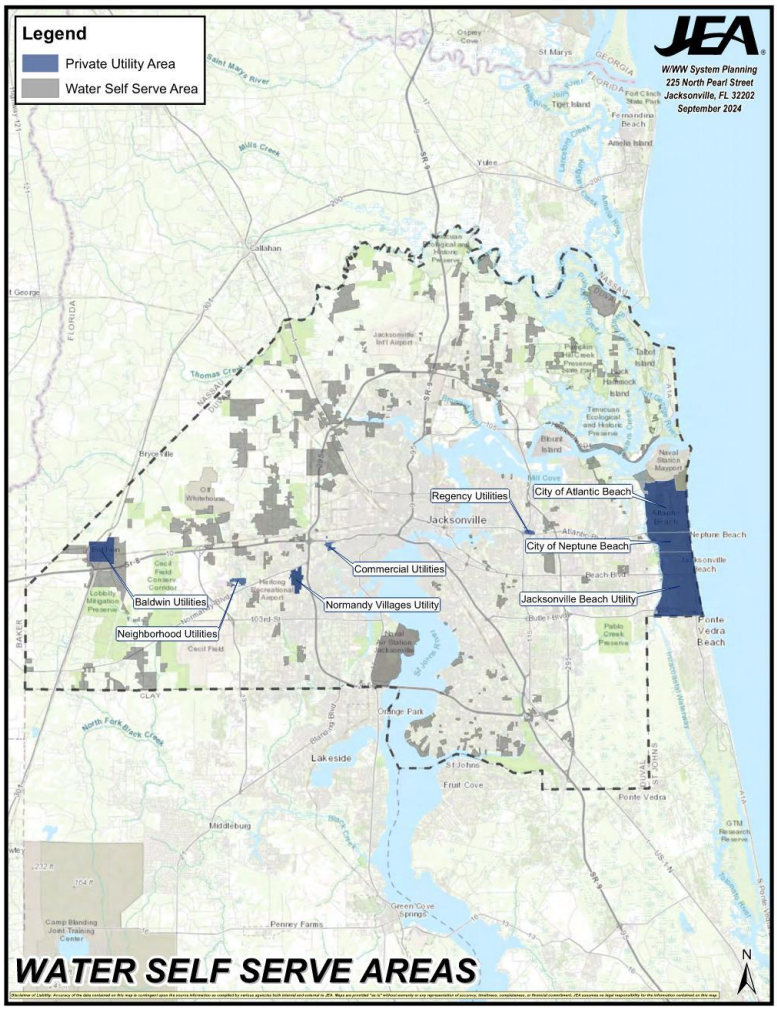


Figure 3: Water Self-serve Areas
Source: JEA (September 2024)

There are an estimated 55,000 septic tanks within Duval County. The Florida Department of Health for Duval County (DOH) has identified 35 areas predominately served by septic tanks with a high number of repair permits. These areas are called Septic Tank Failure Areas. The City's Environmental Quality Division ranked these areas based on a number of factors including the potential for water quality benefit, age of the development area, median home value, presence of an existing water distribution system, and the percentage of undeveloped lots. The rankings were prioritized to develop a list for a Septic Tank Phase Out (STPO) program. Figure 4 shows the general location of septic tanks within Duval County as well as the Septic Tank Phase Out (STPO) area; prioritized areas are shown in Figure 5. Properties within the STPO areas that are currently served by a private well system will be connected to the centralized water system when the area is addressed. Funding for the STPO areas is limited with current funding levels not sufficient

to address all of the areas that have been ranked. The total number of septic tanks within the STPO areas is estimated at 22,300. Of these properties, an estimated 3,500 are served by private wells. There are no current plans by JEA to connect the septic tank properties, outside of the prioritized areas, to a centralized sewer system.

Pursuant to Section 163.3177(6)(c), Florida Statutes, the City has developed a "Sanitary Sewer Service Feasibility Analysis" (May 28, 2024) and incorporated the document as a reference to the Infrastructure Element of the Comprehensive Plan. The analysis considers the feasibility of providing sanitary sewer services within a 10-year planning horizon, for developments over a certain size, and will be updated as needed to account for future applicable developments.

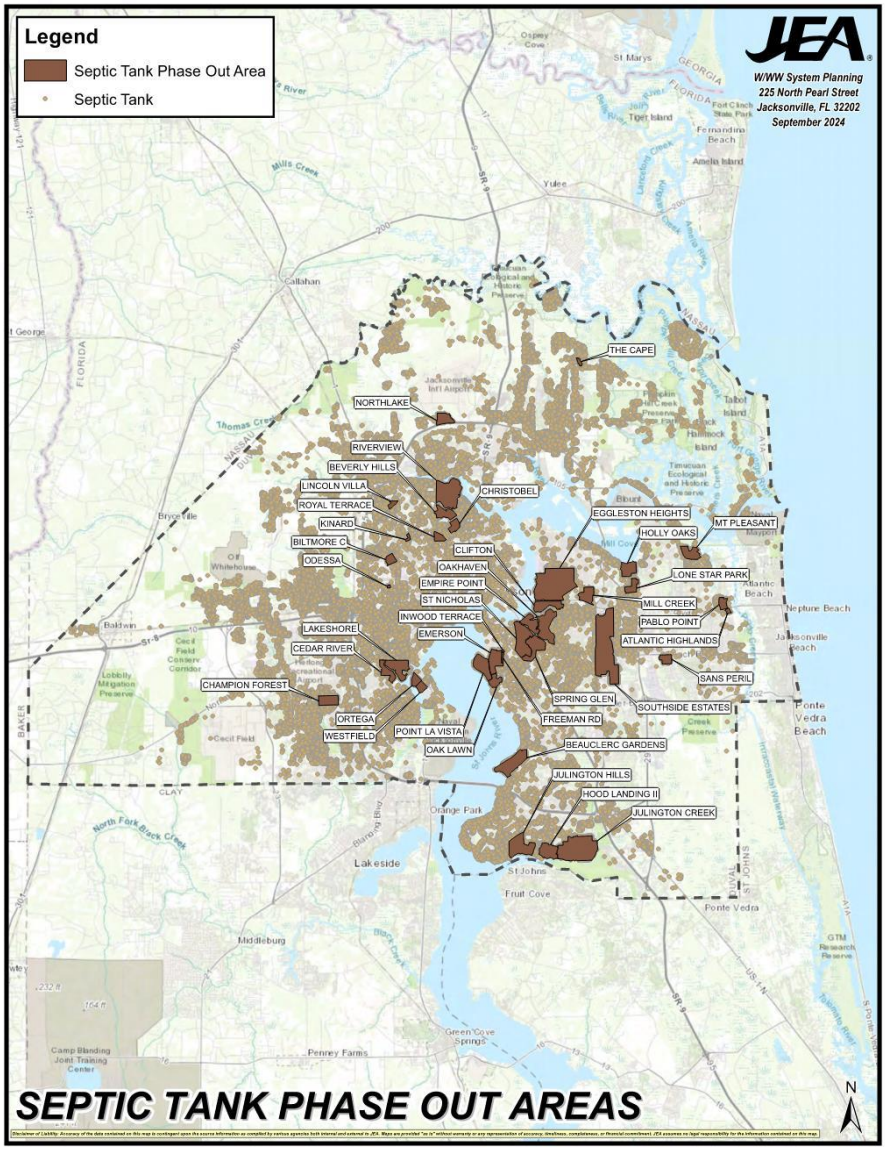


Figure 4: Septic Tanks and Septic Tank Phase Out Areas, Duval County
Source: JEA (September 2024)

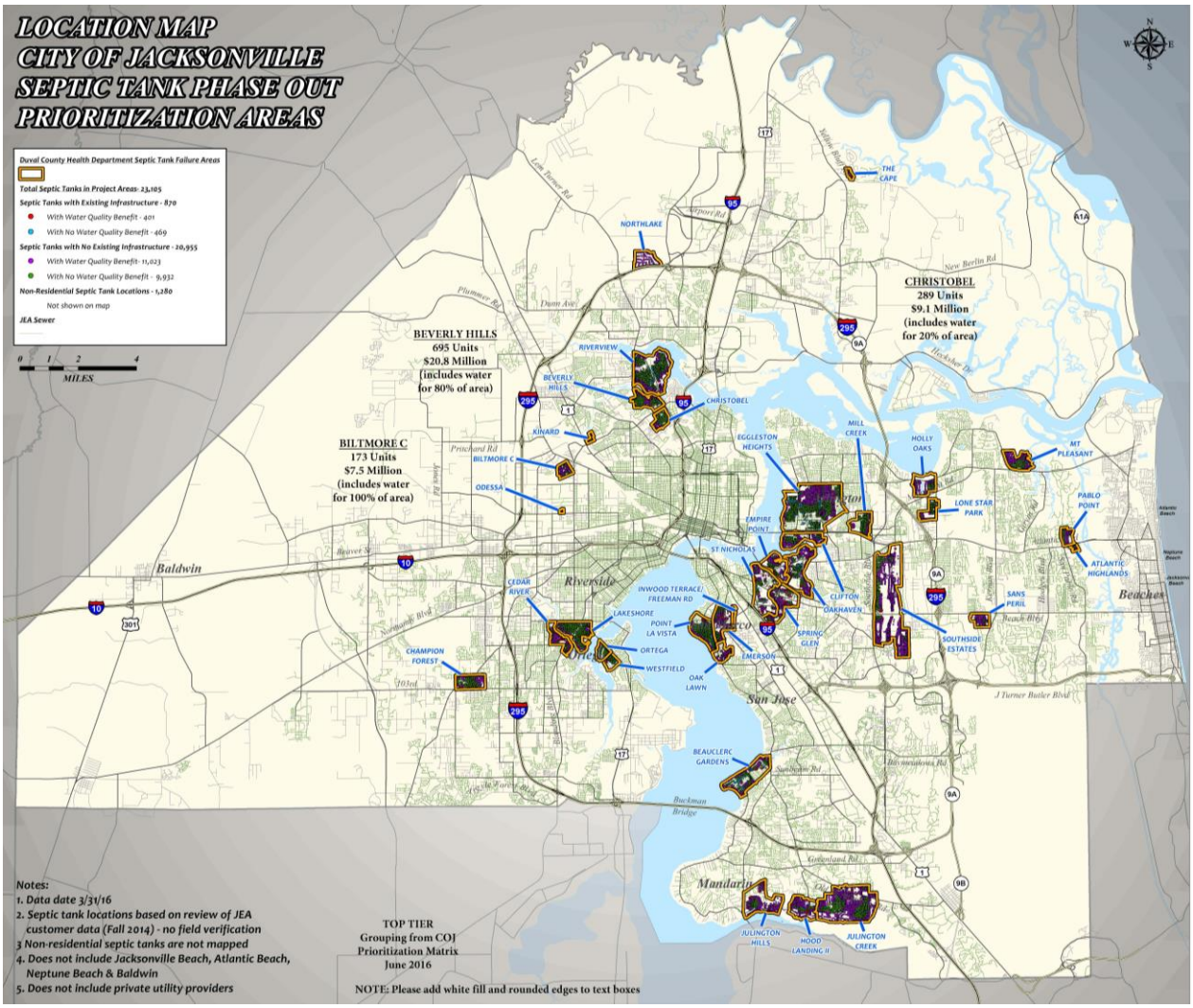


Figure 5: Septic Tank Phase Out Prioritization Areas, Duval County
Source: JEA

3.2 Consumptive Use Permit

JEA and the City are committed to proper management of water resources and to providing residents with a sustainable water supply. JEA currently operates under one (1) Consumptive Use of Water Permit (CUP). JEA renewed its Consumptive Use Permit (CUP 88271-11) with the SJRWMD in May 2011. The CUP was renewed for a 20-year period and will expire in 2031. The CUP allocates to JEA a maximum groundwater withdrawal of 56,575 million gallons per year (mgy) from the Floridan Aquifer for the public supply system until such time as the permit needs to be renewed. This amount may contingently increase in the last 10 years of the permit up to 59,359 mgy through the permittee's providing additional reclaimed water to replace permitted Floridan Aquifer uses, if it becomes feasible. The amount permitted is to serve a projected population of 1,026,161 people in 2031 with water for household, commercial/industrial, water utility, and essential (fire protection) uses and unaccounted-for water losses.

Reclaimed water is an integral part of JEA's CUP. According to condition number 12 of the CUP, JEA can increase its annual allocation of groundwater up to 163 mgd (from the Floridan Aquifer) if all reclaimed

water production goals are met.

There are seven (7) years before the expiration of JEAs CUP. The Water Supplies Facilities Work Plan covers the period through 2034. While the CUP will expire just before the planning timeframe, the allocation of needs from the CUP extrapolates out to the end of the WSFWP planning period.

Additionally, the US 301 Villages master planned community includes 7,000 acres located west of US 301 and south of I-10. This area is entitled for a mix of uses including single-family and multi-family residential, commercial, hospital, office and hotel/motel uses. 301 Capital Partners, LLC, or its subsidiary, are responsible for the design and construction of the water, wastewater and reuse facility utilities for the planned community. 301 Capital Partners, LLC, and its Florida Public Service Commission authorized utility subsidiary, First Coast Regional Utilities, Inc., has received a 1.2 mgd Consumptive Use Permit (CUP) issued July 11, 2024 by the Water Management District. The First Coast Regional Utilities CUP expires in 2044, beyond the US 301 Villages phased development. Additional information on the First Coast Regional Utilities CUP for the US 301 Villages mixed use community is included in Appendix 3.

3.3 Potable Water Production and Treatment Facilities

The Water System, which served an average of 391,859 customer accounts and 25,764 reuse water customers, respectively, in the FY2023, was composed of 39 water treatment plants and two repump facilities, 139 active water supply wells, approximately 5,112 miles of water distribution mains, and water storage capacity of 84 million gallons (including the repump facilities). The overall peak capacity of the Water System was approximately 324 mgd, and the Water System wells produced an average daily flow of approximately 126 mgd and a maximum daily flow of approximately 163 mgd during the FY2023.

As previously mentioned, JEA's water distribution system is divided into six (6) distinct service grids serving most of Duval County and parts of St. Johns, Clay and Nassau Counties. The North and South Grid are currently interconnected via 30 inch and 36 inch transmission mains that cross the St. Johns River in downtown Jacksonville, commonly referred to as the Total Water Management Plan (TWMP) Mains. The purpose of the TWMP Mains is to transfer water from the North to the South grid. Each service grid contains an interconnected network of WTPs and transmission and distribution mains. JEA's water distribution grids have grown through the acquisition of several privately owned utilities over the past 20 years; United Water and Florida Water being the largest of these acquisitions. There are 39 active WTPs in JEA's fleet; 11 in the North Grid, 18 in the South Grid, four (4) in the Nassau (Lofton Oaks) Grid, two (2) in the Ponte Vedra Grid, three (3) in the Ponce de Leon Grid and one (1) in the Mayport Grid in FY 2023. There are two (2) additional WTPs planned for construction within the next 10 years: Wildlight WTP (Nassau County) and SJRPP WTP in the North Grid; see JEA service area map, Figure 1.

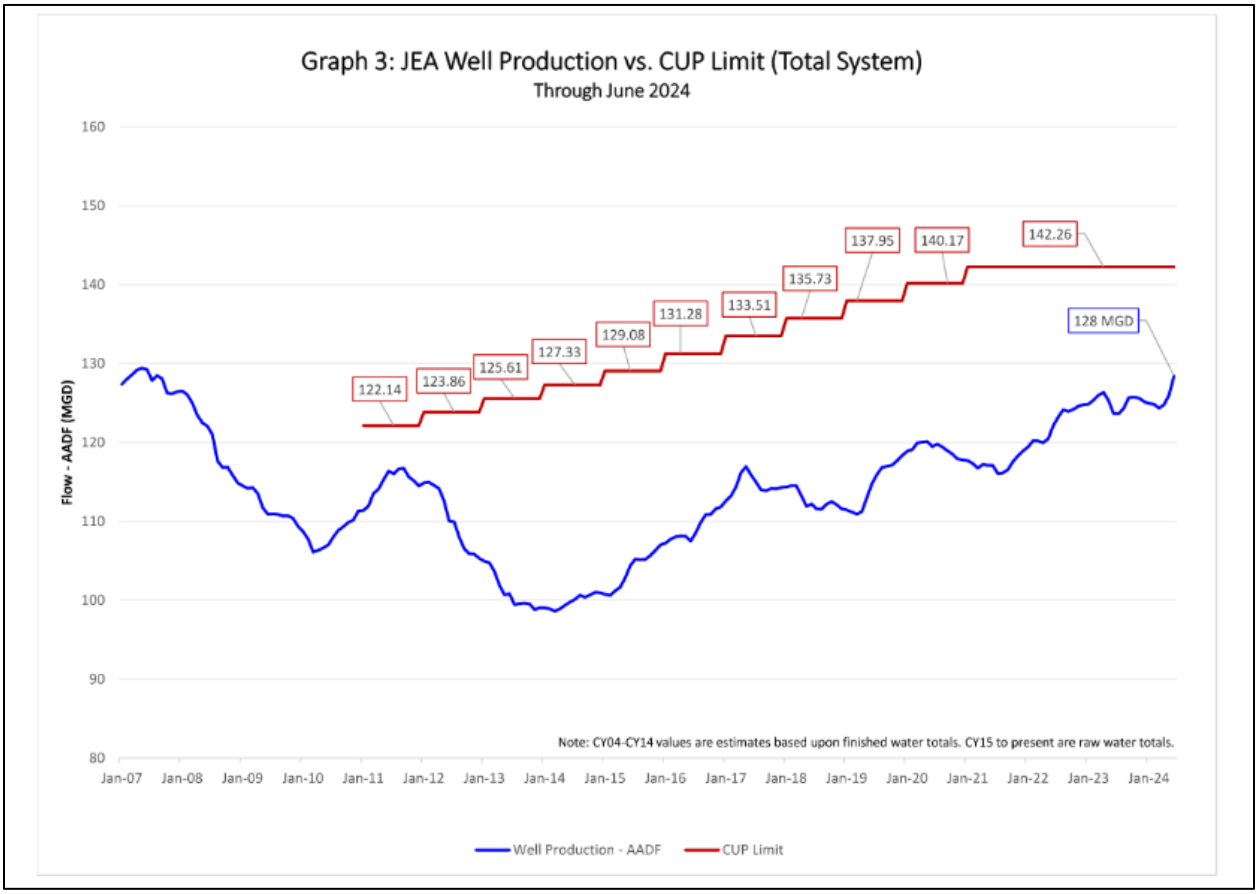


Figure 6: JEA Water Production vs. CUP Limit
Source: JEA's Q3/FY 2024 Metrics

Figure 6 shows the historic monthly and annual average daily production for the overall JEA Water System of raw water as compared to the annual CUP limit for the total system. The CY2023 annual average potable water produced from the groundwater was 126 mgd. It is important to note that JEA customers average a demand of 13 mgd of reclaimed water, which directly offsets potable groundwater use. In CY2023 the water system had a total water demand of 139 mgd (126 groundwater + 13 reclaimed water).

3.4 Reclaimed Water System

JEA has significantly expanded its reclaimed water system (Figure 7), and potable water offsets through the use of reclaimed water, over a relatively short period of time. JEA acquired the Julington Creek Plantation (JCP) WWTF in 1999, which operated at nearly 100 percent reuse of its effluent with a capacity of 1.0 mgd. JCP WWTF was JEA's initial reclaimed water program until the construction of 2.0 mgd for public access at the Arlington East WWTF in 1999. Reclaimed water demands on the system in 1999 were less than 0.5 mgd and were primarily located in the region surrounding JCP WWTF.

The major backbone of the reclaimed water system was constructed between 2002 and 2008, a 26-mile transmission main between Arlington East and Mandarin WWTFs. Retail customer reclaimed water demand has rapidly increased since the completion of the reclaimed transmission main in 2008. The first homes within the Nocatee development, which occupies land in both northeast St. Johns County and southeast Duval County, were connected in 2007; this was the start of potable offset reclaimed water

demands on the reclaimed water system. Potable offset/retail reclaimed water customers have grown by an average of 2,900 customers per year over the last three (3) years.

As of FY 2023, JEA operates and maintains 11 WWTFs, 10 of which produce reclaimed water, within a wastewater service area that covers four (4) counties (Nassau, Duval, St Johns and Clay). Six (6) of JEAs WWTFs produce public access reclaimed water and four (4) produce non-public access reclaimed water used strictly at the WWTF and/or within a restricted area. The overall reclaimed water production capacity is 41 mgd. The southeast region of JEA's wastewater service area, served by Arlington East, Monterey, Mandarin, Blacks Ford, JCP, Ponte Vedra and Ponce de Leon WWTFs, currently has the greatest offset potable water demand with reclaimed water as opposed to the other regions north and west of the St. Johns River.

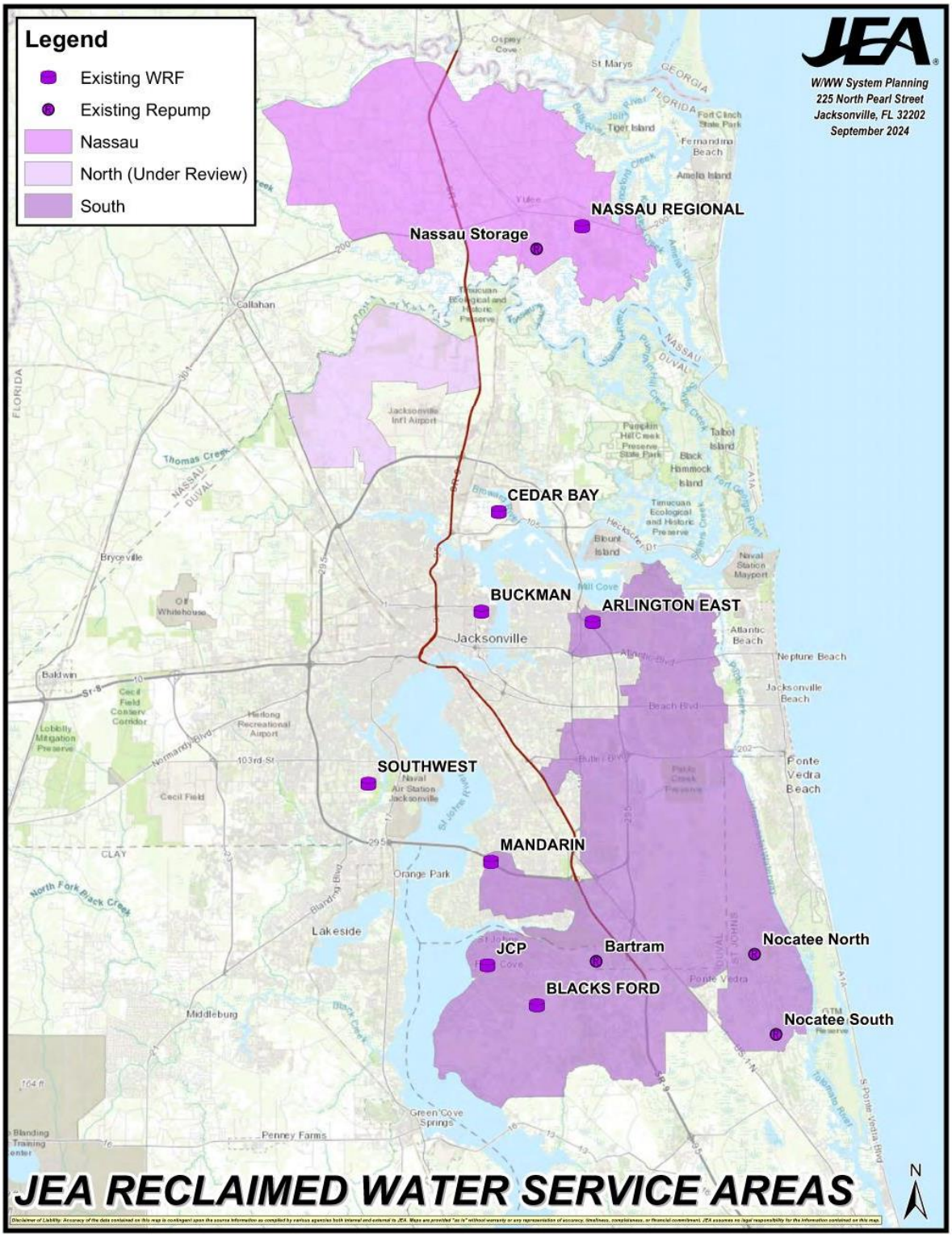


Figure 7: Reclaimed Water Service Grids
Source: JEA

Total reclaimed water demands (retail, bulk, and internal use at JEA WWTFs) have increased to an annual average of 22 mgd (FY2023). Based on projected system growth, total reclaimed water is estimated to

reach 31 mgd by 2031. Additionally, planned alternative water projects that will utilize reclaimed water are currently underway and could increase the projected reclaimed water use to over 40 mgd by 2031.

The primary factors that have driven JEA's implementation of reclaimed water are:

- The need to reduce nutrient discharges into the St. Johns River (TMDL, Total Maximum Daily Load)
- The desire to reduce groundwater withdrawals for irrigation
- JEA and City policies to promote the efficient use of water and protect the water resources of the region

Reclaimed water that JEA's WWTFs produce is specific to the needs of the area served. The South Grid reclaimed water service area (Arlington East, Mandarin, Blacks Ford and JCP WWTFs) has been a focal point of the JEA reclaimed water investment and expansion as a result of the Lower St. Johns River TMDL (circa 2004), the River Accord (circa 2006) and the Total Water Management Plan (TWMP, circa 2007), in addition to residential growth. Arlington East, Mandarin, Blacks Ford and JCP WWTFs were gridded together with a major north/south transmission main to provide reclaimed water to future development in the southern extent of the JEA service area. Regions to the West and North of the St. Johns River historically have not seen residential growth at the rate seen in the South Grid reclaimed water service area.

JEA has been successful in all of these goals, and through further system expansion and implementation of new reclaimed water projects, expects to achieve feasible reuse, aquifer recharge, and enhancement through its reclaimed water program for the duration of its CUP and beyond. The City's Comprehensive Plan and local ordinance code provide enabling policies and companion requirements to further the maintenance and expansion of the water reclamation system; these policies are discussed later in this Work Plan.

JEA may need to expand its facilities to adequately meet the future demands of the system. Proposed facility expansions and new facilities are planned in order to more evenly distribute the production and pumping capabilities of the gridded system while increasing the overall system reliability and quality.

3.4.1 Reclaimed Water Agreement(s)

In 2001, JEA executed an interlocal agreement with Nassau County (see Table 1 and Section 2.3). This agreement includes provisions allowing JEA to provide reclaimed water. At this time no revisions to this agreement are proposed.

In 2006, a reclaimed water connection ordinance was adopted by the City of Jacksonville. Agreements were established with major developments in St. Johns County (i.e. Nocatee, RiverTown, Aberdeen, and Durbin Crossing DRIs) to provide retail reclaimed water service; this continued to other new developments as they were established.

In February 2015, JEA updated the JEA Rules and Regulations for Water, Sewer & Reclaimed Services to include reclaimed water service as a required connection within the JEA reclaimed water service area. The required connection for new developments is subject to the conditions described in the new Rules and Regulations. These Rules and Regulations are a major step forward in promoting an alternative water supply and continued improvement of the JEA reclaimed water program. In the future, there is potential for more reclaimed water service areas to be implemented; North and West of the Jacksonville International Airport is an area currently under review.

As of September 2023, JEA has constructed over 580 miles of pipeline to serve over 25,000 customers, with a reclaimed water delivery capacity of 41 mgd. Retail customers have grown significantly over the last 15 years as a result of the reclaimed water infrastructure installed throughout the South Grid and Nassau County. A majority of reclaimed water customers are located in southern Duval and northern St. Johns Counties; however, the reclaimed customer base is expanding throughout the JEA service area.

4.0 Population and Water Demand Projections

Abundant, clean drinking water is one of Jacksonville's most valuable resources. Potable water must be adequate to meet the future demands of the City while sustaining water resources and related natural systems.

4.1 Population Projections

The University of Florida's Bureau of Economic and Business Research (BEBR) produces Florida's official city, county and state population estimates each year. The population projections developed by BEBR are generally accepted as the standard throughout Florida. Table 3 provides the BEBR population projections for Duval County. JEA and the SJRWMD use BEBR population projections as the base number for estimating future population. JEA and the SJRWMD also use acceptable industry standards to project the need for water supply utilities.

Table 3: Duval County Population Growth Projections, 2020 – 2045

Planning District	2020	2025	2030	2035	2040	2045
Urban Core	33,418	36,949	35,757	34,104	32,331	30,616
Greater Arlington/Beaches	227,983	252,074	264,863	274,163	280,618	286,043
Southeast	267,874	296,180	320,104	339,512	355,256	368,918
Southwest	181,328	200,489	217,059	230,497	241,554	251,108
Northwest	128,407	141,976	142,441	141,130	138,715	136,255
North	89,640	99,113	108,451	116,387	122,707	128,370
Beaches/Baldwin	46,841	51,791	53,516	54,483	55,067	55,442
County Total	**975,491**	**1,078,572**	**1,142,191**	**1,190,275**	**1,226,247**	**1,256,752**
City Total	**928,650**	**1,026,781**	**1,088,675**	**1,135,792**	**1,171,180**	**1,201,310**

*Source: City of Jacksonville Planning and Development Department, University of Florida, Bureau of Economic and Business Research; November 2023

The City of Jacksonville Planning and Development Department uses the cohort-component method to project population and compares it to projections prepared by BEBR in order to ensure consistency and accuracy. Projections used by the City of Jacksonville Planning and Development Department assist in the on-going assessment of Jacksonville's *2045 Comprehensive Plan*. The population projections in Table 3 are from Table L-3 of the Future Land Use Element's Background Report and were used to update the

Comprehensive Plan from a horizon year of 2030 to 2045; the *2045 Comprehensive Plan* is based on the projections in Table 3.

JEA's demand forecast is based upon recent customer connection and demand/production trends. Historical new connection trends are analyzed on a grid or basin basis and then consolidated into an overall service territory trend. Utilizing the connection trends along with total water production data, a gallons per day per connection metric is developed and then applied against the projected connections to develop a future demand forecast. Served population estimates are calculated on an as needed basis. JEA does not have demographic information for customers or number of people per connection served. Population is estimated using only residential and multifamily connection counts multiplied by a persons per household factor obtained from the United States Census Bureau for the specific County/region in question.

Population Projections						
Grid	**North**	**South**	**Nassau**	**Ponte Vedra**	**Ponce De Leon**	**Mayport**
2024	344,563	452,247	31,803	4,175	1,866	245
2025	350,600	460,744	33,980	4,198	1,878	251
2026	356,637	469,036	36,157	4,222	1,889	256
2027	362,673	477,124	38,334	4,245	1,900	261
2028	368,710	485,006	40,511	4,269	1,911	267
2029	374,747	492,684	42,688	4,292	1,922	272
2030	380,784	500,156	44,865	4,316	1,933	277
2035	410,967	534,445	55,749	4,433	1,988	304
2040	441,151	563,609	66,634	4,550	2,043	330
2045	471,335	587,650	77,518	4,668	2,087	357

Table 4: Population Projections, JEA Service Area
Source: JEA

4.2 Projected Water Demands

JEA renewed its CUP with the SJRWMD in May 2011 for a 20-year period. Figure 8 shows the projected total water demand and the expected water demand from the Floridan Aquifer. The difference from the purple dashed line and blue dashed line is the projected volume of potable offset reclaimed water demand.

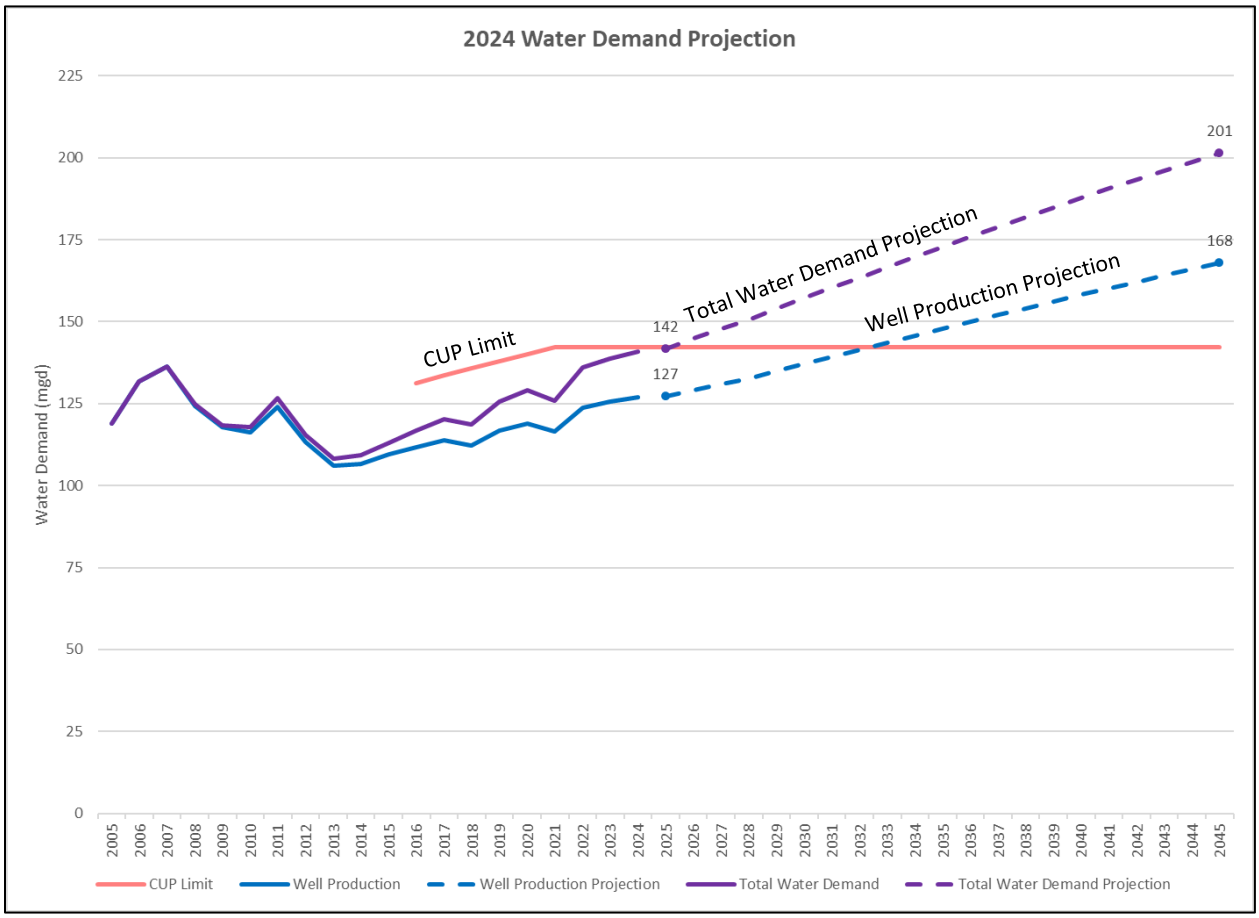


Figure 8: Water Demand Projections
Source: JEA

Using the customer connection and demand/production trends, historical new connection trends are analyzed on a grid or basin basis and then consolidated into an overall service territory trend. Utilizing the connection trends along with total water production data, a gallons per day per connection metric is developed and then applied against the projected connections to develop a future demand forecast. The result of the final forecast of total water demand per grid is shown in Table 5.

Individual Grid Demand in MGD								
Year	North Grid	South Grid		Nassau Grid	Ponte Vedra Grid	Ponce de Leon Grid	Mayport	Total Water Demand
2019	45.22	66.56		3.57	1.06	0.44	0.05	116.90
2020	47.01	66.71		3.69	1.01	0.42	0.06	118.89
2021	44.14	67.19		3.65	1.03	0.38	0.06	116.44
2022	46.94	71.19		4.25	1.08	0.33	0.06	123.85
2023	48.48	71.09		4.67	1.07	0.25	0.06	125.64
2024	49.19	72.20		4.15	1.07	0.28	0.06	126.96
2025	49.39	72.07		4.35	1.08	0.31	0.06	127.26
2026	49.06	74.07		4.55	1.08	0.35	0.07	129.16
2027	48.71	76.10		4.74	1.08	0.38	0.07	131.08
2028	49.35	76.82		4.94	1.09	0.41	0.07	132.67
2029	50.54	77.66		5.14	1.09	0.41	0.07	134.90
2030	51.72	78.48		5.33	1.10	0.41	0.07	137.11
2035	57.64	82.26		6.32	1.13	0.43	0.08	147.85
2040	63.57	85.62		7.30	1.16	0.44	0.08	158.16
2045	69.49	88.39		8.28	1.19	0.45	0.09	167.89

Table 5: Water Demand by Grid
Source: JEA

4.3 Projected Reclaimed Water Demand

Reclaimed water is an integral part of JEA's CUP. By implementing proposed capital projects, JEA has projected total reclaimed water to reach 44 mgd by 2040. JEA will continue its commitment to develop and invest in the expansion of reclaimed water treatment and distribution in order to support the needs of their customers and maximize the use of reclaimed water to the extent it is economically, environmentally and technologically feasible.

5.0 CAPITAL IMPROVEMENT PROJECTS

JEA's Capital Improvement Plan identifies water, wastewater and reclaimed water treatment, transmission, collection and distribution projects in the capital budget. Water treatment and distribution Capital Improvement Projects (CIP) that are currently planned to begin in the next ten years or are underway are identified and are included in Appendix 1. As planning needs dictate, the timing of specific projects may change or projects substituted to meet the needs of JEA customers. Project specific information and descriptions are not included in this report but are available via JEA's Capital Budget. Current planned projects with 10 year project budgets totaling approximately $1.69 billion are scheduled to be spent during this time period.

JEA has $895 million in reclaimed water projects already planned to serve the needs of the reclaimed water system over the next ten years. These projects are focused on meeting the projected demands, offsetting potable water use and minimizing the environmental impacts to the St. Johns River and Floridan Aquifer. Most projects are focused on providing the projected capacity to support increasing demands from new growth; some projects are currently conceptual and require further evaluation to determine viability. Appendix 2 is a list of the reclaimed water Capital Improvement Projects.

The 2023 North Florida Regional Water Supply Plan (NFRWSP) identifies water conservation efforts and water supply development and water resource development project options to meet water demands while protecting water resources. JEA is evaluating several significant reclaimed water project options, which have the potential to expand reclaimed water use even further. One program in particular, the water purification program, is investigating further purifying the available reclaimed water to drinking water standards so it can be used to replenish the aquifer. Replenishing the aquifer would result in a proportional increase in the Consumptive Use Permit.

The City of Jacksonville updates its 5-Year Capital Improvements Project budget (CIP) annually. Projects identified in JEA's Water Resource Master Plan have been included in the most current CIP, adopted in September 2024. Project options selected by JEA from the NFRWSP are identified in Appendix 1 and 2 of this Work Plan. The City and JEA will continue to evaluate water and reclaimed water projects identified in this Work Plan as well as other projects that may be necessary to meet projected water demands and will update the CIP accordingly.

6.0 FUTURE WATER SUPPLY PLANNING AND COORDINATION

To promote the efficient use of water and offset groundwater withdrawals, the City of Jacksonville and JEA have committed to various alternative water supply strategies.

For the 10-year period of this Work Plan, the City and JEA will continue to focus on the water supply planning strategies listed below. These strategies are implemented through a variety of programs, policies, and projects as mentioned in this section and all include active participation with the SJRWMD and other stakeholders in the Regional Water Supply Planning process.

- Conservation;
- Provision of Water Supplies to Development;
- Protection of Water Sources; and
- Alternative Water Sources

6.1 Water Conservation

The City and JEA have pursued conservation efforts to protect and conserve the Floridan Aquifer. In addition to practicing conservation measures, the City and JEA have also established educational campaigns, enabling policies, and specific projects with the goal of conserving water resources. The City and JEA plan to maintain these conservation programs and improve upon them where possible.

Aside from practicing conservation within their organizations, the City and JEA also focus on developing and disseminating educational campaigns, enabling low-impact development (LID), and requiring responsible landscaping applications such as Florida-friendly landscaping and similar measures.

The City and JEA coordinate and plan using the programs, policies, and projects listed in the table below.

		2045 Comprehensive Plan	Local Ordinance	JEA	Additional
Water Conservation	**Low Impact Development (LID)**	FLUE 1.5.9; CCME 13.3.6 and 13.5.5			Duval County Low-Impact Development Manual, July 2013
	Florida-friendly Landscaping & landscaping-related efforts	IE NGAR 2.2.4; IE PW 1.8.3; CCME 3.4.4	Chapter 656.1211; Irrigation Ordinances 2008-030 and 2009-360	JEA Irrigation Tips for Conservation flyers	SJWMD Model Water Conservation Ordinance for landscape irrigation Rule 40C-2.042(2) F.A.C.; Section 373.62 F.S.
	Education	IE NGAR 1.3.7; IE NGAR Obj. 2.2; IE NGAR 2.2.1; IE NGAR 2.2.6; IE PW 1.6.7; IE PW Obj. 1.8; IE PW 1.8.1; IE PW 1.8.5	EQD Education Flyers Irrigation, Fertilizer, Figuring Out Fertilizer for the Home Lawn, and Frequently Asked Questions	JEA Teacher Resources--free educational materials	DEP/UF resource document "Florida-Friendly Landscape Guidance Models for Ordinances, Covenants, and Restriction," January 2009

FLUE- Future Land Use Element
IE NGAR- Infrastructure Element Natural Groundwater Aquifer Recharge Sub-element
IE PW- Infrastructure Element Potable Water Sub-element
CCME- Conservation/Coastal Management Element

Table 6: Water Conservation Coordination

6.2 Provision of Water Supplies

Concerning future planning and coordination for water provision, the City and JEA recognize the need for developments to be supplied with water resources concurrently as well as for services to be provided to areas in anticipation of future growth and development. To this end, several policies underscore this effort, and these enabling policies and ordinances are listed in the table below.

		2045Comprehensive Plan	Local Ordinance
Provision of Water to Development	**Providing Supplies Concurrently**	FLUE Obj. 1.2; FLUE 1.2.11; IE PW 1.1.1; IE PW 1.1.2; IE PW 1.3.2; CIE 1.4.4	
	Future Provision	FLUE 1.1.25; FLUE 1.2.8; FLUE 1.2.12; IE NGAR 1.1.2; IE NGAR 1.2.6; IE NGAR 1.2.7; IE PW Obj. 1.3	Chapter 654.132

Table 7: Concurrent and Future Water Provision

6.3 Water Source Protection

For the 10-year period of this Work Plan, the City and JEA will continue to focus on water source protection practices, enabled and administered through the following ordinances, policies, programs, and partnerships:

		2045 Comprehensive Plan	Local Ordinance	JEA	Additional
Water Source Protection	**Protect Water Quality**	FLUE 1.5.3; FLUE 1.5.8; FLUE 2.8.6; IE NGAR Obj. 1.3; IE NGAR 1.3.3; IE NGAR 1.3.5; IE NGAR 1.3.14; IE PW 1.2.3; CCME 2.1.5; CCME 2.1.9	Chapter 366.102; Environmental Protection Board (EPB) Rule 8; Chapter 654.119 Design standards wetlands and lands adjacent to water bodies; Chapter 366.607 Low Maintenance Zones	St. Johns River Accord (partnership)	Groundwater Resource Management Program; Groundwater Recharge Area Protection Program; DEP Source Water Assessment and Protection Program

Table 8: Water Source Protection Coordination

In 2006, JEA entered into the River Accord with the SJRWMD, COJ, and Florida Department of Environmental Protection (FDEP). The River Accord is an agreement among the parties to reduce nitrogen discharge to the river through increased usage of reclaimed water, upgrades to wastewater treatment plants, septic tank phase-outs, and storm water treatment. Through the River Accord, JEA entered into a cost sharing agreement with the SJRWMD in July 2007. This provided for a $250 million ten-year commitment to construct reclaimed water projects and upgrade wastewater treatment plants.

6.4 Alternative Water Sources

For the 10-year period of this Work Plan, the City and JEA will continue to focus on researching and providing alternative water sources. The primary strategy in this area is expansion of the water reclamation system and aquifer sustainability.

Over the past several years JEA has invested in a reclaimed water system in numerous service areas to help reduce the demand on the potable water system. During 2015, JEA established a reclaimed water system service area and enhanced its rules and regulations to promote the use of reclaimed water throughout its system. In the next decade additional sources of supply will be needed to help reduce the demand on the groundwater supply.

With JEA's support, the City passed a reclaimed water ordinance in 2006. This ordinance requires the construction of reclaimed water distribution systems in developments that JEA is prepared to serve. For more than a decade, JEA has been committed to providing reclaimed water for beneficial use. More than $85 million has been spent on transmission, treatment and pumping facilities to date.

As previously mentioned, in February 2015 JEA updated the JEA Rules and Regulations for Water, Sewer and Reclaimed Services to include reclaimed water service as a required connection within the JEA reclaimed water service area. Developments planned to be constructed within the reclaimed water service area at a distance greater than the minimum required from existing reclaimed water piping will be required to install reclaimed water piping until the service comes available in the future. Connection requirements are based on Equivalent Residential Connections (ERC) determined for each specific development. The required connection for new developments is subject to the conditions described in the Rules and Regulations. In the future more reclaimed water service areas are planned in regions like Northwest (north of Naval Air Station Jacksonville) as the reclaimed water system is expanded.

Over the next 10 years, JEA has budget plans to spend an additional $895 million to expand the use of reclaimed water throughout its service area. In addition, JEA is evaluating a number of other significant reclaimed water project options that have the potential to expand reclaimed water use even further. The table below lists the programs and policies that support water reuse.

		2045 Comprehensive Plan	**Local Ordinance**	**JEA**	**Additional**
Alternative Water Sources	**Water Reuse/ Reclaimed**	FLUE 1.2.12; IE NGAR 1.2.5; IE NGAR 1.2.6; IE NGAR 1.2.8; IE NGAR Obj. 2.1; IE PW Obj. 1.7; IE PW 1.7.2; CCME 2.2.4	Chapter 752 (Jacksonville Reuse of Reclaimed Water Program)	JEA Rules and Regulations for Water, Sewer & Reclaimed Services	DEP Comprehensive Reuse Program Chap. 62-610 F.A.C.

Table 9: Alternative Water Source Coordination

Other sources such as desalination of brackish, ocean or river water, potable reuse could be developed in the future to provide alternative potable water to JEA's customers. These options are much costlier to construct and operate than JEA's current water treatment facilities. These alternative water supply options would influence the current cost of service. The rates may need to be increased to cover the higher costs. JEA continues to work with the SJRWMD and the FDEP to find the most environmentally responsible and financially equitable solution for the community.

In FY2014 JEA began investing potable reuse as an alternative water supply which led to developing a three-phase program. Phase I consisted of pilot testing from 2017-2019. JEA is currently in Phase II which is design, construction and operation of a demonstration scale facility. Phase III considers full-scale implementation at multiple locations.

APPENDIX 1

Capital Improvement Projects, South Grid (in $1,000s)

Index No	Project Description	Project Total FY 24-34	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34
101-60	Forest Blvd - Stone Rd to T-Line - Raw Water Main - New	$222	$117	$105	$0	$0	$0	$0	$0	$0	$0	$0	$0
101-71	South Grid - Baymeadows Rd - Brierwood Rd to Craven Rd W - W	$1,300	$0	$0	$0	$0	$0	$190	$550	$560	$0	$0	$0
101-73	South Grid - Intertie between Bartram Repump and Racetrack Rd - W	$100	$0	$15	$85	$0	$0	$0	$0	$0	$0	$0	$0
102-21	SIPS - Main St WTP - 1st St to Franklin St - Trans - New - W - ENV	$30	$30	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
102-33	US1 BPS - Old St Augustine Rd to US1 BPS - New - W	$527	$527	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
102-34	SIPS - Deerwood - Southside Blvd Intertie to Deerwood III WTP - New	$9,925	$8,136	$1,789	$0	$0	$0	$0	$0	$0	$0	$0	$0
102-35	SIPS - Oakridge - Saints Rd - St Johns Bluff to Oakridge WTP - W	$13,381	$0	$0	$0	$0	$1,132	$5,436	$6,813	$0	$0	$0	$0
102-36	SIPS - Ridenour - Cortez to Ridenour WTP - New - W	$25,372	$0	$0	$0	$0	$2,162	$9,899	$13,312	$0	$0	$0	$0
102-37	SIPS - Greenland - Southside Blvd - Deerwood 3 to Greenland - W	$49,920	$27,500	$14,620	$7,800	$0	$0	$0	$0	$0	$0	$0	$0
102-43	SIPS - Greenland WTP GST No. 3 and Intertie Station	$9,408	$15	$7,708	$1,686	$0	$0	$0	$0	$0	$0	$0	$0
150-10	Southeast WTP - Ground Storage Tank	$6,712	$162	$0	$0	$62	$3,407	$2,033	$1,048	$0	$0	$0	$0
166-20W	2021-0722 - Eaton Ave - W	$1,270	$635	$635	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-30W	Estuary - 2023-0673 Ranger Station Roadway and Infrastructure - W	$4,677	$0	$2,338	$2,338	$0	$0	$0	$0	$0	$0	$0	$0
425-13	Brierwood WTP - Rehabilitation	$9,168	$0	$0	$0	$0	$680	$2,797	$5,691	$0	$0	$0	$0
425-41	Deerwood III WTP - Well 2 Replacement	$2,381	$1,890	$491	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-42	Cecil Commerce Center - Well No. 4	$4,353	$0	$1,413	$2,925	$15	$0	$0	$0	$0	$0	$0	$0
425-43	Ridenour WTP - Well No. 8	$4,691	$699	$3,141	$851	$0	$0	$0	$0	$0	$0	$0	$0
425-44	DLY - Southeast WTP - Well No. 4	$2,109	$22	$0	$0	$524	$1,562	$0	$0	$0	$0	$0	$0

425-59	Deerwood WTP - Well 5 Rehabilitation	$68	$68	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-61	Brierwood WTP - Well 1 Rehabilitation	$29	$29	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-62	Brierwood WTP - Well 2 Rehabilitation	$1	$1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-64	Hendricks WTP - Well 6 Rehabilitation	$13	$13	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-65	Norwood WTP - Well 1 Investigation and Rehabilitation	$312	$156	$156	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-66	Norwood WTP - Well 4 Investigation and Rehabilitation	$531	$391	$140	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-67	Deerwood WTP - Well 8 Rehabilitation	$475	$475	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-68	Woodmere WTP - Well 3 Rehabilitation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-69	Oakridge WTP - GST 1 Rehabillitation	$330	$330	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-72	Hendricks WTP - Well 4 Rehabilitation	$635	$28	$607	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-73	Lovegrove WTP - Well 4 Rehabilitation	$544	$453	$92	$0	$0	$0	$0	$0	$0	$0	$0	$0
825-15	Water Treatment Plant Large Capital Improvements - PH	$143,124	$0	$550	$5,047	$9,710	$24,065	$44,902	$30,761	$12,414	$5,225	$5,225	$5,225
831-03	Royal Lakes WTP Upgrades	$23,882	$1,115	$60	$6,915	$6,886	$8,906	$0	$0	$0	$0	$0	$0
	Totals	$315,488	$42,792	$33,860	$27,646	$17,197	$41,913	$65,257	$58,175	$12,974	$5,225	$5,225	$5,225

Capital Improvement Projects, North Grid (in $1,000s)

Index No	Project Description	Project Total FY 24-34	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34
095-01	North Grid - Downtown WTP	$11,000	$0	$0	$0	$750	$5,250	$5,000	$0	$0	$0	$0	$0
101-05	Pritchard Rd - Old Plank Rd to Cisco Dr W - Trans - New - W	$599	$599	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
101-07	Cisco Dr - Westlake WTP to Garden St - Trans - New - W	$7,212	$438	$5,022	$1,751	$0	$0	$0	$0	$0	$0	$0	$0
101-10	New World Av - Waterworks Ave to Chaffee Rd - Trans - New - W	$1	$1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
101-38	Jammes Rd - Wilson Blvd to Harlow Blvd	$2	$2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
101-68	North Grid - 301 WTP to Trails - W	$12,427	$0	$0	$0	$0	$0	$0	$0	$0	$827	$2,500	$9,100
101-69	North Grid - Main St - I-295 to Airport Center Dr - W	$2,300	$0	$0	$125	$382	$1,380	$413	$0	$0	$0	$0	$0
101-70	North Grid - Rental Car Lane - Owens Rd to Pecan Park Rd N - W	$1,600	$0	$0	$0	$0	$0	$240	$680	$680	$0	$0	$0

107-10	E 1st St Main St to E 4th St - Raw Water - New - W	$1	$1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
127-03	Westlake WTP - Expansion from 3.0 to 7.0 MGD	$14,859	$13	$396	$871	$7,656	$5,152	$771	$0	$0	$0	$0	$0
127-04A	Westlake WTP - Well No 4 and RW Main	$4,354	$1,056	$3,101	$197	$0	$0	$0	$0	$0	$0	$0	$0
150-15W	SWDE - Southwest WRF Purification Facility	$198,202	$298	$854	$850	$850	$92,064	$66,355	$7,843	$29,086	$0	$0	$0
151-03W	SWDE - Cedar Bay Purification Facility	$139,229	$366	$239	$250	$250	$58,973	$47,932	$8,367	$22,853	$0	$0	$0
166-16W	2021-5321 Darby Offsite - W	$225	$225	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-17W	2021-0517 Percy Oaks Offsite - W	$109	$109	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-18W	2021-5260 Saddle Oaks Offsite - W	$135	$135	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-19W	2020-3267 - Seaton Creek - W	$303	$303	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-21W	2020-4323 - Katie Cove - W	$473	$236	$236	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-29W	2023-0280 Diamond Timber Trails Phase 1A - W	$257	$0	$257	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-32W	2023-2827 Acree Pod G - Offsite Utilities - W	$515	$0	$515	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-33W	2023-0725 Seaton Creek Phase 4 - W	$388	$0	$388	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-34W	2023-2192 Trails 1B-1L - W	$300	$0	$300	$0	$0	$0	$0	$0	$0	$0	$0	$0
166-W	Grid - Cost Participation - New - W	$9,869	$43	$4,864	$3,437	$1,175	$50	$50	$50	$50	$50	$50	$50
182-132W	North Grid - Main St - Cole Rd to Elizabeth Ln - W	$3,230	$0	$0	$0	$0	$0	$300	$1,500	$1,430	$0	$0	$0
425-70	Highlands WTP - Well 6 Rehabilitation	$532	$480	$52	$0	$0	$0	$0	$0	$0	$0	$0	$0
425-74	Main Street WTP - Well 6A Rehabilitation	$531	$423	$108	$0	$0	$0	$0	$0	$0	$0	$0	$0
438-02	Ft. Caroline Rd - McCormick Rd to Fulton Rd - Dist - New - W	$2,286	$0	$0	$0	$0	$179	$805	$1,303	$0	$0	$0	$0
642-03	McDuff WTP - Refurbishment Project	$4,357	$3,115	$1,242	$0	$0	$0	$0	$0	$0	$0	$0	$0
737-02	Norwood WTP - Rehabilitation	$3,071	$1,889	$1,182	$0	$0	$0	$0	$0	$0	$0	$0	$0
743-01	SJRPP WTP - New 2 MGD Plant	$26,200	$0	$0	$0	$0	$300	$1,700	$6,000	$18,200	$0	$0	$0
825-17	Lakeshore WTP - Reservoirs Rehabilitation - Phase 2	$4,434	$3,944	$490	$0	$0	$0	$0	$0	$0	$0	$0	$0
825-18	North Grid THM Mitigation Project	$27,802	$185	$760	$1,200	$5,000	$17,000	$3,607	$50	$0	$0	$0	$0

	Totals	$476,802	$13,860	$20,007	$8,681	$16,063	$180,348	$127,173	$25,793	$72,299	$877	$2,550	$9,150

APPENDIX 2

Reclaimed Water Capital Improvement Projects (in $1,000s)

Index No	Project Description	Project Total FY 24-34	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34
103-04	Blacks Ford WRF - Expansion from 6 to 12 MGD	$291,835	$8,299	$10,815	$39,858	$96,286	$89,487	$47,090	$0	$0	$0	$0	$0
135-19*	**Arlington East WRF – Reclaimed Water and Disinfection System Upgrades**	**$102,320**	**$1,366**	**$3,690**	**$38,000**	**$44,000**	**$15,164**	**$100**	**$0**	**$0**	**$0**	**$0**	**$0**
150-15S	SWDE - Southwest WRF Purification Facility - Deep Injection Disposal Wells	$101,928	-$169	$0	$0	$0	$5,188	$39,029	$38,529	$19,351	$0	$0	$0
151-03S	SWDE - Cedar Bay Purification Facility - Deep Injection Disposal Wells	$62,313	-$232	$0	$0	$0	$1,613	$24,653	$24,153	$12,126	$0	$0	$0
166-30R	Estuary - 2023-0673 Ranger Station Roadway and Infrastructure - R	$5,125	$0	$2,563	$2,563	$0	$0	$0	$0	$0	$0	$0	$0
166-R	Grid - Cost Participation - New - R	$3,104	$0	$2,204	$100	$100	$100	$100	$100	$100	$100	$100	$100
181-06	Reuse Facility - Capital Equipment Replacement	$501	$9	$50	$50	$50	$50	$50	$42	$50	$50	$50	$50
268-10	Greenland WRF - Expansion to 8 MGD	$136,395	$0	$0	$0	$0	$0	$714	$5,592	$3,669	$22,107	$49,964	$54,349
268-W3*	**Greenland WRF - 4.0 MGD**	**$41,862**	**$35,595**	**$6,267**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
417-10A*	**Monument Rd - AE WRF to St Johns Bluff Rd - Trans - New - R**	**$10,060**	**$0**	**$352**	**$941**	**$3,114**	**$5,652**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
417-47	Davis - Gate Pkwy to RG Skinner - Trans - R	$13,894	$5,081	$8,425	$388	$0	$0	$0	$0	$0	$0	$0	$0
417-52	Russell Sampson Rd - St. Johns Pkwy to CR210 - Trans - R	$4,267	$0	$0	$0	$0	$0	$41	$600	$3,430	$195	$0	$0

417-64	Twin Creeks Reclaim Storage Tank and Booster PS - R - (Reimb-20)	$601	-$32	$632	$0	$0	$0	$0	$0	$0	$0	$0	$0
417-90*	**SEQ to Gate Parkway - Trans - New - R**	**$4,050**	**$0**	**$0**	**$1,000**	**$1,000**	**$2,050**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
417-94	Mandarin-Greenland Interconnect - R - ENV	$1,437	$1,437	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
417-97	N Estuary - RW Storage and Repump - R	$18,000	$0	$0	$0	$0	$200	$5,500	$10,300	$2,000	$0	$0	$0
417-98	Bartram Park WTP - Reclaimed Storage Tank Expansion Phase 3 - R	$2,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$400	$2,000
422-05	Ridenour WTP - Storage and Repump - R	$22,338	$386	$3,191	$12,878	$5,883	$0	$0	$0	$0	$0	$0	$0
730-12	US 1 - Greenland WRF to CR 210 - Trans - New - R	$1,168	$1,168	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
730-16	Nocatee North - Reclaim Water Storage Tank	$10,722	$36	$818	$3,185	$6,683	$0	$0	$0	$0	$0	$0	$0
825-13C	H20 Purification Center - Offsite Piping - Reclaimed Water Main	$249	$249	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
870-01	Water Reclamation Facilities - Capital Equipment Replacement	$60,240	$5,240	$5,500	$5,500	$5,500	$5,500	$5,500	$5,500	$5,500	$5,500	$5,500	$5,500
	Totals	$894,808	$58,434	$44,507	$104,463	$162,615	$125,002	$122,778	$84,816	$46,227	$27,953	$56,014	$61,999

'* Project listed in the North Florida Regional Water Supply Plan

Appendix 3- Water Supply Facilities Work Plan 2018-2028

301 Villages Water, Wastewater, and Reuse Water Facilities

Added August 6, 2024 pursuant to Policy 1.1.13 of the Infrastructure Element, Potable Water Sub-Element (IE-PW) of the of the 2045 Comprehensive Plan

IE-PW

Policy 1.1.13

The City shall continue to amend the Comprehensive Plan as needed to implement the City's Water Supply Facilities Work Plan 2018-2028 (Jacksonville Planning and Development Department, February 2019), adopted by reference. Supporting data and analysis may be attached as appendices to the Water Supply Facilities Work Plan, and updated from time to time, without the necessity of an amendment to the Comprehensive Plan. The City and JEA shall continue to identify and implement traditional and alternative water supply projects and programs, including conservation and water reuse, that are consistent with the SJRWMD's Regional Water Supply Plan to meet the City's water needs.

Summary:

Construction, by 301 Capital Partners, LLC, and its Florida Public Service Commission authorized utility subsidiary, First Coast Regional Utilities, Inc., of a One Million Gallon per Day (MGD) water, wastewater, and reuse utility facility to serve entitled development on approximatly 7,000 acres of land located west of US 301 and south of Interstate 10 in western Jacksonville. First Coast Regional Utilities, Inc., has received a 1.2 mgd Consumptive Use Permit (CUP) issued 7/11/24 by the SJRWMD (attached). All estimates are subject to final design and contracting.

Pursuant to Ordinances 2021-692-E and 2021-693-E, development is entitled on approximately 7,000 acres of land located west of US 301 and south of Interstate 10 in western Jacksonville. The development is entitled for construction of over 15,000 equivalent water and wastewater residential connections in mixed use configuration consisting of single-family and multi-family housing and zoning entitlements for commercial, hospital, office, and hotel/motel uses. Pursuant to the Multi-Use Future Land Use Category of the 2045 Comprehensive Plan and the 301 Villages Master Plan, the Water Supply Facilities Work Plan must be updated to reflect construction of the water supply facilities required to serve development. 301 Capital Partners, LLC, and its subsidiary, First Coast Regional Utilities, Inc., is authorized to and will provide water, wastewater, and reuse utility services to the property entitled pursuant to 2021-692-E and 2021-693-E. 301 Capital Partners, LLC, or its assigns or subsidiary, will be responsible for the design and construction of the facility utilities, which shall consist of One Million Gallon per Day (MGD) of water, wastewater, and reuse capabilities to provide services to the proposed development.

Project Title	**301 Villages Water, Wastewater, and Reuse Water Facilities**	**Council District(s)**	12	**Est. Completion Date (FY)**	FY 2024
Project Location	U.S. 301	**Project No**	N/A	**Capital Maint. Category**	
Department	N/A - Private Funding - 301 Capital Partners LLC/First Coast Regional Utilities, Inc.	**Ordinance/BT No**	No	**APP/Vertical Construction**	
Program Area	Public Facilities	**Urban Core**	No	**Est. Useful Life (in years)**	20 Years

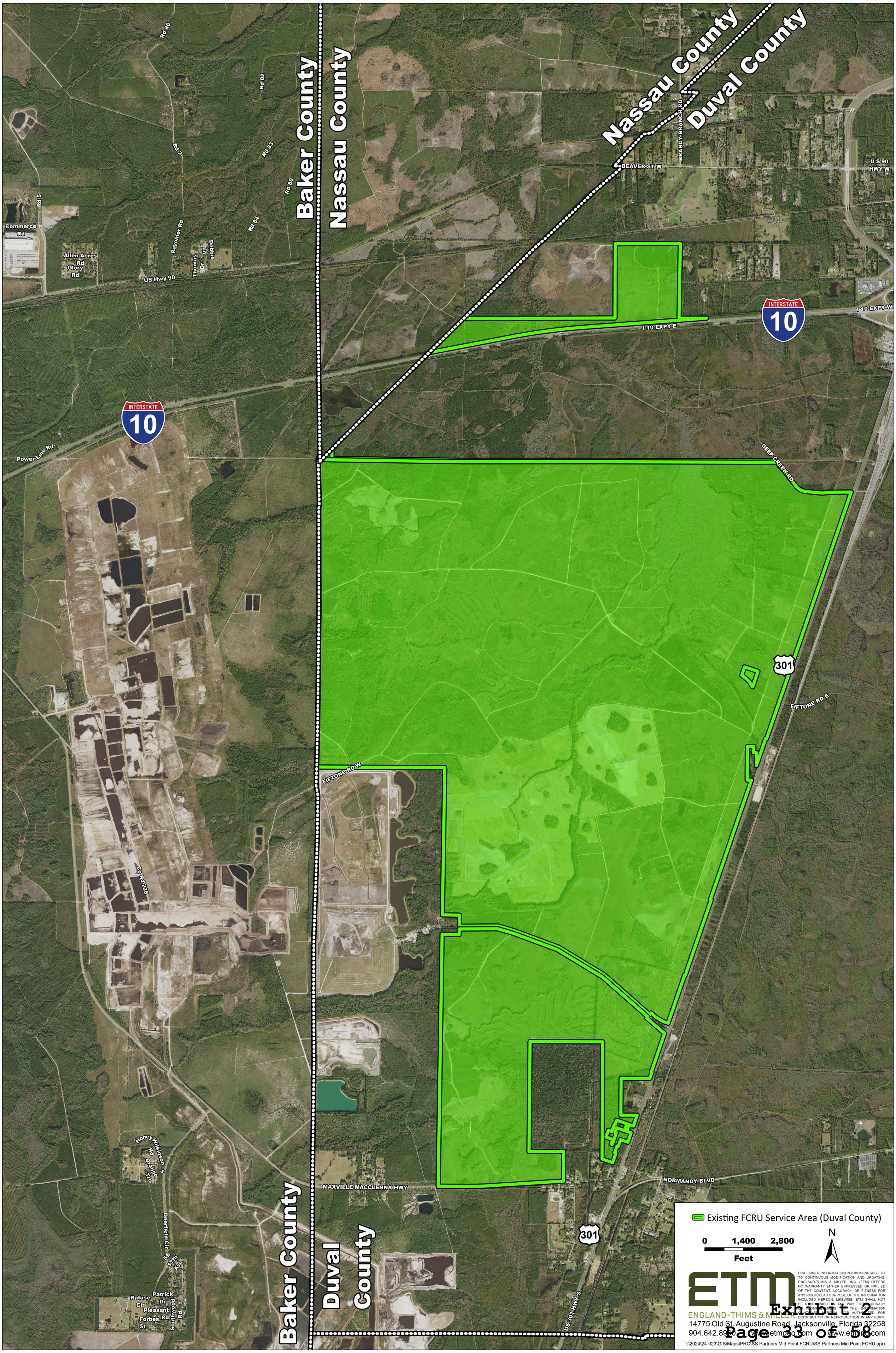
Description or Scope

Construction, by 301 Capital Partners, LLC, and its Florida Public Service Commission authorized utility subsidiary, First Coast Regional Utilities, Inc., of a One Million Gallon per Day (MGD) water, wastewater, and reuse utility facility to serve entitled development on approximatly 7,000 acres of land located west of US 301 and south of Interstate 10 in western Jacksonville. First Coast Regional Utilities, Inc., has received a 1.2 mgd Consumptive Use Permit (CUP) issued 7/11/24 by the SJRWMD (attached). All estimates are subject to final design and contracting.

Justification

Pursuant to Ordinances 2021-692-E and 2021-693-E, development is entitled on approximately 7,000 acres of land located west of US 301 and south of Interstate 10 in western Jacksonville. The development is entitled for construction of over 15,000 equivalent water and wastewater residential connections in mixed use configuration conisting of single-family and multi-family housing and zoning entitlements for commerical, hospital, office, and hotel/motel uses. Pursuant to the Multi-Use Future Land Use Category of the 2045 Comprehensive Plan and the 301 Villages Master Plan, the Water Supply Facilities Work Plan must be updated to reflect contruction of the water supply facilities required to serve develpment. 301 Capital Partners, LLC, and its subsidiary, First Coast Regional Utilities, Inc., is authorized to and will provide water, wastewater, and reuse utility services to the property entitled pursuant to 2021-692-E and 2021-693-E. 301 Capital Partners, LLC, or its assigns or subsidiary, will be responsible for the design and construction of the facility utilities, which shall consist of One Million Gallon per Day (MGD) of water, wastewater, and reuse capabilitities to provide services to the proposed development.

Funding Sources	**Total ('000)**	**Prior FY Budget ('000)**	**FY 23-24 ('000)**	**FY 24-25 ('000)**	**FY 25-26 ('000)**	**FY 26-27 ('000)**	**FY 27-28 ('000)**	**Beyond 5 ('000)**
First Coast Regional Utilities (Privately Funded)	**$150,000**				**$31,000**	**$31,000**		**$55,000**
Debt Management Funds	$0	$0	$0	$0	$0	$0	$0	$0
Local Option and Constitutional Gas Taxes	$0	$0	$0	$0	$0	$0	$0	$0
Prior Year Revenue	$0	$0	$0	$0	$0	$0	$0	$0
Grant Funding	$0	$0	$0	$0	$0	$0	$0	$0
Pay-Go: Transfer From Other Funds	$0	$0	$0	$0	$0	$0	$0	$0
Pay-Go: Transfer Stormwater Operating	$0	$0	$0	$0	$0	$0	$0	$0
F.I.N.D Projects	$0	$0	$0	$0	$0	$0	$0	$0
Totals	**$117,000**	**$0**	**$0**	**$0**	**$31000**	**$31000**	**$0**	**$55000**
Expenditures / Project Phase	**Total ('000)**	**Prior FY Budget ('000)**	**FY 23-24 ('000)**	**FY 24-25 ('000)**	**FY 25-26 ('000)**	**FY 26-27 ('000)**	**FY 27-28 ('000)**	**Beyond 5 ('000)**
Engineering and Design		$0	$4700	$4700	$0	$0	$0	$6600
Land Acquisition and Site Prep	$0	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$ -	$0	$0	$0	$0	$0	$0
Capital Equipment	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$0	$0	$0	$0	$0	$0	$0	$0
Totals	**$16,000**	**$0**	**$4,700**	**$4700**	**$0**	**$0**	**$0**	**$6600**


Baker County
Nassau County
Nassau County
Duval County
Rd 86
Rd 82
Rd 7
Rd 83
Rd 80
Rd 84
Rd 5
Commerce Rd
Allen Acres Rd
Glory Rd
Rayonier Rd
Thomas Dr
Pebbie Ln
US Hwy 90
BEAVER ST W
BRANDY BRANCH RD
U S 90 HWY W
INTERSTATE 10
I 10 EXPY W
I 10 EXPY E
Power Line Rd
DEEP CREEK RD
301
FIFTONE RD E
FIFTONE RD W
Co Rd 228
Honey Wilkinson Rd
Orange Trl S
Deerfield Cir SE
174th Ave
Rafuse Cir
Patrick Dr
Pleasant Rd
Forbes St
Moultrie Pond Rd
MAXVILLE MACCLENNY HWY
NORMANDY BLVD
US 301 HWY S
Baker County
Duval County
Existing FCRU Service Area (Duval County)
0
1,400
2,800
Feet
N
ETM
ENGLAND-THIMS & MILLER
14775 Old St. Augustine Road, Jacksonville, Florida 32258
904.642.8990 www.etmgeo.com www.etminc.com
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T:\2024\24-023\GIS\Maps\PRO\SS Partners Mid Point FCRU\SS Partners Mid Point FCRU.aprx

Baker County
Nassau County
Nassau County
Duval County
Duval County
Baker County
Rd 86
Rd 82
Rd 7
Rd 83
Rd 5
Rd 80
Rd 84
Commerce Rd
Rayonier Rd
Allen Acres Rd
Glory Rd
US Hwy 90
Thomas Dr
Debbie Ln
BEAVER ST W
BRANDY BRANCH RD
U S 90 HWY W
INTERSTATE 10
I 10
I 10 EXPY W
Power Line Rd
DEEP CREEK RD
301
FIFTONE RD E
FIFTONE RD W
Co Rd 228
Honey Wilkinson Rd
Deerfield Cir
SE 17th Ave
Rafuse Cir
Patrick Dr
Pleasant Rd
Forbes St
Poomumous Rd
Crooked Rd
MAXVILLE MACCLENNY HWY
NORMANDY BLVD
US 301 S

Existing FCRU Service Area

0 1,400 2,800
Feet

N

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FIRST COAST REGIONAL UTILITIES SJRWMD CUP
(Permit # 213110-0; Issued July 11, 2024)

TOTAL CUP VOLUME ADF (Annual Average)

Permit Condition #20	Upper Floridan Aquifer	0.96 mgd
Permit Condition #21	Surface Water	0.196 mgd
Permit Condition #22	Intermediate Aquifer	0.047 mgd
TOTAL CUP ALLOCATION		1.203 mgd

CUP PHASING

Upper Floridan Aquifer — Phasing Schedule

0.13 mgd – December 31, 2025*

0.72 mgd – December 31, 2030*

0.96 mgd – January 1, 2031*

Permit Condition #20.2 – Permittee may apply by **letter modification** to accelerate this allocation schedule by providing a demonstrated need for a greater amount up to the maximum annual allocation.

Surface Water — 0.196 mgd – No Phasing

Intermediate Aquifer — 0.047 – No Phasing

Project Information

Information as of 29-Jul-2024 01:52:51 AM

Project Number	213110 - 1	**Project Name**	First Coast Regional Utilities		
Sequence Type	Initial Sequence	**Permit Type**	CUP Individual - Board Issued	**County**	Duval ( )
Received	12/27/2023	**Decision**	07/11/2024	**Expiration**	07/09/2044

Description The District authorizes the use of 350.4 million gallons per year (mgy) (0.96 million gallons per day (mgd), annual average) of groundwater from the Upper Floridan aquifer for public supply use (household, commercial, water utility, and unaccounted for), 71.54 mgy (0.196 mgd, annual average) of surface water from the stormwater management system for supplementation of the reclaimed water system, and 17.14 mgy (0.047 mgd, annual average) of groundwater from the intermediate aquifer for emergency backup use only through 2044.

Status	Issued	**Recommendation**	Approval	**Current Process Stage**	**Compliance**
Applicant	First Coast Regional Utilities, Inc.	**Owner**	First Coast Regional Utilities	**Agent**	Environmental Research and Technology LLC
Total Wells	10	**Total Pumps**	1		

Copy Link | District Map | Google Earth | Google Map | Contact Us

Documents (40)

Change View | Export

Group Name	Document Name	Date	Size	Link	Comments
Application	Application	12/27/2023	397109	Application	System Generated Online Application...
Application	Additional Material:4	12/27/2023	8168328	Additional Material:4	Master Plan and Reclaimed Files
Application	Map:2	12/27/2023	2962963	Map:2	Site Info - II. Location Maps...
Application	Additional Material:5	12/27/2023	1188635	Additional Material:5	First Coast Regional Utilities Parcel I...
Application	Map	12/27/2023	961729	Map	Site Info - II. Location Maps...
Application	Additional Material:3	12/27/2023	125952	Additional Material:3	Impact Evaluation
Application	Additional Material:2	12/27/2023	125952	Additional Material:2	Reclaimed Water Feasibility
Application	Additional Material	12/27/2023	238722	Additional	Well Design

Items per page: 10 | 1 – 10 of 40

Close

301 Villages Phase I
Well Locations
FCRU Proposed Location
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CONSUMPTIVE USE PERMIT APPLICATION

St. Johns River Water Management District
4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
Application forms may also be submitted electronically at *floridaswater.com*.

SECTION I – CONTACT INFORMATION

If necessary, attach additional sheets if there are multiple applicants, owners, agents, etc.

1. **APPLICANT** (Complete legal name in which permit should be issued)

NAME: **Avery Roberts**

If applicant is a business, provide a contact person: ***First Coast Regional Utilities***

ADDRESS: **Po Box 238**

CITY, STATE, ZIP: **Lake Butler FL 32054-0238**

PHONE: **(386) 496-3509** CELL PHONE: **(386) 496-3509**

EMAIL ADDRESS: **info@firstcoastutility.com**

Do you want all correspondence to be transmitted electronically to this email address? ☒ Yes ☐ No

Applicant is: ☐ Owner ☐ Lessee* ☐ Other (explain) _____

*Attach copy of current lease, or written authorization from property owner

2. **OWNER** (If different than applicant)

NAME: **Avery Roberts, First Coast Regional Utilities**

ADDRESS: **Po Box 238**

CITY, STATE, ZIP: **Lake Butler FL 32054-0238**

PHONE: **(386) 496-3509** CELL PHONE: **(386) 496-3509**

EMAIL ADDRESS: **envrestec@outlook.com**

3. **AGENT OR CONSULTANT** Address all correspondence to the person below? ☐ Yes ☐ No

NAME: _____

COMPANY NAME (if applicable): _____

ADDRESS: _____

CITY, STATE, ZIP: _____

PHONE: _____ CELL PHONE: _____

EMAIL ADDRESS: _____

4. **COMPLIANCE CONTACT** (Person responsible for ensuring that the permit conditions are met)

NAME: **Avery Roberts, First Coast Regional Utilities**

ADDRESS: **Po Box 278**

CITY, STATE, ZIP: **Lake Butler FL 32054**

PHONE: **(386) 496-3509** CELL PHONE: **(386) 496-3509**

EMAIL ADDRESS: **envrestec@outlook.com**

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

SECTION II – APPLICATION INFORMATION

For permit application guidance, please refer to the Applicant's Handbook, Consumptive Uses of Water, which is incorporated by reference in Rule 40C-2.101(1)(a), F.A.C. (A.H.). Please complete all fields. Enter N/A for any fields that are not applicable.

1. **TYPE OF APPLICATION:** ☒New ☐ Modification ☐ Renewal

   If this application is for a modification, please describe the modification request and the reason the modification is necessary. _____

2. **CONSUMPTIVE USE PERMIT NO.** (if application is for renewal or modification): _____

3. **REQUESTED PERMIT DURATION**: ☒20 years ☐ _____ years (up to 20 years)

   ☐This project qualifies for a duration greater than 20 years, per Section 373.236, F.S.

4. **PROJECT NAME:** **First Coast Regional Utilities** **COUNTY:** _____

   PHYSICAL ADDRESS: _____

5. **RELATED PERMITS** (for projects other than Public Supply)

   ☐ ENVIRONMENTAL RESOURCE PERMIT: MSSW/ERP No(s): _____

   ☐ INDUSTRIAL WASTEWATER (IWW) PERMIT: IWW Permit No(s): _____

   ☐ NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT:

   NPDES Permit No(s): _____

SECTION III – USE TYPE CATEGORIES

Please check all applicable use categories associated with this application and complete the associated supplemental form(s) indicated. The **Minor Individual Supplemental Form** (Form No. 40C-2.900(2)) can be completed in lieu of Supplemental Forms A through G if all of the following criteria are met:

- Use is less than 100,000 gallons per day
- Withdrawal facilities (wells or pump intakes) are less than 8-inches diameter
- Combined withdrawal capacity is less than 1,000,000 gallons per day
- Use is not for Mining/Dewatering
- Use is for Public Supply where end users are not individually metered

Use Type Category	Supplemental Form
☐**Agricultural** (e.g., crops, livestock, nursery, aquaculture, pasture)	Form A Form No. 40C-2.900(1)(a)
☐**Commercial / Industrial** (e.g., service business, food and beverage production, cooling and heating, commercial attraction, manufacturing, chemical processing, power generation)	Form B Form No. 40C-2.900(1)(b)
☐**Landscape / Recreation** (e.g., irrigation of parks, cemeteries, landscaped areas, golf courses, athletic fields, playgrounds)	Form C Form No. 40C-2.900(1)(c)
☐**Mining / Dewatering** (e.g., water use or removal associated with construction or excavation)	Form D Form No. 40C-2.900(1)(d)
☒**Public Supply** (e.g., public or privately owned potable water supply utility)	Form E Form No. 40C-2.900(1)(e)
☐**Environmental / Other** (e.g., aquifer remediation, environmental enhancement, or the use of water for other purposes)	Form F Form No. 40C-2.900(1)(f)
☐**Institutional** (e.g., hospital, university, military base, correctional facility)	Form G Form No. 40C-2.900(1)(g)

SECTION IV – SOURCES OF WATER

(please attach additional facility tables if necessary)

SUMMARY OF GROUNDWATER (WELL) FACILITIES

Site or Wellfield Name[1]	District ID (if available)	Florida Unique Well ID (if available)	Owner's Well Name	Capacity (gpm)	Pump Type[2]	Casing Diameter (inches)[3]	Casing Depth (feet)	Total Depth (feet)	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Centrifugal (impeller located above water level), submersible (pump set below water level), turbine (motor at ground surface that drives an impeller below water level), vacuum underdrain (typically used for dewatering), well point system (typically used for dewatering), or other (any pump that does not fall into one of the categories previously listed)
3 The casing diameter is defined as the largest permanent water-bearing casing of the well at land surface.
4 Active (currently in use), Inactive (capped, does not have power, or the connection to the water supply system has been severed), Abandoned (plugged and abandoned in accordance with 40C-3, Florida Administrative Code), or Proposed (include anticipated construction date)
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

SUMMARY OF SURFACE WATER (PUMP) FACILITES

Site Name[1]	District ID (if available)	Owner's Pump Name	Pump Capacity (gpm)	Pump Intake Diameter (inches)	Pump Type[2]	Name of Surface Water Body	Type of Surface Water Body[3]	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Centrifugal (impeller located above water level), submersible (pump set below water level), turbine (motor at ground surface that drives an impeller below water level), hydraulic dredge pump (typically used for mining), hydraulic dewatering pump (typically used for construction or mining), other (any pump that does not fall into one of the categories previously listed)
3 Ditch/canal, lake/pond (natural), lake/pond (artificial), river/creek, spring, mining/borrow pit
4 Active (currently in use), Inactive (does not have power, or the connection to the water supply system has been severed), Proposed
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

SUMMARY OF CONNECTION POINT FACILITIES

Connection points include locations where potable or non-potable water (including reclaimed water) purchased from a water supplier enters a project site.

Site Name[1]	District ID (if available)	Owner's Connection Point Name	Water Supplier Name[2]	Type of Surface Water Body[3]	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Name of water supplier that provides water to the project through the connection point
3 Reclaimed water holding pond, stormwater management system
4 Active (currently in use), Inactive (the connection to the water supply system has been severed), Proposed
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

SECTION V – USE OF LOWEST QUALITY WATER AND EVALUATION OF RECLAIMED WATER FEASIBILITY

The applicant may be required to evaluate the feasibility of utilizing reclaimed water and/or other lower quality water sources. The feasibility analysis must be completed as outlined in Section 2.3.3(e), A.H.

SECTION VI – SUMMARY OF REQUESTED WATER USE

Summarize the requested water use from each supplemental form (Agricultural, Public Supply, Commercial / Industrial, etc.) in the table below. Provide projections for each source, at five-year intervals, for the requested permit duration. If the requested permit duration exceeds 20 years, please attach a supplemental sheet providing additional five-year projections for each source.

Year	Requested Amounts and Source(s) of Water				
	Upper Floridan ____ (mgy[2])	_____ (mgy)	_____ (mgy)	_____ (mgy)	Total Requested Water Use (mgy)
2023 - 2028	350.4				
2028 - 2033	350.4				
2033 - 2038	350.4				
2038 - 2043	350.4				

[1] Provide the name of the water source. Examples include upper Floridan aquifer, stormwater pond, surficial aquifer, Davis Lake.
[2] Million gallons per year

SECTION VII – AQUIFER STORAGE AND RECOVERY *(complete if applicable)*

ASR Facility Name	Source of Stored Water[1]	Storage Aquifer Name	Recovery Water Destination	Projected Demand Average (mgy)	Projected Demand Maximum (mgy)	Projected Injected Average (mgy)	Projected Injected Maximum (mgy)

[1] Aquifer name, surface water body, water treatment plant name.

Please describe any projected increases or decreases (from historical average) in the amounts stored or recovered.

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

SECTION VIII – IMPACT EVALUATION

When determining whether the permit applicant has provided reasonable assurances that the conditions for issuance in Rule 40C-2.301, F.A.C., are met, the District will consider the projected impacts of the proposed consumptive use on an individual and cumulative basis. In order to provide reasonable assurance, studies and/or impact evaluations may be required. Please refer to the Applicant's Handbook for guidance regarding the impact evaluations and attach analyses, if applicable.

SECTION IX – APPLICANT CERTIFICATION

I certify that to the best of my knowledge and belief, all of the information provided on this form and in any attachment to it is correct. I also certify that I have legal authority to execute this application for the applicant and certify that the applicant will have sufficient legal authority to undertake the activities described herein. I understand that any material false statement in an application to continue, initiate, or modify a use, or any material false statement in any report or statement of fact required of the permittee, may result in revocation, in whole or in part, of the permit (Section 373.243(1), F.S.). With advance notice, I agree to provide St. Johns River Water Management District staff, with proper identification, entry to the project site for the purpose of performing analyses of the site for determining whether the conditions for issuance will be met. Further, if a permit is granted, I agree that, with advance notice, District staff with proper identification shall have permission to enter, inspect, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications.

(If applicable) I authorize _____ to act as my agent for permit application coordination.

Avery Roberts	*(electronically signed)*	**22-Dec-2023**
APPLICANT'S NAME (print or type)	APPLICANT'S SIGNATURE	DATE
AUTHORIZED AGENT'S NAME (print or type)	AUTHORIZED AGENT'S SIGNATURE	DATE

When an application that will be considered by the District's Governing Board is complete, the applicant will be notified of the date of the hearing (Governing Board meeting) at which the application will be considered at least 14 days in advance. The Governing Board normally meets on the second Tuesday of the month.

SECTION X – APPLICANT CHECKLIST

The following items must be included with the permit application submittal:

- ☐ Proof of Property Control (e.g., deed, lease), if not already on file with the District
- ☐ Application Fee (refer to online fee schedule or Applicant's Handbook)
- ☐ Location/Site Map
- ☐ Supplemental Form(s) and associated supporting information (e.g., maps, calculations)
- ☐ Water Conservation Plan

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

Additional Information

Application submitted and electronically signed by Avery Roberts on 22-Dec-2023.

Additional Addresses

Water Use Reporting (EN-50) Contact	Avery Roberts First Coast Regional Utilities Po Box 278 Lake Butler, FL 32054 envrestec@outlook.com (386) 496-3509 (386) 496-3509
Consultant	Michael John Fuller Environmental Research and Technology LLC 356 SW DAYTIME LN LAKE CITY, FL 32024 envrestec@outlook.com 3863442625 (386) 344-2625

CONSUMPTIVE USE PERMIT
Public Supply – Form E

St. Johns River Water Management District
4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
Application forms may also be submitted electronically at *www.sjrwmd.com*.

SECTION E1 – SITE INFORMATION

1. Submit a map showing: [if available, provide items A through C in a District-approved electronic format, e.g. ESRI shapefile, AutoCAD, DXF, KMZ, or compatible GIS file]:
   A. The Distribution Area boundary(ies) where service is currently being provided and where the utility is proposing to provide service during the permit duration;
   B. The Authorized Water Service Area or Franchise Area boundary in which the utility is legally authorized to provide potable water service;
   C. All existing and proposed withdrawal and connection point locations. Label all wells, pumps and connection points so they match the IDs provided in Section IV (Sources of Water) of the main application form (Form No. 40C-2.900(1), which is incorporated by reference in Rule 40C-2.900(1), F.A.C.);
   D. A north arrow and map scale; and
   E. Labeled landmarks such as major roads and political boundaries.

SECTION E2 – POPULATION AND PER CAPITA USE

1. Historical data must be provided for the previous five years (including the most recent calendar year) and projected use at a minimum of five-year intervals for the requested permit duration. If historical data has been previously submitted to the District to fulfill periodic reporting requirements, the historical data may be left blank.

	Year	Average Number of Active Residential Connections	Total Number of Residential Dwelling Units (if available)	Residential Population Served[1]	Residential Water Use Average Day (mgd)	Uniform Residential Per Capita Use[2] (gpcd)[3]
Historical						
Projected	2025	420	420	1037	0.088	85
	2030P	3413	3413	8430	0.691	81.9

[1] Calculated as the Average Number of Active Residential Connections or Total Number of Residential Dwelling Units multiplied by the average number of persons per household.
[2] Calculated as Total Residential Water Use Average Day divided by Residential Population Served. Residential water use reflects finished water.
[3] gpcd = gallons per capita per day

2. Please attach a description of the methodology used to estimate population. Include supporting calculations and describe any deviations from District-approved methods as outlined in the Applicant's Handbook.

Form No. 40C-2.900(1)(e), effective August 2014
Incorporated by reference in 40C-2.900(1)(e), F.A.C

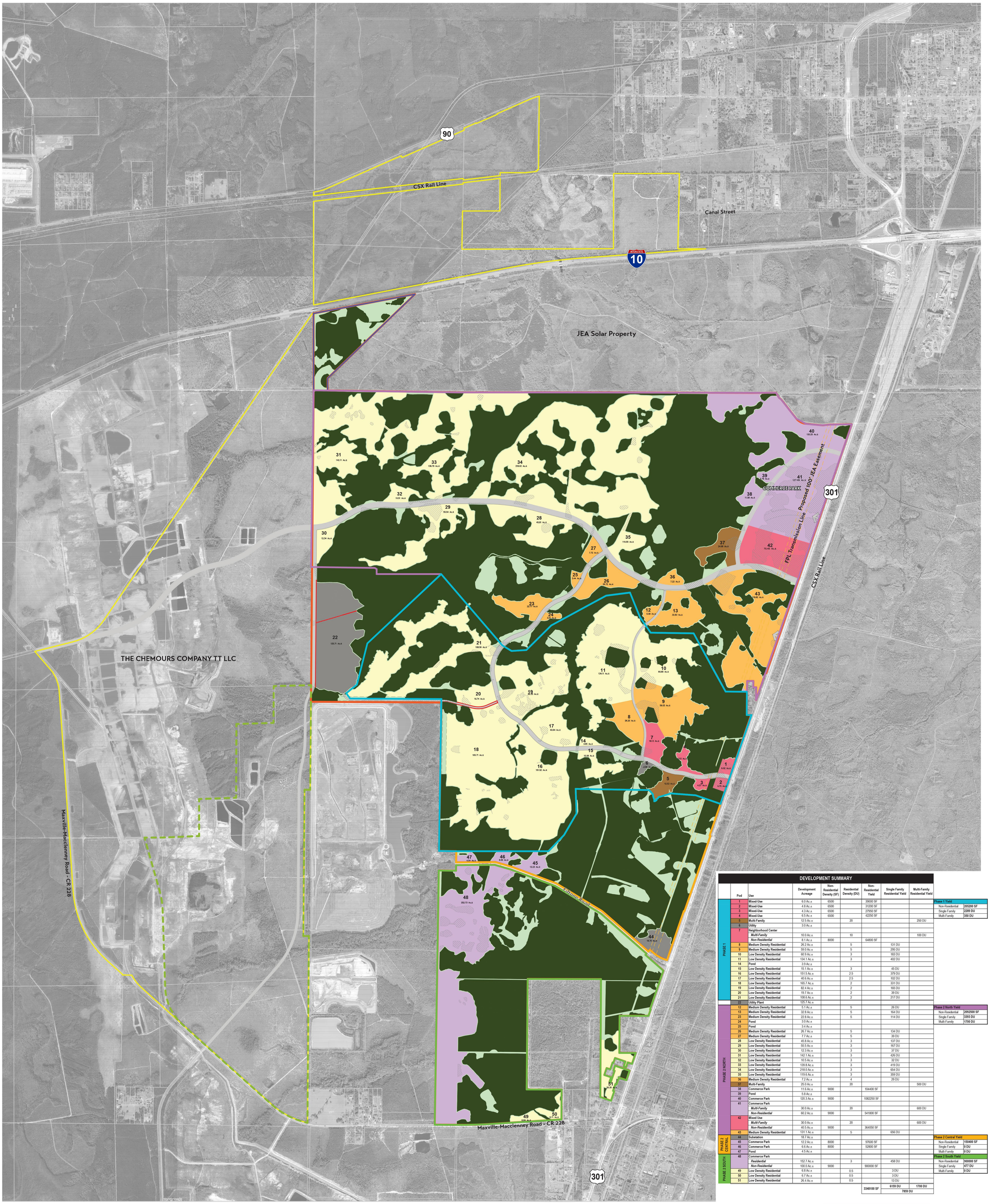
SECTION E3 – WATER DEMAND COMPONENTS

1. **Historical and Projected Water Demands**.
   If historical data has been previously submitted to the District to fulfill periodic reporting requirements, the historical data may be left blank. Projections must be provided at a minimum of five-year intervals for the requested permit duration.

	Year	Residential Water Use Average Day (mgd) (from Section E2 above)	Commercial / Industrial / Institutional[1] Average Day (mgd)	Recreation and Landscape Irrigation Average Day[2] (mgd)	Routine Exports Average Day[3] (mgd)	Other[4] (describe) _____ Average Day (mgd)	Water Utility[5] Average Day (mgd)	Water Losses[6] Average Day (mgd)	Water Treatment Reject[7] Average Day (mgd) (if applicable)	Annual Average Daily Raw Water Demand[8] (mgd)
Historical Water Demand	NA									0
										0
										0
										0
										0
Projected Water Demand	2025	0.09	0.035	0	0	0	0.001	0.0062	0	0.13
	2030P	0.69	0.206	0	0	0	0.009	0.0448	0	0.95

[1] Metered bulk industrial and commercial use including businesses, manufacturing facilities, and institutions such as schools and hospitals, including irrigation uses associated with these facilities whose irrigation source is provided by the utility.
[2] Use for irrigation of common areas such as parks, athletic fields, cemeteries, medians, and rights-of-way.
[3] Water routinely supplied to other utilities through interconnections.
[4] Examples of "Other" could include supplementation of a reclaimed water system, environmental restoration, or other uses not listed above.
[5] Water used for line flushing, well lubrication, and other water system maintenance.
[6] Water losses including leakage from transmission and storage facilities and other unknown water losses.
[7] Reject water from treatment systems such as reverse osmosis
[8] The annual average day raw water demand; should represent the sum of the columns to the left.

Form No. 40C-2.900(1)(e), effective August 2014
Incorporated by reference in 40C-2.900(1)(e), F.A.C



DEVELOPMENT SUMMARY								
	Pod	Use	Development Acreage	Non-Residential Density (SF)	Residential Density (DU)	Non-Residential Yield	Single Family Residential Yield	Multi-Family Residential Yield
PHASE 1	1	Mixed-Use	6.0 Ac.±	6500		39000 SF		
	2	Mixed-Use	4.8 Ac.±	6500		31200 SF		
	3	Mixed-Use	4.3 Ac.±	6500		27950 SF		
	4	Mixed-Use	6.5 Ac.±	6500		42250 SF		
	5	Multi-Family	12.5 Ac.±		20			250 DU
	6	Utility	3.0 Ac.±					
	7	Neighborhood Center						
		Multi-Family	10.0 Ac.±		10			100 DU
		Non-Residential	8.1 Ac.±	8000		64800 SF		
	8	Medium Density Residential	26.2 Ac.±		5		131 DU	
	9	Medium Density Residential	59.0 Ac.±		5		295 DU	
	10	Low Density Residential	60.9 Ac.±		3		183 DU	
	11	Low Density Residential	134.1 Ac.±		3		402 DU	
	14	Pond	3.9 Ac.±					
	15	Low Density Residential	15.1 Ac.±		3		45 DU	
	16	Low Density Residential	151.5 Ac.±		2.5		379 DU	
	17	Low Density Residential	40.6 Ac.±		2.5		102 DU	
	18	Low Density Residential	165.7 Ac.±		2		331 DU	
	19	Low Density Residential	82.4 Ac.±		2		165 DU	
	20	Low Density Residential	19.7 Ac.±		2		39 DU	
	21	Low Density Residential	108.6 Ac.±		2		217 DU	
	22	Utility Plant	125.7 Ac.±					
	12	Medium Density Residential	5.1 Ac.±		5		26 DU	
	13	Medium Density Residential	32.8 Ac.±		5		164 DU	
	23	Medium Density Residential	22.8 Ac.±		5		114 DU	
	24	Pond	3.0 Ac.±					
	25	Pond	3.4 Ac.±					
PHASE 2 NORTH	26	Medium Density Residential	26.7 Ac.±		5		134 DU	
	27	Medium Density Residential	7.7 Ac.±		5		39 DU	
	28	Low Density Residential	45.8 Ac.±		3		137 DU	
	29	Low Density Residential	55.5 Ac.±		3		167 DU	
	30	Low Density Residential	12.3 Ac.±		3		37 DU	
	31	Low Density Residential	142.1 Ac.±		3		426 DU	
	32	Low Density Residential	10.5 Ac.±		3		32 DU	
	33	Low Density Residential	139.8 Ac.±		3		419 DU	
	34	Low Density Residential	218.0 Ac.±		3		654 DU	
	35	Low Density Residential	119.6 Ac.±		3		359 DU	
	36	Medium Density Residential	7.2 Ac.±		4		29 DU	
	37	Multi-Family	25.0 Ac.±		20			500 DU
	38	Commerce Park	11.6 Ac.±	9000		104400 SF		
	39	Pond	5.8 Ac.±					
	40	Commerce Park	120.3 Ac.±	9000		1082250 SF		
	41	Commerce Park						
		Multi-Family	30.0 Ac.±		20			600 DU
		Non-Residential	60.2 Ac.±	9000		541800 SF		
	42	Mixed Use						
		Multi-Family	30.0 Ac.±		20			600 DU
		Non-Residential	40.5 Ac.±	9000		364050 SF		
	43	Medium Density Residential	131.1 Ac.±		5		656 DU	
PHASE 2 CENTRAL	44	Substation	18.7 Ac.±					
	45	Commerce Park	12.2 Ac.±	8000		97600 SF		
	46	Commerce Park	6.6 Ac.±	8000		52800 SF		
	47	Pond	4.5 Ac.±					
PHASE 2 SOUTH	48	Commerce Park						
		Residential	152.7 Ac.±		3		458 DU	
		Non-Residential	100.0 Ac.±	9000		900000 SF		
	49	Low Density Residential	6.8 Ac.±		0.5		3 DU	
	50	Low Density Residential	6.7 Ac.±		0.5		3 DU	
	51	Low Density Residential	26.4 Ac.±		0.5		13 DU	
						3348100 SF	6159 DU	1700 DU
							7859 DU	

Phase 1 Yield	
Non-Residential	205200 SF
Single Family	2289 DU
Multi-Family	350 DU

Phase 2 North Yield	
Non-Residential	2092500 SF
Single Family	3393 DU
Multi-Family	1700 DU

Phase 2 Central Yield	
Non-Residential	150400 SF
Single Family	0 DU
Multi-Family	0 DU

Phase 2 South Yield	
Non-Residential	900000 SF
Single Family	477 DU
Multi-Family	0 DU

0' 1,000' 2,000'

Note: This land plan and/or rendering is conceptual and is subject to review, change and approval by several governmental agencies to meet environmental, technical and other standards. This plan was completed based on limited information, therefore all acreage figures are unofficial and are subject to change.

301 Villages

Conceptual Master Plan

August 24, 2023

Updated: 08.24.23
"T:\2022\22-280\22-280-02\Concept\Overall Master Plan\22-280-02_Master Plan_08-24-23.ai"

ENGLAND-THIMS & MILLER

Trusted Advisors, Creating Community.

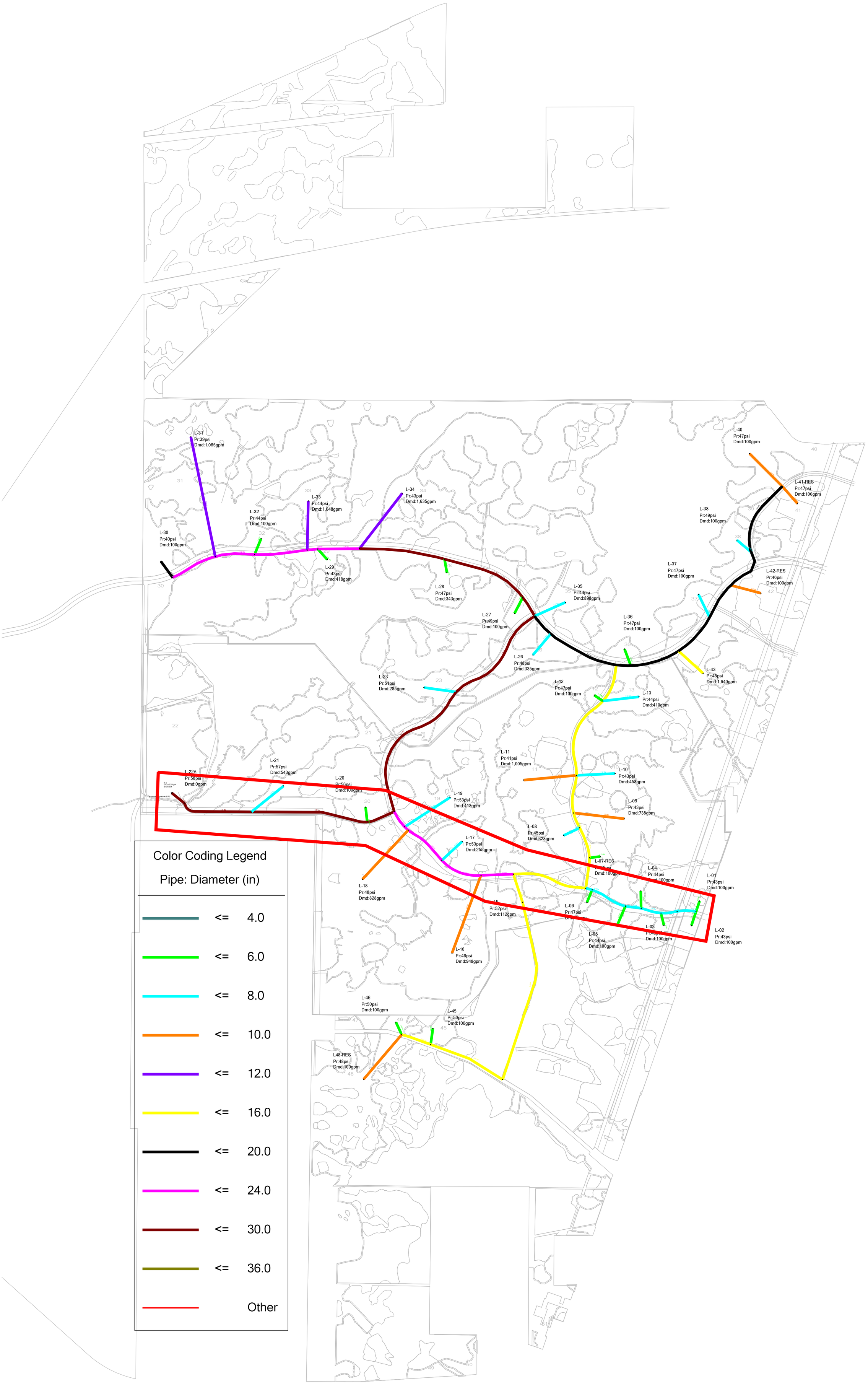
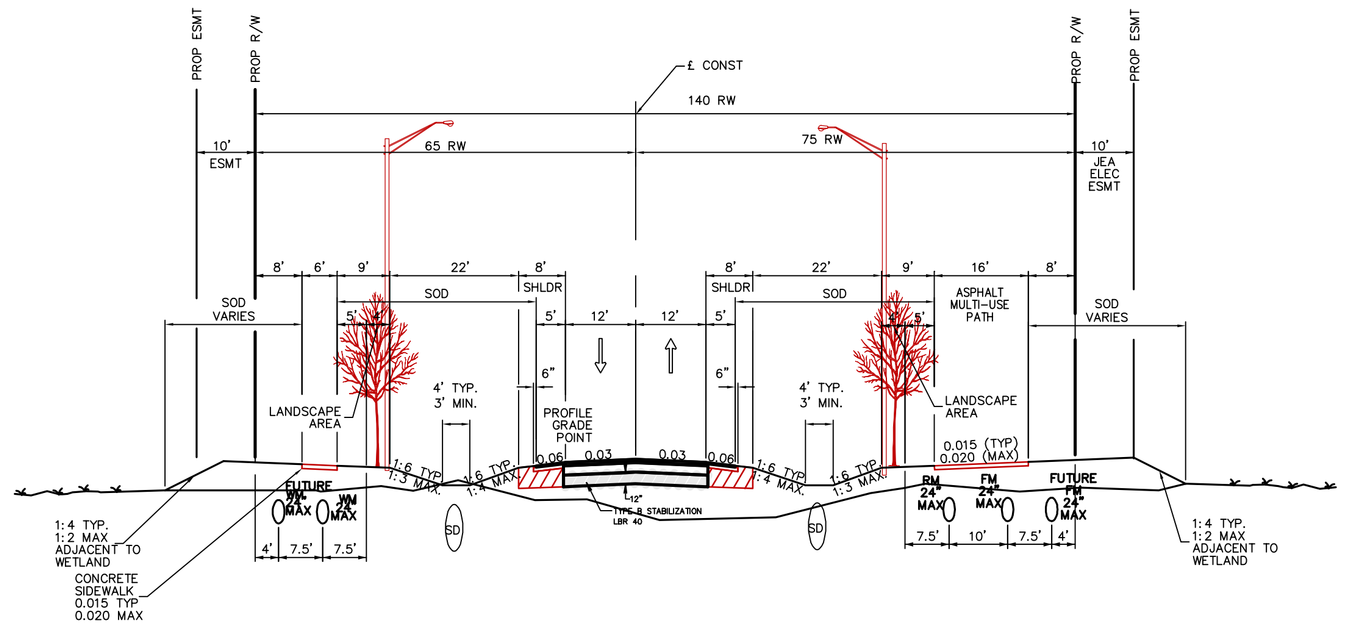
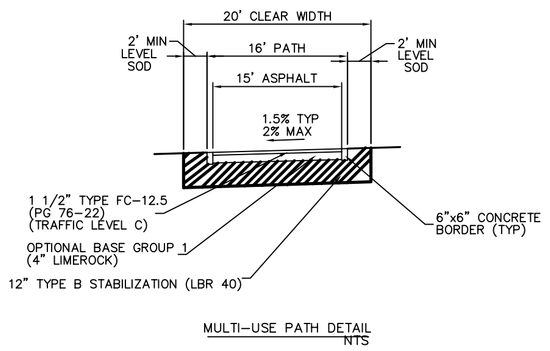


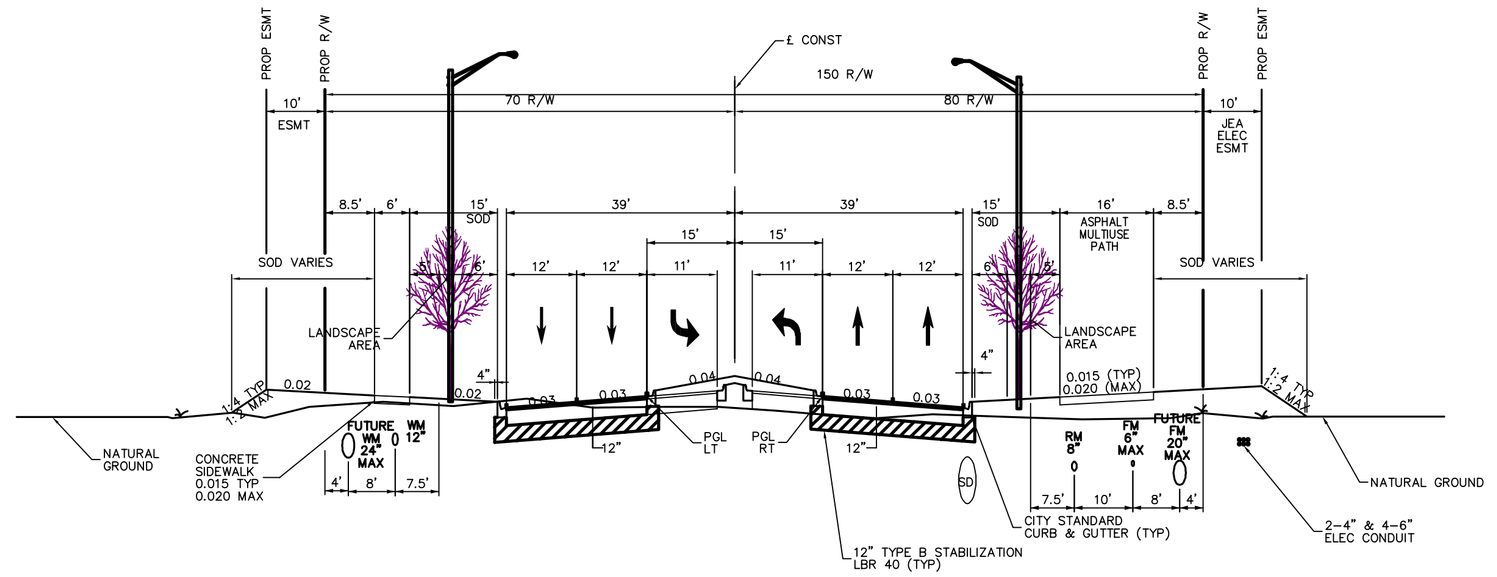
Exhibit 2
Page 48 of 58



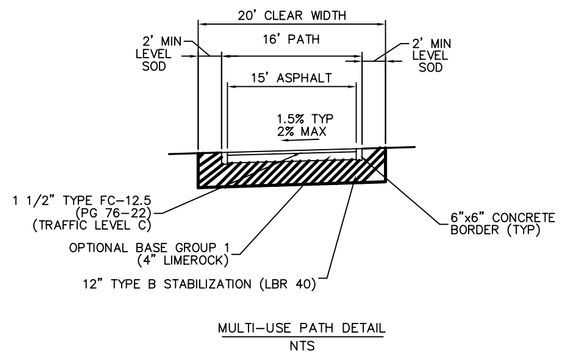
LOOP ROAD 2–LANE SECTION



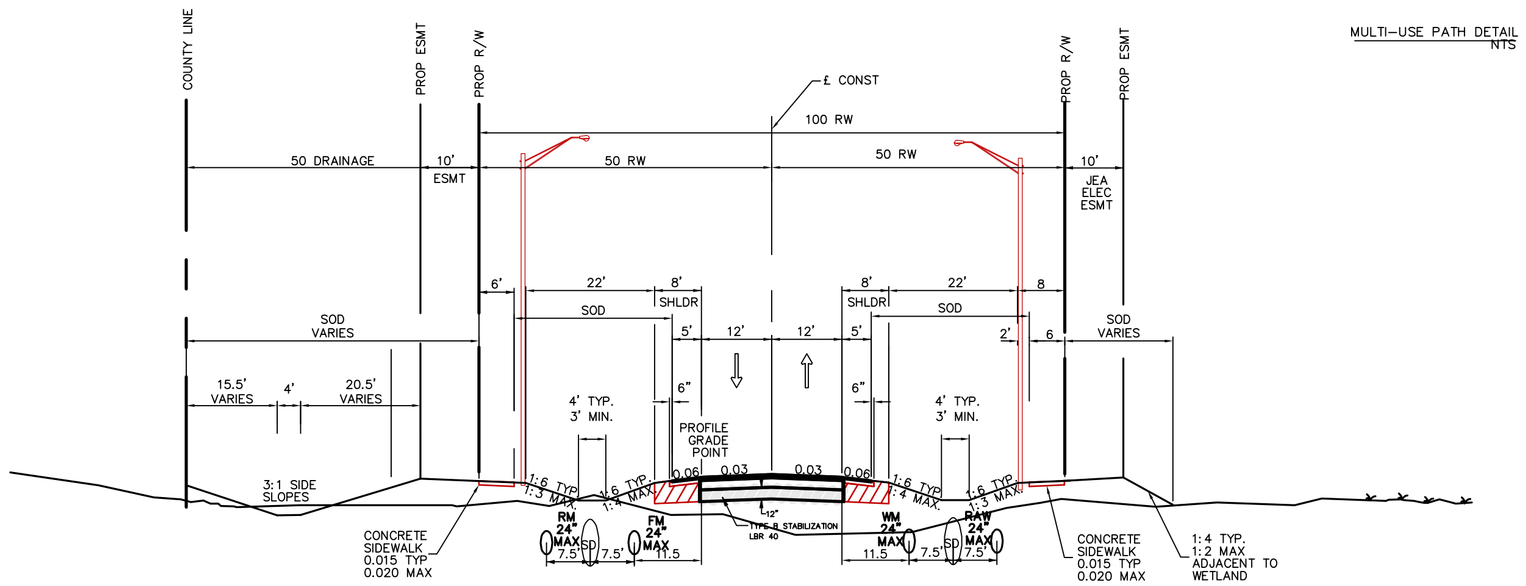
MULTI–USE PATH DETAIL
NTS



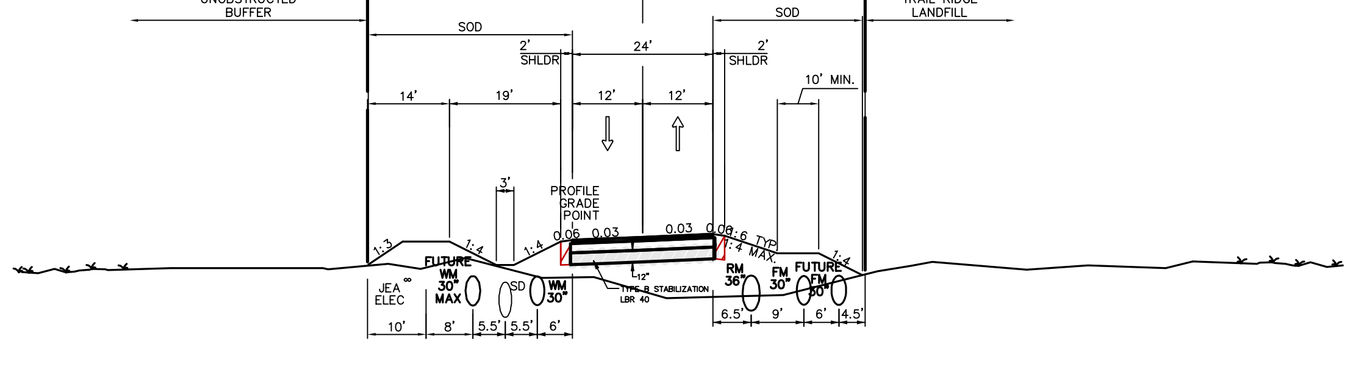
LOOP ROAD 4–LANE SECTION



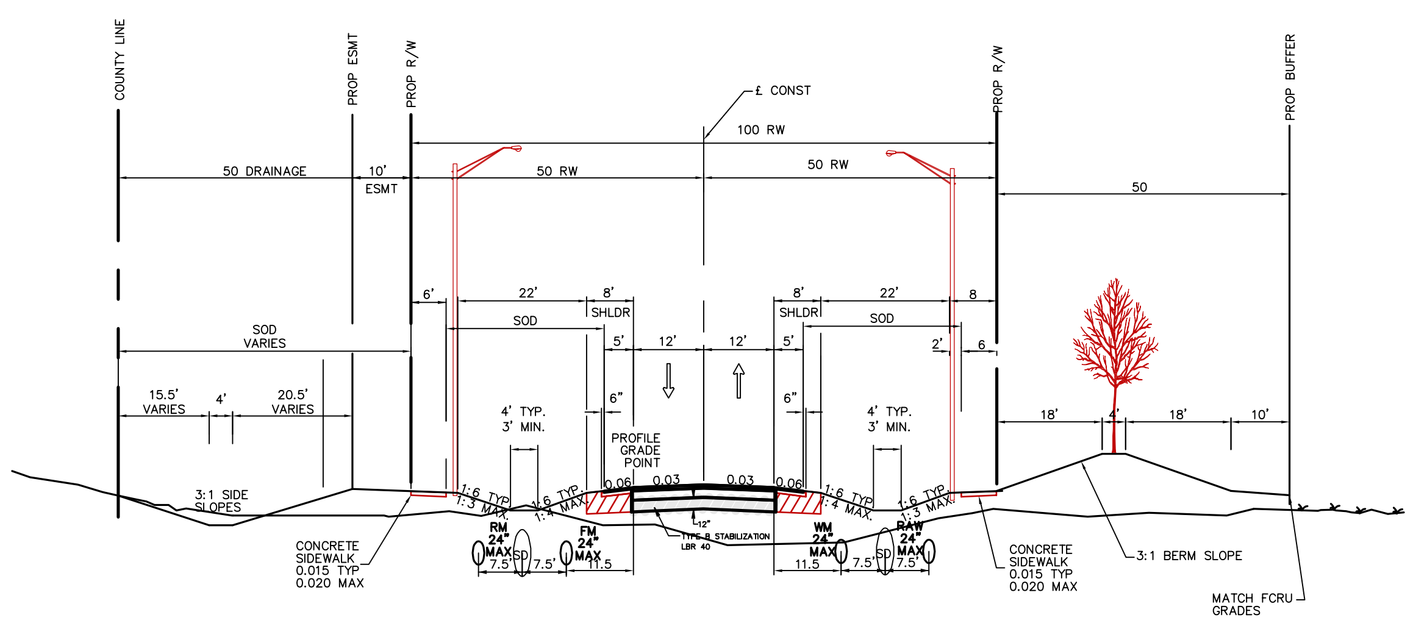
MULTI–USE PATH DETAIL
NTS



COUNTY LINE 2–LANE SECTION
NORTH OF FCRU PLANT



FCRU PLANT ACCESS ROAD



COUNTY LINE 2–LANE SECTION
ADJACENT TO FCRU PLANT

TYPICAL SECTIONS

FCRU
JACKSONVILLE

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
REG - 2584 LC - 0000316
VISION • EXPERIENCE • RESULTS

PLOTTED: September 25, 2023 – 10:28 AM, BY: Matthew Guiheaut
T:\2022\22-280\LandDev\Design\Plots\Exhibits\301 TYPICAL SECTION Parallel pipes.dwg

WM & FM STUBS

36" FORCE MAIN/
24" REUSE MAIN/
24" WATER MAIN
±5,700 LF EACH

5,700 LF FROM UTILITY PLANT TO MAIN ROADWAY

20" FORCE MAIN/
16" REUSE MAIN/
20" WATER MAIN
±9,200 LF OF EACH

6,200 LF FROM UTILITY CORRIDOR TO MASTER PUMP STATION

MASTER PUMP STATION

3,000 LF FROM 301 TO MASTER PUMP STATION

FUTURE WATER MAIN, REUSE MAIN & FORCE MAIN IN PROPOSED 100' JEA EASEMENT

US 301

LEGEND

GEMINI FLOOD LINE

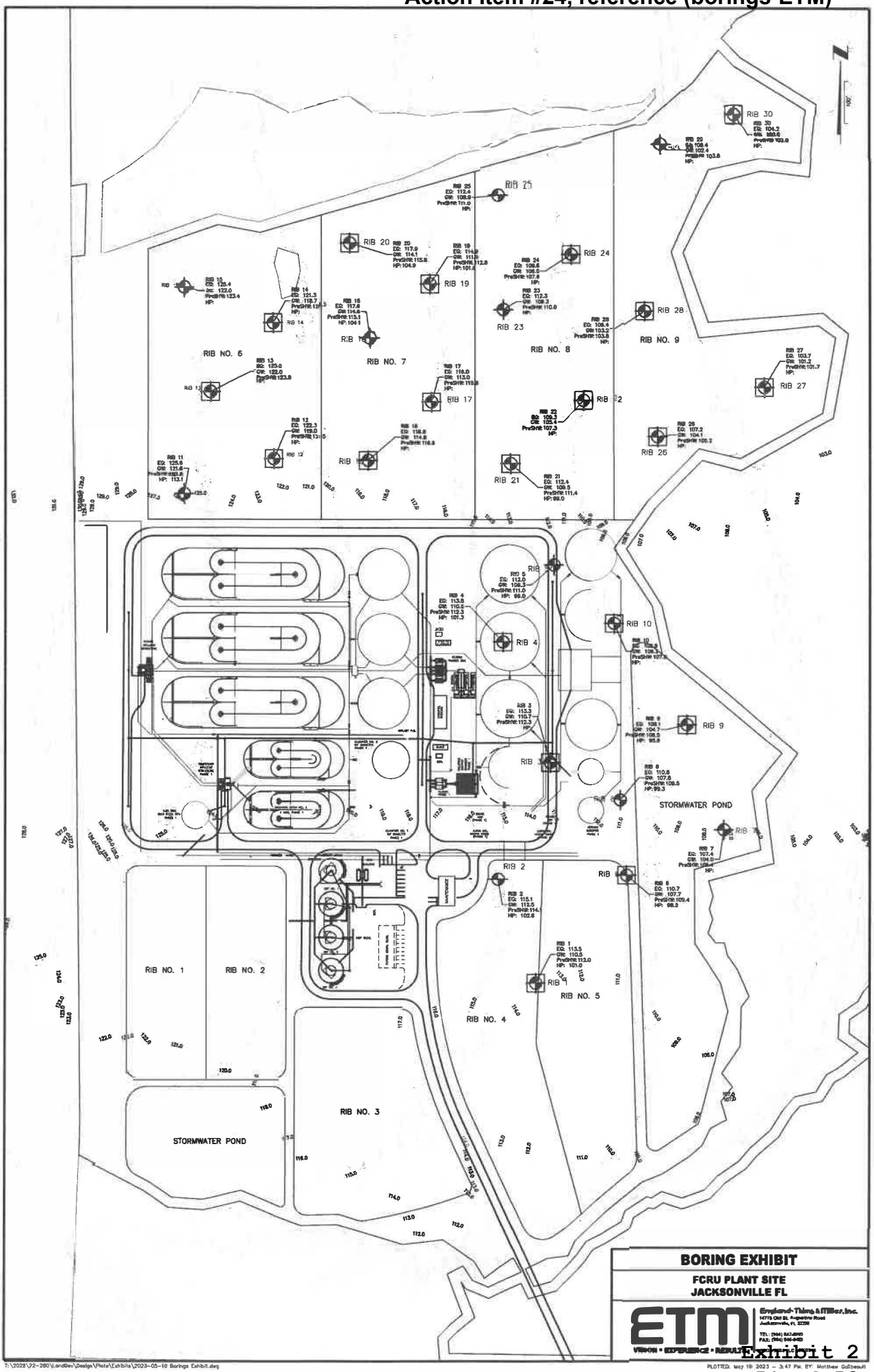
FEMA EFFECTIVE

LG2 WETLANDS (FLAGGED)

PHASE 1

301 PROPERTY
JACKSONVILLE, FL

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
REG - 2584 LC - 0000316
VISION • EXPERIENCE • RESULTS


RIB 30
RIB 25
RIB 20
RIB 24
RIB 19
RIB 28
RIB 23
RIB NO. 6
RIB NO. 7
RIB NO. 8
RIB NO. 9
RIB 27
RIB 17
RIB 26
RIB 12
RIB 21
RIB 10
RIB 4
RIB 9
STORMWATER POND
RIB 2
RIB 5
RIB NO. 1
RIB NO. 2
RIB NO. 4
RIB NO. 5
RIB NO. 3
STORMWATER POND
BORING EXHIBIT
FCRU PLANT SITE
JACKSONVILLE FL
ETM
England-Thims & Miller, Inc.

2. Attach a description of the methodology used to develop projections for each column in the Projected Water Demands table above. Include supporting calculations and describe any deviations from District-approved methods as described in the Applicant's Handbook.

SECTION E4 – HISTORICAL AND REQUESTED WATER USE

1. **Historical and Projected Water Supply Sources**

Provide the historical and projected water supply from each source. Sources include any bulk water purchases or transfers. The sum of all sources should equal the Annual Average Daily Raw Water Demand.

	Year	Requested Amounts and Source(s) of Water (mgy)				
		Annual Average Daily Raw Water Demand (mgd) Section E3 Table 1	Source 1 Name[1] _____ (mgy)	Source 2 Name _____ (mgy)	Source 3 Name _____ (mgy)	Source 4 Name _____ (mgy)
Historical Water Supply						
Projected Water Supply						

[1] Provide the name of the water source. Examples include upper Floridan aquifer, stormwater pond, surficial aquifer, Davis Lake

2. **Wellfield Operation Schedule**

Describe the typical wellfield operation schedule, including source and/or facility specific allocations if applicable. Identify which wells are primary, secondary (peaking), stand-by, and describe the well rotation schedule.

SECTION E5 – REUSE FEASIBILITY

For public water supply utilities that operate a domestic wastewater treatment facility, please provide an analysis of the economic, environmental, and technological feasibility of making reclaimed water available or increasing reclaimed water availability for beneficial reuse. Pursuant to subsection 403.064(6), F.S., a reuse feasibility study prepared in accordance with subsection 403.064(2), F.S., satisfies the requirement to conduct a reuse feasibility study.

SECTION E6 – WATER CONSERVATION

1. **CONSERVATION**

Please attach a copy of the conservation plan, and include a copy of any water conservation ordinances related to the plan. If your facility is located in a Water Resource Caution Area, there may be additional water conservation requirements as described in section 2.2.2.5 of the Applicant's Handbook.

A. Indicate whether the conservation program is a Standard Conservation Plan or a Goal-based Plan.

■ Standard Conservation Plan ❑ Goal-based Plan

B. Please attach a copy of the current water rate structure.

I-10

CROSS I-10 VIA ABANDONED RAIL UNDERPASS

NASSAU COUNTY

DUVAL COUNTY

FUTURE EXTENSION FORCE MAIN/ WATER MAIN

JEA PROPERTY

BAKER COUNTY

NASSAU COUNTY

FUTURE EXTENSION FORCE MAIN/ WATER MAIN

BAKER COUNTY

DUVAL COUNTY

WELL SITE 2

500' RADIUS LAND USE RESTRICTIONS

FUTURE EXTENSION FORCE MAIN/ REUSE MAIN/ WATER MAIN

FUTURE EXTENSION FORCE MAIN/ REUSE MAIN/ WATER MAIN/ RAW WATER MAIN

WELL SITE 1

±1.27 AC OF IMPACTS

7086.980'

BAKER COUNTY

DUVAL COUNTY

FIRST COAST REGIONAL UTILITY PLANT SITE

±1.73 AC OF IMPACTS

LANDFILL

FORCE MAIN/ REUSE MAIN/ WATER MAIN

FORCE MAIN/ WATER MAIN

500'

WELL LOCATIONS

FIRST COAST REGIONAL UTILITY PLANT JACKSONVILLE, FLORIDA

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
REG. 2584 LC - 0000316

VISION • EXPERIENCE • RESULTS

Exhibit 2

T:\2022\22-280\LandDev\Design\Plots\Exhibits\2023-02-15 Utility Exhibits and wells.dwg

PLOTTED: March 10, 2023 – 8:54 PM BY: Matthew Guilbeault

June 21, 2022

Work Order No. 22-316.00
File No. 128H-40.00A

Utility Parcel

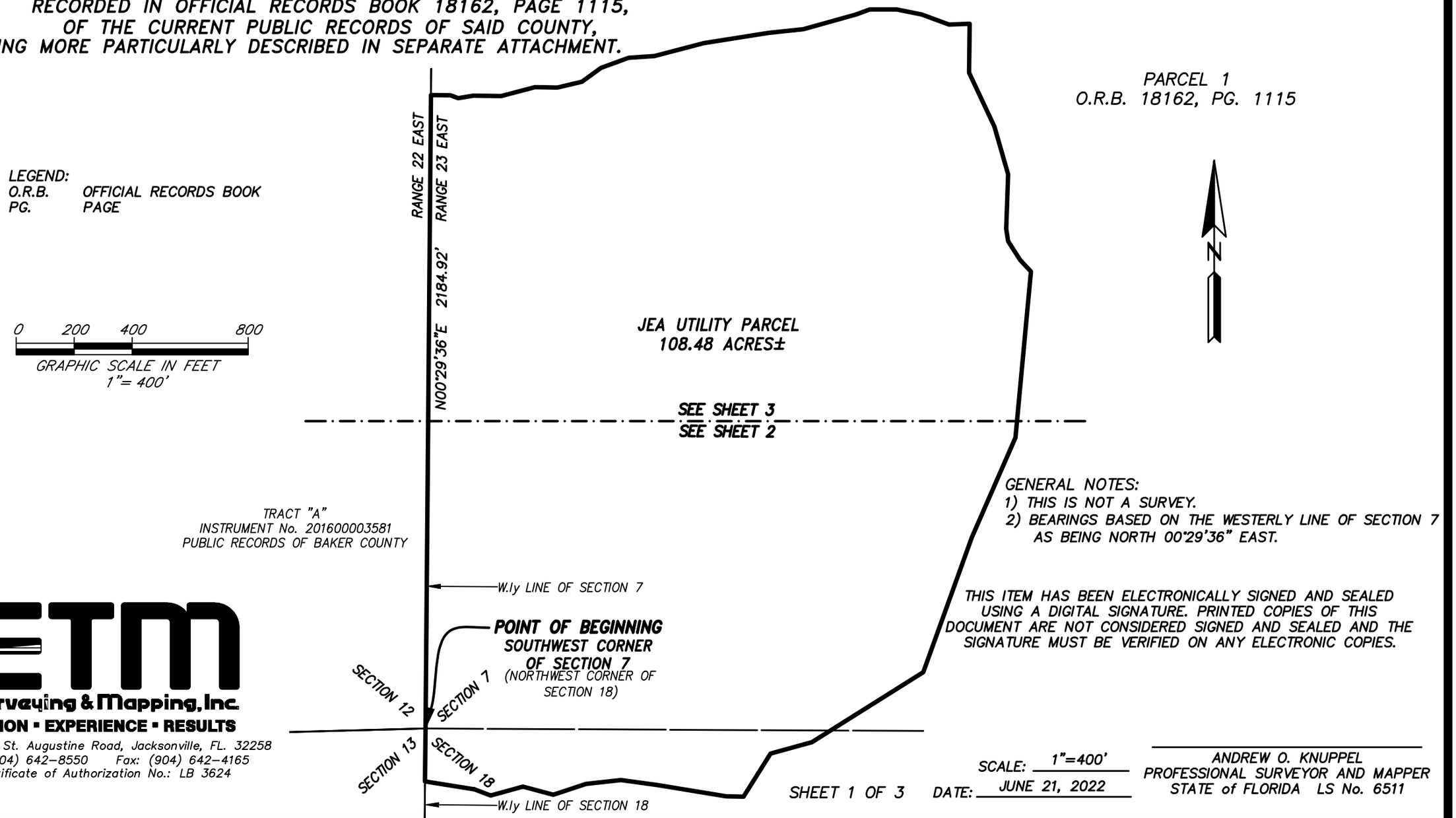
A portion of Sections 7 and 18, Township 3 South, Range 23 East, Duval County, Florida, being a portion of Parcel 1, as described and recorded in Official Records Book 18162, page 1115, of the current Public Records of said county, being more particularly described as follows:

For a Point of Beginning, commence at the Southwest corner of said Section 7; thence North 00°29'36" East, along the Westerly line of said Section 7, a distance of 2184.92 feet; thence South 89°38'01" East, departing said Westerly line, 67.37 feet; thence South 68°12'16" East, 28.40 feet; thence North 80°17'01" East, 53.06 feet; thence South 89°09'27" East, 95.68 feet; thence North 75°09'16" East, 120.81 feet; thence South 88°57'30" East, 77.39 feet; thence North 76°51'58" East, 86.68 feet; thence North 54°07'04" East, 81.61 feet; thence North 69°48'51" East, 101.93 feet; thence North 86°22'01" East, 88.81 feet; thence North 75°11'12" East, 176.09 feet; thence North 81°03'52" East, 226.45 feet; thence North 83°57'21" East, 120.26 feet; thence North 74°24'26" East, 188.43 feet; thence North 70°12'44" East, 50.30 feet; thence Due East, 93.49 feet; thence South 78°41'24" East, 87.82 feet; thence South 69°46'31" East, 99.64 feet; thence North 88°09'09" East, 71.76 feet; thence South 00°49'21" West, 168.48 feet; thence South 25°13'58" East, 205.43 feet; thence South 15°56'43" East, 171.05 feet; thence South 01°57'09" West, 188.08 feet; thence South 08°31'51" East, 43.20 feet; thence South 32°27'40" East, 77.21 feet; thence South 43°16'33" East, 54.28 feet; thence South 05°17'07" West, 575.23 feet; thence South 23°38'56" West, 375.95 feet; thence South 19°47'17" West, 494.18 feet; thence South 57°51'46" West, 453.26 feet; thence South 74°34'40" West, 148.03 feet; thence South 31°57'45" West, 175.66 feet; thence North 88°12'36" West, 61.26 feet; thence North 80°41'27" West, 238.26 feet; thence North 82°13'36" West, 127.37 feet; thence South 83°39'35" West, 121.47 feet; thence South 71°33'54" West, 118.78 feet; thence North 74°55'53" West, 108.36 feet; thence South 74°30'41" West, 115.54 feet; thence North 69°08'44" West, 60.29 feet; thence North 80°49'45" West, 172.37 feet to a point lying on the Westerly line of said Section 18; thence North 00°29'20" East, along said Westerly line, 182.36 feet to the Northwest corner thereof and the Point of Beginning.

Containing 108.48 acres, more or less.

SKETCH TO ACCOMPANY DESCRIPTION OF

A PORTION OF SECTIONS 7 AND 18, TOWNSHIP 3 SOUTH, RANGE 23 EAST, DUVAL COUNTY, FLORIDA, BEING A PORTION OF PARCEL 1, AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 18162, PAGE 1115, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED IN SEPARATE ATTACHMENT.



GENERAL NOTES:
1) THIS IS NOT A SURVEY.
2) BEARINGS BASED ON THE WESTERLY LINE OF SECTION 7 AS BEING NORTH 00°29'36" EAST.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

ETM
Surveying & Mapping, Inc.
VISION • EXPERIENCE • RESULTS
14775 Old St. Augustine Road, Jacksonville, FL. 32258
Tel: (904) 642-8550 Fax: (904) 642-4165
Certificate of Authorization No.: LB 3624

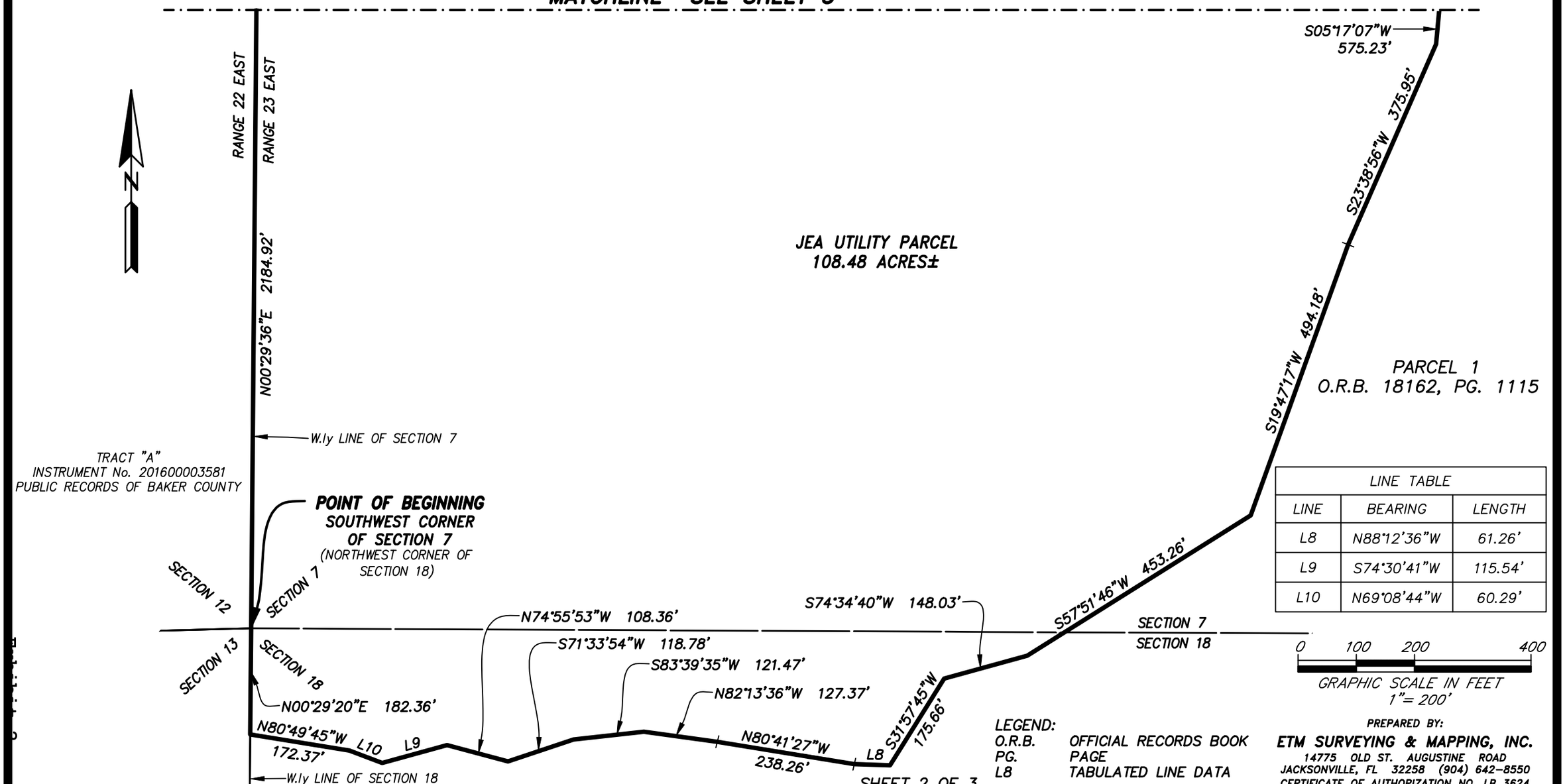
SCALE: 1"=400'
DATE: JUNE 21, 2022

ANDREW O. KNUPPEL
PROFESSIONAL SURVEYOR AND MAPPER
STATE of FLORIDA LS No. 6511

SHEET 1 OF 3

CAD FILE: I:\Survey\RMAproj\Baldwin-ICI\sketches\JEA Utility Parcel.dwg
DRAWN BY: TLK ORDER NO.: 22-316.00 FILE NO.: 128H-40.00A

A PORTION OF SECTIONS 7 AND 18, TOWNSHIP 3 SOUTH, RANGE 23 EAST, DUVAL COUNTY, FLORIDA, BEING A PORTION OF PARCEL 1, AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 18162, PAGE 1115, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY.



LINE TABLE		
LINE	BEARING	LENGTH
L8	N88°12'36"W	61.26'
L9	S74°30'41"W	115.54'
L10	N69°08'44"W	60.29'

LEGEND:
O.R.B. OFFICIAL RECORDS BOOK
PG. PAGE
L8 TABULATED LINE DATA

SHEET 2 OF 3
SEE SHEET 1 FOR GENERAL NOTES

PREPARED BY:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
CERTIFICATE OF AUTHORIZATION NO. LB 3624

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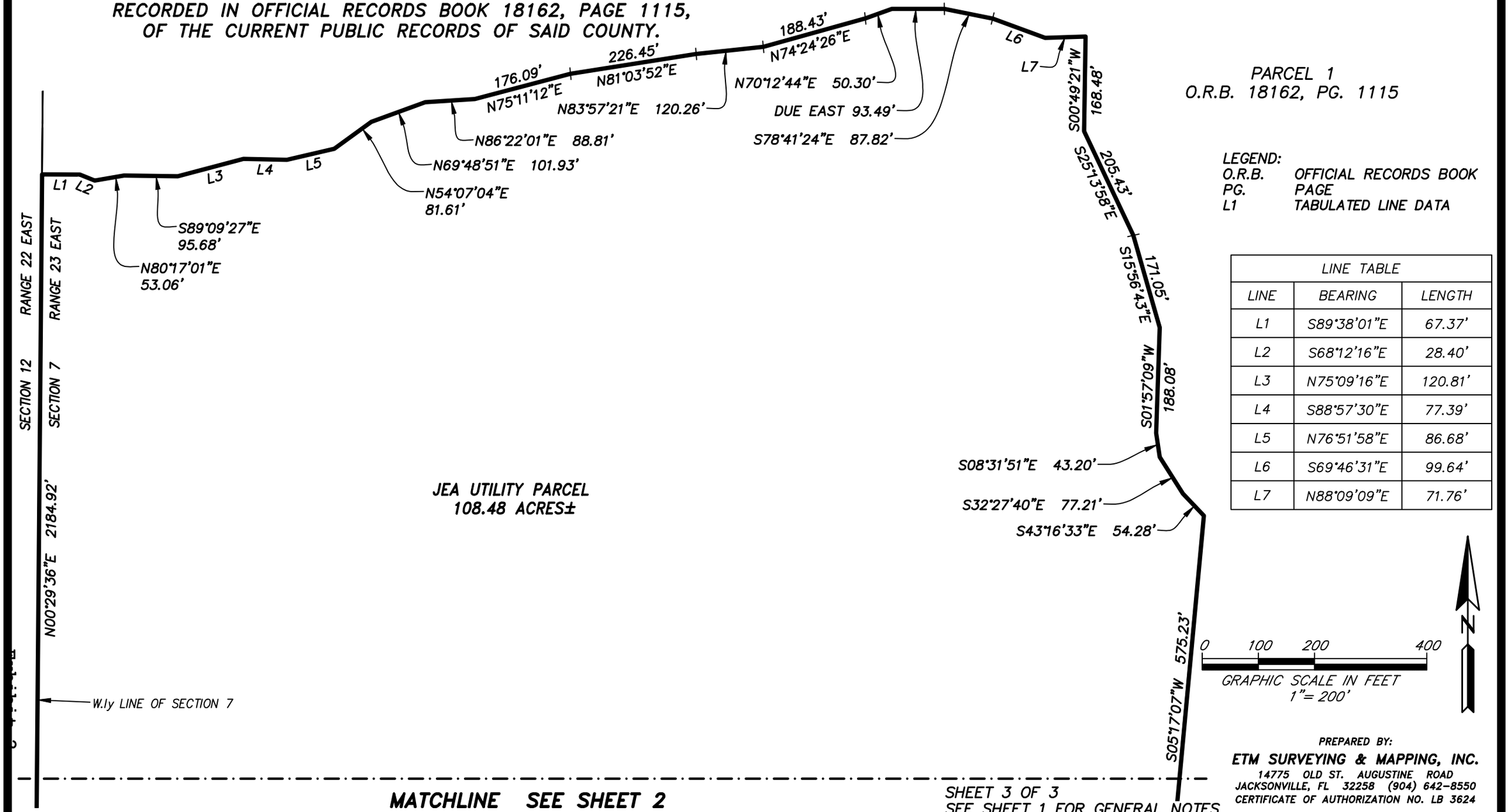

LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
PG.	PAGE
L1	TABULATED LINE DATA

LINE TABLE

LINE	BEARING	LENGTH
L1	S89°38'01"E	67.37'
L2	S68°12'16"E	28.40'
L3	N75°09'16"E	120.81'
L4	S88°57'30"E	77.39'
L5	N76°51'58"E	86.68'
L6	S69°46'31"E	99.64'
L7	N88°09'09"E	71.76'

MATCHLINE SEE SHEET 2

SHEET 3 OF 3
SEE SHEET 1 FOR GENERAL NOTES

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