

**POLK COUNTY
DEVELOPMENT REVIEW COMMITTEE
STAFF REPORT**

DRC Date: August 15, 2024	Level of Review: Level 3 Review
PC Date: October 2, 2024	Type: Conditional Use
BoCC Date: n/a	Case Numbers: LDCU-2024-27
Applicant: Polk Regional Water Cooperative	Case Name: PRWC Southeast Water Treatment Plant and Water Well Network
	Case Planner: Erik Peterson, AICP

Locations of Treatment Facility and raw water wells:	Conditional use approval of a 30 MGD potable water production facility, four ground storage tanks and five Lower Floridan Aquifer raw water wells. The facility is at 630 Boy Scout Road, north of State Road 60, in Section 8, Township 30, Range 29. Two wells are located on the north side of County Road 630, west of Walk-in-Water Road, in Section 20 and 21, Township 31, Range 29. One Well is on the east side of Walk-in-Water Road, north of Dixie Street in Section 32, Township 30, Range 29. Another well is on the west side of Lake Walk-in-Water Road, south of Wakeford Road in Section 32, Township 30, Range 29. One will be located on the east side of Lake Walk-in-Water Road, either north or south of Cypresswood Drive in Section 29, Township 30, Range 29.
Property Owners:	Polk Regional Water Cooperative
Parcel Size (Number):	±30 acres (293008-000000-033020 & 033010) Treatment Facility ±6 acres (293121-000000-041010 & 293120-000000-021010) ±0.5 acres (293032-993000-000181) ±0.77 acres (293032000000032080) ±0.97 acres (293029-992880-011010, 011020, 012010, & 012020)
Future Land Use:	Institutional-1 (INST-1), Agricultural/Residential Rural (A/RR)
Development Area:	Rural Development Area (RDA)
Nearest Municipality:	Lake Wales 5 miles, Frostproof 1.2 Miles
DRC Recommendation:	Approval
Planning Commission:	Pending Public Hearing

Location Map

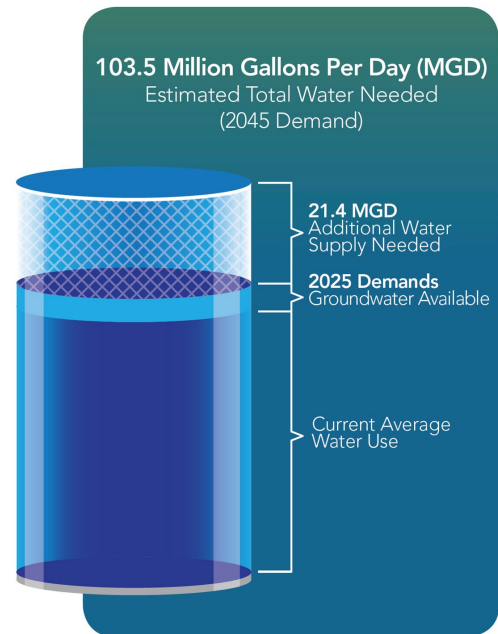


Satellite Photo



Summary:

Water is vital to any form of property development and the need for it will increase as the population increases. It is estimated that by 2045, the County and its cities will need at least 103.5 million gallons of water per day to serve the population projections. There is also a limited supply available from our current source, the Upper Floridan Aquifer. Drawdowns in aquifer levels in some areas of central Florida have exceeded 50 feet. Within approximately 5,100 square miles, including all of DeSoto, Hardee, Manatee and Sarasota counties, and parts of Charlotte, Highlands, Hillsborough and Polk counties scientists are documenting reduced flows in its river systems, reduced lake levels, and saltwater intrusion into the Upper Floridan aquifer along the southwest coast of the state. Concurrently, similar environmental declines were being witnessed on the eastern coast of central Florida. After much data gathering and analysis into the causes of these environmental declines, the Florida Department of Environmental Protection developed a program called the Central Florida Water Initiative (CFWI). The CFWI Planning Area covers five counties, including Orange, Osceola, Polk, Seminole and southern Lake County. The boundaries of the St. Johns River, South Florida and Southwest Florida water management districts (Districts) meet in this area. In 2020, rules were adopted to limit water users in the CFWI area to their currently permitted groundwater quantities, or the quantities necessary to meet their needs in the year 2025, depending upon the use type. It requires all new and expanded Upper Floridan Aquifer uses to be offset. This rule will limit growth and development in Polk County unless other sources of drinking water can be found.



In the wake of limitations discovered in the County's primary water source, the Upper Floridan Aquifer, the Polk Regional Water Cooperative (PRWC) was formed in 2017 to ensure the future of our precious water supply and responsibly meet the individual and regional water supply needs of our communities. PRWC's role is to proactively identify alternative water sources and projects that will protect and sustain our future regional water supply. PRWC will specifically identify sustainable groundwater sources, develop strategies to meet our future water demands, determine needed infrastructure for treatment and distribution, and establish consistent rules for fairly meeting all water supply needs across the County. Oversight of PRWC is solely in the hands of the elected officials from the sixteen Polk County member governments. In addition to Polk County, these include the cities of Auburndale, Bartow, Davenport, Dundee, Eagle Lake, Fort Meade, Frostproof, Haines City, Lake Alfred, Lake Hamilton, Lake Wales, Lakeland, Mulberry, Polk City, and Winter Haven.

This request is the first project to advance this goal the Southeast Water Treatment Facility and Wellfield. The goal of this project is to utilize the brackish, Lower Floridan Aquifer (LFA) in Southeast Polk County as a "non-traditional" water supply. The Southeast Wellfield is a permitted supply, and after treatment via reverse osmosis, will deliver up to 12.5 million gallons per day (MGD) of high-quality drinking water to the member governments. As master planned, this project will eventually deliver up to 30 MGD of high-quality potable water to member governments. The first phase of construction, expected to begin in late 2024, will consist of a 7.5 MGD reverse osmosis treatment facility, storage tanks, five (5) raw water wells, and 61 miles of transmission pipeline.

The PRWC is requesting Level 3 approval of a potable water treatment facility and five (5) Lower Floridan Aquifer raw water wells for the following properties:

- The WPF, Parcel 293008-000000-033020
- Well Site 1, Parcel 293121-000000-041010
- Well Site 2, Parcel 293120-000000-021010
- Well Site 10, Parcel 293032-993000-000181
- Well Site 11, Parcel 293032-000000-032080
- Well Site 12, Parcels 293029-992880-011010, 011020, 012010, & 012020

Onsite of the water production facility will be a deep injection well going below 8,000 feet of the surface to discharge the brine extracted through the reverse osmosis filtration process. There will also be two one-million-gallon ground storage tanks onsite of the facility and two more anticipated in the future (See Exhibit 5).

Each well site will contain at least one well with a casing that reaches a minimum of 1,400 feet below the surface and extends to a depth of approximately 1,900 feet. The wells will be drilled to a depth of approximately 2,500 feet and then backfilled with cement grout to plug the base of the hole to prevent mineral intrusion (See Exhibit 7). There will also be test wells drilled to the Upper Floridan Aquifer depth (75-400 feet) to monitor any potential impacts (See Exhibit 8). The well sites will be unmanned and operated through a communication network called the SCADA system which stands for system control and data acquisition. This is a protected internal communication system accessible only by the system operators. There will be back-up generators at each well site and some electronics (See Exhibit 6).

Findings of Fact

- *This is a request for Conditional Use approval of a 30 MGD potable water production facility, two ground storage tanks and five (5) Lower Floridan Aquifer raw water wells.*
- *The site water treatment plant and fire rescue station site were designated INST-1 through adoption of case number LDCPAL 2019-3 on October 12, 2019.*
- *The water treatment facility and well sites are in a Rural Development Area (RDA), which is an area “characterized by large open areas, agricultural use, with scattered development and rural centers. Services are limited and mostly found in the rural centers and clustered developments” according to POLICY 2.108-A1 of the Comprehensive Plan.*
- *Comprehensive Plan POLICY 2.125-D2.c says, “The development of utility facilities shall be permitted in the Rural-Development Area, as designated on the Future Land Use Map Series, only when such developments provide regional services, or is incompatible with urban uses, or services the existing needs of the immediate area in which it is located.”*
- *Comprehensive Plan POLICY 2.125-D2.d says, “Polk County adopted the Land Development Code in accordance with Section 163.3202(1), FS, to further define appropriate development controls to govern the locational and site criteria for utilities.”*
- *Chapter 10 of the Land Development Code (LDC) defines Class III Utilities as “Production or treatment facilities such as sewage treatment plants, elevated water storage towers, non-accessory ground storage tanks, or similar facilities. This definition does not include electric power plants and lime stabilization facilities.”*
- *Comprehensive Plan POLICY 3.105-D3 says, “the County, in partnership with the municipalities within Polk County, formed the Polk Regional Water Cooperative (PRWC) in*

2016. The purpose was to develop projects that are environmentally sound, sustainable and include adequate alternative water supplies within the region. Alternative water supplies may be sold to end users or retail and/or wholesale distributors as permitted by the appropriate water management district. Members of the PRWC within Polk County shall have first priority on alternative water supply production in accordance with the provisions of Section 373.1961 (5), FS.”

- Chapter 10 of the Land Development Code (LDC) defines Class III Utilities as “Production or treatment facilities such as sewage treatment plants, elevated water storage towers, non-accessory ground storage tanks, or similar facilities. This definition does not include electric power plants and lime stabilization facilities.”
- Section 205, Table 2.1 Use Table for Standard Land Use Districts lists Class III Utilities as a Level 3 Conditional Use in the Institutional-1 (INST-1) and Agricultural/Residential Rural (A/RR) districts.
- Chapter 3, Section 303, Criteria for Conditional Uses, of the Land Development Code states “Class III utility facilities may be permitted within the Rural Development Area (RDA), as designated on the Future Land Use Map Series, only when such development:
 - a. Provides regional (multi-county) services;
 - b. Is determined by the County to be incompatible with urban uses;
 - c. Is necessary to service the existing needs of the immediate area in which it is proposed to locate.”
- The areas surrounding the water treatment facility and all of the Lower Floridan Aquifer well sites are in an A/RR Future Land Use Map district.
- There are no public schools within 9 miles of the water treatment facility or any Lower Floridan Aquifer well site.
- Fire and EMS facilities are planned and permitted to on the same site as the water treatment facility. In the interim the site will be served by Station 14 at 10399 Leisure Lane in NalCrest.
- The site is served by the Polk County Sheriff’s Office Northeast District Command Center at 4011 Sgt. Mary Campbell Way near Lake Wales 14½ miles driving distance from the site.
- The water treatment facility is not within the utility service area of any municipality or private utility provider. Well site #12 is the only facility within Polk County’s Southeast Utility Service Area (SEUSA), Walk-in-Water water system.
- The water treatment facility and all five well sites have direct frontage on collector roads.
- According to the Transportation Planning Organization, there are no capacity deficiencies on State Road 60, County Road 630, or Lake Walk-in-Water Road. Approval of the water treatment facility will not result in a significant increase in current traffic.
- There are no wetlands and floodplains on the site where the water treatment facility or any of the five proposed well sites.
- The site where the water treatment facility will be located is mostly comprised of Pomello fine sand, according to the U.S. Department of Agriculture, Soil Conservation Service, Polk County Survey.
- There have been numerous endangered species sightings within one mile of every well site and the water treatment plant site according to the Florida Natural Areas Inventory surveys in 2002, 2006, and 2011.

- *The site is not within an airport flight path and height notification zone.*

Development Review Committee Recommendation: Based on the information provided by the applicant, recent site visits, and the analysis conducted within this staff report, the Development Review Committee (DRC) finds that with the proposed conditions the request **IS COMPATIBLE** with the surrounding land uses and general character of the area and **IS CONSISTENT** with the Polk County Comprehensive Plan and Land Development Code. Therefore, the DRC recommends **APPROVAL of LDCU-2024-27.**

CONDITIONS OF APPROVAL

Based upon the findings of fact, the DRC recommends APPROVAL of LDCU-2024-27 with the following conditions:

1. This approval shall be for 30 MGD potable water treatment facility, four (4) ground storage tanks, and brine disposal on Parcel 293008-000000-033020 and five (5) Lower Floridan Aquifer raw water wells on the following properties:
 - Well Site 1, Parcel 293121-000000-041010
 - Well Site 2, Parcel 293120-000000-021010
 - Well Site 10, Parcel 293032-993000-000181
 - Well Site 11, Parcel 293032-000000-032080
 - Well Site 12, Parcels 293029-992880-011010, 011020, 012010, & 012020
2. The site plans included herein together with the conditions of approval shall be considered the “Binding Site Plan.” Any modifications to LDCU-2024-27, except for those listed in Section 906.E of the LDC, shall constitute a Major Modification to this approval and require a Level 3 Review before the Planning Commission.

GENERAL NOTES

NOTE: This staff report was prepared without the benefit of testimony and evidence submitted by the public and other parties at a public hearing.

NOTE: Approval of this request shall not constitute a waiver or variance from any applicable development requirement unless specifically noted in the conditions of approval and consistent with the LDC.

NOTE: All written comments made in the application and subsequent submissions of information made during the application review process, which are on file with the Land Development Division, shall be considered to be binding upon the applicant, provided such comments are not at variance with the Comprehensive Plan, LDC or other development regulations in effect at the time of development.

NOTE: Approval of this request is only for Level 3 Review and only for those development decisions within the Planning Commissioners’ jurisdiction. Building permits will be required for improvements to structures in accordance with Chapter 553 of the Florida Statutes.

NOTE: Issuance of a development permit by the county does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the county for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law.

Surrounding Land Use Designations and Current Land Use Activity

The following table provides a reference point for notable and pertinent Future Land Use Map districts and existing land uses upon them in the vicinity of the proposed water treatment plant.

Table 1 Water Treatment Facility

<p>Northwest: Agricultural/Residential Rural (A/RR) Flaming Arrow Boy Scout Camp</p>	<p>North: A/RR Lake Wales Ridge State Forest</p>	<p>Northeast: A/RR Lake Wales Ridge State Forest</p>
<p>West: A/RR Active Citrus Grove</p>	<p>Subject Property: Institutional-1X (INST-1X) Proposed Water Treatment Plant and approved Fire Rescue Station</p>	<p>East: A/RR Vacant forested upland privately owned</p>
<p>Southwest: A/RR Active Citrus Grove</p>	<p>South: A/RR Vacant forested upland and small wetland privately owned</p>	<p>Southeast: A/RR Vacant forested upland privately owned</p>

The area surrounding the proposed water treatment facility is undeveloped land. The Boy Scouts and the Florida Division of Forestry have no plans for development. The owner of the tract to the south has desires for commercial development near the intersection with State Road 60 but has presented no plans for the north end near the water treatment plant.

The following table provides a reference point for notable and pertinent Future Land Use Map districts and existing land uses of the properties immediately surrounding the Lower Floridan Aquifer well sites.

Table 1a Lower Floridan Well Sites

Site	North	South	East	West
Well Site #1	A/RR Pastureland	A/RR Vacant single-family residential properties Universal Shooting Academy Rifle and pistol range	A/RR Pastureland	A/RR Pastureland Creek flowing to Lake Walk-in-Water
Well Site #2	A/RR Pastureland	A/RR Vacant single-family residential properties Universal Shooting Academy Rifle and pistol range	A/RR Pastureland	A/RR Pastureland
Well Site #10	A/RR Lake Walk-in-the-Water Heights Single-family Subdivision Developed single-family lot	A/RR Vacant single-family lot	A/RR Vacant single-family lot	A/RR Lake Wales Ridge State Forest
Well Site #11	A/RR, PUD 71-7 Walk-in-the-Water Village Developed Mobile Home Subdivision	A/RR Organic Tea Leaf Farm	A/RR, PUD 71-7 Walk-in-the-Water Village Developed Mobile Home Subdivision	A/RR Plant Nursery
Well Site #12	A/RR, Walk-in-the-Water Lake Estates Developed Single-Family	A/RR, Walk-in-the-Water Lake Estates Vacant Single-Family lot	A/RR, Walk-in-the-Water Lake Estates Developed Single-Family	A/RR Citrus grove

Well sites #10 and #12 are the closest to residences. There will be a minimum of 50 feet of separation required between the site mechanics and any current or future residence. It is unlikely that any deep well or above surface equipment will be within 100 feet of a nearby residence according to the typical well site plan shown in Exhibit 6 overlaid on the proposed sites.

Compatibility with the Surrounding Land Uses and Infrastructure:

Staff finds that the Polk Regional Water Cooperative (PRWC) staff have designed the facilities with the utmost caution for neighboring properties. There are no anticipate adverse impacts to neighboring properties due to the site design for the water treatment facility and its five (5) supporting Lower Floridan Aquifer well sites. All six utility facilities will be compatible with the available infrastructure because the well sites are unmanned, and the treatment facility will be located where the infrastructure needed the most (access and public safety) are present in sufficient quantities.

A. Land Uses:

This water treatment facility is clearly compatible with surrounding land uses and other infrastructure in the immediate area. The site plan shown in Exhibit 5 shows that no utility structures are located within 100 feet of the property lines. The INST-1 designation provides the public with information on the intended use of the site. Additionally, the majority of the abutting properties are government owned or committed to conservation. The well sites, once construction of them is complete, will be unmanned and unobtrusive. Staff believes these facilities can “coexist in relative proximity ... in a stable fashion over time such that no use or condition is unduly negatively impacted directly or indirectly by another use or condition.” All six facilities will have vegetative buffers between the roadways and neighboring uses. Landscaping and screening methods will be installed that will primarily use existing vegetation and augment with appropriate plantings. Some equipment will be screened with opaque fencing to conceal their hard appearances.

The LDC defines compatibility as “A condition in which land uses or conditions can coexist in relative proximity to each other in a stable fashion over time such that no use or condition is unduly negatively impacted directly or indirectly by another use or condition.”

B. Infrastructure:

This request is to improve the capacity of each member government’s potable water systems, a vital element of urban infrastructure. This facility is planned to begin by providing up to 12.5 MGD to the regional network. It will have the expansion capability of up to 30 MGD. The infrastructure most needed to support the water treatment site is access and public safety. The site has direct frontage on a collector road which is within a half mile of an arterial road. A fire rescue station has been approved on the site and will be constructed concurrently with the development of the water treatment facility. The Lower Floridan Aquifer well sites are unmanned. They have no need for urban services or infrastructure to support them other than roadway access.

Nearest and Zoned Elementary, Middle, and High School

School capacity is not a concern for non-residential uses. Proximity and traffic conflicts are a concern. Fortunately, the activity on this site is benign and will have no potential conflicts with any school’s operation. Listed to follow are the three zoned schools for the area. The closest schools to the site are in Lake Wales over eight (8) miles away.

Table 2

Name of School	Average driving distance from subject site
Spook Hill Elementary	±11 miles driving distance
McLaughlin Academy Middle School	±9¼ miles driving distance
Frostproof High School	±15½ miles driving distance

Source: Polk County School Board GIS

This water treatment facility will pose no potential adverse impacts upon any nearby schools.

Nearest Sheriff, Fire, and EMS Station

Fire and EMS response to this project is from Polk County Fire Rescue Station 14, located at 10399 Leisure Lane in NalCrest, a retirement community for former letter carriers. The travel distance is approximately 4 miles from the water treatment facility entrance. This station facility is outdated. A new one will be constructed on the site of the proposed water treatment facility. This will make response time almost immediate.

Table 3

	Name of Station	Distance	Response Time*
Sheriff	Southeast District Command (4011 Sgt. Mary Campbell Way near Lake Wales)	±14½ miles	6 minutes
Fire	Station 14 (10399 Leisure Lane, NalCrest)	±4 miles	6 minutes
EMS	Station 14 (10399 Leisure Lane, NalCrest)	±4 miles	6 minutes

Source: Polk County Sheriff's Office and Public Safety

*Response times are based on when the station receives the call, not from when the call is made to 911.

The nearest Sheriff's station is the Northeast Command Center on Dunson Road, 14 miles to the northwest. While it may seem like a long distance, Sheriff response times are not as much a function of the distance to the nearest sheriff's station, but more a function of the overall number of patrol officers within the County. However, the closer to the command center increases the number of patrol officers available in the area.

Water and Wastewater Demand and Capacity:

This water treatment facility will produce its own potable water and not require any public wastewater service. An onsite septic system will be adequate to meet the needs of the 4-6 personnel operating the facility. The goal of this project is to utilize the brackish, Lower Floridan Aquifer (LFA) in Southeast Polk County as a "non-traditional" water supply. The Southeast Wellfield is a permitted supply, and after treatment via reverse osmosis, will deliver up to 12.5 million gallons per day (MGD) of high-quality drinking water to the member governments and potentially 30 MGD in the future.

A. Estimated Demand and Service Provider:

The PRWC will be the water provider to the facility but a potable water well connecting to the Upper Floridan Aquifer will be used in the interim for both the facility during construction and the fire rescue station sharing the property. PRWC's role is to proactively identify alternative water sources and projects that will protect and sustain our future regional water supply. Onsite septage disposal systems (septic tanks) will serve wastewater needs for both uses. Table 4 to follow is an

overestimate of the real water and wastewater needs of the site. The site will only host six workers during the day and four at night once it is operational. The staffing of the fire rescue station is slightly higher by two per shift.

Table 4

Subject Property	Estimated Impact Analysis		
	Demand as Currently Permitted in the INST-1 district	Maximum Permitted in the INST-1 district	Proposed Plan INST-1
±30 acres INST-1			
Permitted Intensity	10,788 SF Fire Rescue Station	Elementary School (500 students)	10,788 SF Fire Rescue Station + Class III Utility (15,000 SF Operations Building)
Potable Water Consumption (GPD)	2,590 GPD	7,500 GPD	2,590 + 3,600 = 6,190 GPD
Wastewater Generation (GPD)	2,071 GPD	6,000 GPD	2,071 + 2,880 = 4,951 GPD

Source: Polk County Concurrency Manual & Polk County Utilities

The facility will have restrooms with the operations center, flow will likely be the equivalent of one single family residential connection (ERC).

B. Available Capacity:

The initial phase of the water treatment plant project is to treat up to 7.5 MGD per day with two million gallons of onsite storage. As demand increases throughout the network, more raw water wells will be developed, and an additional ground storage tank will be added to provide up to 30 MGD and four million gallons of onsite storage. Ground storage facilities are also being added at receiving plants in each member government’s system to be blended with Upper Floridan water and distributed throughout each member government’s existing potable water distribution network.

C. Planned Improvements:

This is a planned improvement at this stage in the process. It is a planned improvement to all of the member government’s water capacity.

Roadways/ Transportation Network

Class III Utilities do not often generate significant amounts of traffic on roadways. They are typically more of a “land intensive” use. This means they can use a lot of land but don’t have as much activity to go with it. The site will be developed with a restricted commercial driveway from the driveway that will serve the fire station. The fire station will have additional direct access to Boy Scout Road for the fire trucks to exit during a call. There is more than ample capacity on the directly affected roadways, even for a use with higher transportation demands.

A. Estimated Demand:

The only portion of the project that will have any daily traffic is the water treatment facility on Boy Scout Road. The other well sites will be unmanned and monitored through System Control and Data Acquisition (SCADA) systems. In addition to the water treatment facility plant operations, there will also be a fire rescue station on the site. Although comparing building sizes yields a higher traffic volume, the fire station is likely to have more traffic generation than the water plant. In all, both are relatively low traffic generators. Either way, the next likely use to be permitted on 30 acres of INST-1 is an elementary school. Elementary schools in Polk County range from 400 to 900 students, according to the 2023 School Utilization report.

Table 5

Subject Property	Estimated Impact Analysis		
	Demand as Currently Permitted in the INST-1 district	Maximum Permitted in the INST-1 district	Proposed Plan INST-1
±30 acres INST-1			
Permitted Intensity	10,788 SF Fire Rescue Station	Elementary School (500 students)	10,788 SF Fire Rescue Station + Class III Utility (15,000 SF Operations Building)
Average Annual Daily Trips (AADT)	244	1,135	244 + 339 = 583
PM Peak Hour Trips	17	72	17 + 26 = 41

Source: Institute of Transportation Engineers (ITE) Trip generation Manual 11th Addition
 Elementary School = 2.27/student AADT, 0.16 PM Peak (89% new)
 Government Facilities = 22.59/1,000SF AADT, 1.71 PM Peak (89% new)

In the end, this property is best suited for water treatment services due to its geological location in relation to the Lower Floridan Aquifer. This request will require a minor traffic study since the average annual daily trip rate (AADT) will be less than 750 trips per day but more than 50. This will result in 20 vehicles exiting the property during the peak hour. Eleven will go south to SR 60, none (9) will go north to Camp Mack Road.

B. Available Capacity:

Although the request will have limited impact on the transportation system, it is still pertinent to be aware of available capacity when making land use decisions. Table 6, to follow, provides a good snapshot of the capacity on the surrounding road network.

Table 6

Link #	Road Name	Current Level of Service (LOS)	Available PM Peak Hour Capacity	Minimum LOS Standard
5910E	State Road 60 From: Stokes Road To: County Road 630	B	1,503	C
5910W	State Road 60 From: County Road 630 To: Stokes Road	B	1,531	C
4157N	Walk-in-Water Road From: County Road 630 To: State Road 60	B	393	C
4157S	Walk-in-Water Road From: State Road 60 To: County Road 630	B	390	C
4064E	County Road 630 From: US Highway 27 To: State Road 60	B	582	C
4064W	County Road 630 From: State Road 60 To: US Highway 27	B	576	C

Source: Polk County Transportation Planning Organization, Concurrency Roadway Network Database October 13, 2023

State Road 60 is operating at 32% of its level of service capacity at a current volume of

approximately 17,000 AADT according to the Florida Department of Transportation (FDOT). Walk-in-Water Road is operating at 13.3% of its level of service capacity at a current volume of 1,300 AADT, and County Road 630 is operating at 23.2% of its level of service capacity at a current volume of 3,800 AADT according to Polk County TPO. Boy Scout Road has so little traffic on it that it is not tracked for concurrency.

C. Roadway Conditions

Boy Scout Road and Lake Walk-in-Water Road are in “fair” condition, according to Roads and Drainage Division staff using industry standards for roadway assessment. Boy Scout Road is substandard at 22 feet in width. Lake Walk-in-Water meets current standards of 24’ in width. Both have 80 feet of right-of-way width. Drainage is handled through open swales. County Road 630 is in “very good condition” meeting standard pavement width of 24 feet and more than adequate right-of-way at up to 160 feet in most places.

D. Planned Improvements:

There are no roadway improvements planned in this area over the next five years.

E. Sidewalks

This is a very rural area of the County. There are no sidewalks located on either Boy Scout Road, Walk-in-Water Road, or County Road 630.

F. Mass Transit

There are no mass transit routes in this rural area of the county. The closest route to the water treatment plant is the Lake Wales Circulator. The closest stop is over seven miles away. This uses has no demand or adverse impacts to the mass transit system.

Park Facilities:

Utility infrastructure does not create a direct demand for parks or recreational facilities. It is very rare that a utility infrastructure project will impede or diminish the use of a park or recreation improvement. There are no adverse impacts anticipated to any public parks or recreation areas. Lake Rosalie Campground and the Lake Walk-in-Water boat ramp are the nearest County park facilities. Lake Rosalie Park is a regional facility located over three miles away from the water treatment facility “as the crow flies,” and 12 miles driving distance. The subject property is also surrounded by many environmentally managed lands and conservation easements.

A. Location:

Lake Rosalie Park is located at the end of Lake Rosalie Road, 3¼ miles north of State Road 60 via Tiger Lake Road. While it is approximately three miles linear distance the site, it is over 10 miles driving distance.

Lake Walk-in-Water boat ramp is at the end of Boat Landing Road 0.85 miles from the nearest proposed well site, Well Site #9.

B. Services:

Lake Rosalie Park has campgrounds and boat ramps. Lake Walk-in-Water is just a boat ramp with parking and a dock.

C. Multi-use Trails:

There is a canoe trail that links Lake Rosalie, Tiger Lake and Lake Kissimmee together.

D. Environmental Lands:

The water treatment facility and well sites are near or abutting tracts of the Lake Wales Ridge State Forest.

E. Planned Improvements:

There are no recreation improvements scheduled by the County for this area.

Environmental Conditions

There are no significant environmental limitations to the development of these properties. The water treatment facility site will see the most development activity. The well sites, once constructed, will be unmanned and function in a relative benign manner. There are little or no conflicts with surface waters, wetlands or floodplains, soils, protected species, archeological sites, and public use airports.

A. Surface Water:

The water treatment facility site is closest to Lake Saddlebag which lies west of the site. However, the elevations on the site are highest on the west sending the sheet flow to the east towards Lake Walk-in-the-Water Creek and onto Lake Walk-in-the-Water. The facility site plan shows less than 20% impervious surface coverage of the site and two ponds for surface water runoff retention and filtration. The well sites all drain towards Lake Walk-in-the-Water but have a minimal impervious surface footprint and are all a significant distance from the shoreline.

B. Wetlands/Floodplains:

There are no wetlands or 100-year flood hazard areas on or near any of the well site locations. The water treatment plant site has one small insignificant wet depression but no floodplains. The site sites over 30 feet higher in elevation from the nearest flood zone. There is no discharge of fluids from the water treatment plant off site and the well sites will have very little impervious surface containing only a driveway apron and pad for electrical, back-up generator, and SCADA equipment. This project will have no adverse impacts upon wetlands or floodplains.

C. Soils:

The sites are comprised of sandy soils prone to caving in if excavated and have slope or wetness issues, according to the U.S. Department of Agriculture, Soil Conservation Service (USDA, SCS) Polk County Survey. This would be a concern if digging trenches. However, they have little effect on well drilling or pedestals for electric equipment and back-up generators. It's a different style of digging and the pads for the equipment are not bearing significant loads.

Table 8

Facility	Soil Name	Shallow Excavations	Limitations to Small Commercial Buildings	% of Site (approximate)
Water Treatment Site 630 Boy Scout Road	Astatula Sand (46)	Severe: cutbanks cave	Moderate: slope	33%
	Pomello Fine Sand (22)	Severe: cutbanks cave	Moderate: wetness	67%
Well Site #1	Smyrna & Myakka Fine Sands (17)	Severe: cutbanks wetness	Severe: wetness	100%
Well Site #2	Smyrna & Myakka Fine Sands (17)	Severe: cutbanks wetness	Severe: wetness	100%
Well Site #10	Astatula Sand (46)	Severe: cutbanks cave	Moderate: slope	100%
Well Site #11	Astatula Sand (46)	Severe: cutbanks cave	Moderate: slope	100%
Well Site #12	Astatula Sand (46)	Severe: cutbanks cave	Moderate: slope	100%

Source: Soil Survey of Polk County, Florida, USDA, Soil Conservation Service

D. Protected Species

The west shore of Lake Walk in the Water has an abundance of natural wildlife. There have been numerous endangered species sightings within one mile of every well site and the water treatment plant site according to the Florida Natural Areas Inventory surveys in 2002, 2006, and 2011. The well sites are close to well-traveled roads and surrounded by existing development. Once constructed, the facilities will be relatively benign and noninvasive to protected species. A more in-depth protected species study was required for both the Environmental Resource Permit (ERP) from the Florida Department of Environmental Protection as well as the federal agency providing the funding for the project. Proper avoidance is being implemented with construction and mitigation measures taken if necessary.

E. Archeological Resources:

There are no protected archeological resources in Section 8, Township 30, and Range 29, that the site of these proposed water treatment facility would adversely impact, according to the Florida Department of State, Division of Historical Resources. The well sites are too small, disturbed, and former residentially developed to have any significant archeological resources associated with them.

F. Wells (Public/Private)

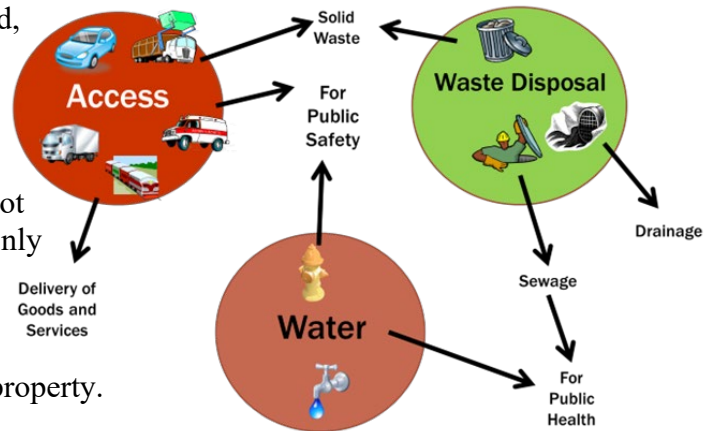
Every one of the Lower Floridan Aquifer wells will be significantly deeper than any other Upper Floridan Aquifer wells. The Polk County Utilities' (PCU's) Walk-in-the-water potable water system's well site is 1.4 miles to the north of the site. PCU's Edghill well site is 0.6 miles to the northeast of Well Site #12. It is over 2,300 feet from the edge of its wellhead protection district. There are no other public use wells closer to the site than that facility.

G. Airports:

The closest airport is Fly Jive Fly at 2605 Walk in Water Road. It is over 1,600 feet away from Well Site #12 and is a small private facility. The PRWC sites are over ten (10) miles from the Lake Wales Municipal Airport. Water Treatment Plants are typically close to grade and pose no threat to aircraft. The well sites will not have any structures above 10 feet tall.

Economic Factors:

To develop any property there are three fundamental needs that have to be addressed, otherwise there will be no development. As in the biology of life where every organism must have food, water, and a way to dispose of their waste, so must every type of land development. There will absolutely be no use for the land if the property does not have a means of **accessing** it, a source of **water**, and a way to dispose of its **waste** (solid, liquid, and gas). Of the three, water is the most essential commodity to the development and habitation of property. The other two can be manufactured, but water cannot. Roads can be built, waste can be managed, but if water is not available there is no way to create it easily. Not only is water part of the basic needs of development, but it is also not one that can be assumed to be an infinite resource. Water is the most essential commodity to the development and habitation of property.



The Southern Water Use Caution Area (SWUCA) was designated in 1992 to address declines in aquifer levels due primarily to groundwater withdrawals. Drawdowns in aquifer levels in some areas exceeded 50 feet. The area encompasses approximately 5,100 square miles, including all of DeSoto, Hardee, Manatee and Sarasota counties, and parts of Charlotte, Highlands, Hillsborough and Polk counties. This area is seeing reduced flows in its river systems, reduced lake levels, and saltwater intrusion into the Upper Floridan aquifer along the southwest coast of the state. Concurrently, similar environmental declines were being witnessed on the eastern coast of central Florida. After much data gathering and analysis into the causes of these environmental declines, the Florida Department of Environmental Protection developed a program called the Central Florida Water Initiative (CFWI). The CFWI Planning Area covers five counties, including Orange, Osceola, Polk, Seminole and southern Lake County. The boundaries of the St. Johns River, South Florida and Southwest Florida water management districts (Districts) meet in the area. In 2020, rules were adopted to limit water users in the CFWI area to their currently permitted groundwater quantities, or the quantities necessary to meet their needs in the year 2025, depending upon the use type. Requires all new and expanded Upper Floridan Aquifer uses to be offset. This rule will limit growth and development in Polk County unless other sources of drinking water can be found.

The PRWC was formed as a non-profit, special district of the State of Florida created to plan, develop, and deliver a future high-quality drinking water supply. The PRWC was created by interlocal agreement among member governments and is a regional utility funded by contributions from the member governments and State agency grants. Based on the local and regional water supply needs of Polk County's communities, the member governments knew that planning to meet those needs and protect Polk County's precious water resources needed to be a collective and collaborative process. The PRWC assures fair representation in the decision-making process while also representing the regional water supply needs of Polk County with a single voice.

This facility comes at a steep price. The Southwest Florida Water Management District is the project's largest funding partner, having committed over \$200 million to the project so far. The PRWC has also been successful in securing over \$10 million in state funding grants for this regional project. Low-interest state revolving funds and federal WIFIA loans will also be used to help finance the project and give members time to generate future revenue for repayment of the project loans. In spite of all the grants and low interest loans, the water produced from this facility will cost more than it costs to retrieve water from the Upper Floridan Aquifer. This is due to the effort and energy it takes to bring the Lower Floridan Aquifer's briny water to purification and consumption standards. The byproduct of the process also comes at a cost to dispose through deep well injection.

With or without this facility the cost of water will go up, just like very thing that has a low supply and a high demand. For those PRWC member government utilities that elect to receive water from PRWC, it is anticipated that drinking water rates will increase in order to pay for the cost to construct and operate the PRWC water treatment and supply system. The individual utilities will make the determinations for any changes to their customer drinking water rates. Regardless of its cost, our existing water supply will become more expensive. Conservation of the water we have will ultimately be the factor that lessens the burden to the average consumer.

Consistency with the Comprehensive Plan, LDC, and Other County Ordinances:

The WTP and well sites are all located in the Rural Development Area (RDA), which *“is characterized by large open areas, agricultural use, with scattered development and rural centers. Services are limited and mostly found in the rural centers and clustered developments.”* according to POLICY 2.108-A1 of the Comprehensive Plan.

POLICY 2.125-D1: UTILITIES PERMITTED USES states that *“utility facilities shall be permitted throughout the County in all land use classifications, subject to County approval, to support existing and proposed development.”* Some utility facilities must be located closer to the resource rather than closer to the users. Such is the case with the PRWC well sites. These sites were chosen due to their ability to access the Lower Floridan Aquifer more efficiently. The treatment facility needed to be in a remote location where a deep injection well could be placed for the brine disposal.

POLICY 3.105-D3 of the Comprehensive Plan states that the purpose of Polk Regional Water Cooperative (PRWC) is to *“develop projects that are environmentally sound, sustainable and include adequate **alternative water supplies** within the region.”* While the PRWC acts as an independent government authority and may sell water to both public and private utility providers, the members of the PRWC within Polk County *“shall have first priority on alternative water supply production in accordance with the provisions of Section 373.1961 (5), FS.”*

Table 9, to follow, provides an analysis of the proposed request when compared to typical policies of the Comprehensive Plan selected by staff for evaluation of development proposals. Based upon this analysis, the proposed request is consistent with relevant policies of the Polk County Comprehensive Plan.

Table 9

Comprehensive Plan Policy	Consistency Analysis
<p>POLICY 2.102-A2: COMPATIBILITY - Land shall be developed so that adjacent uses are compatible with each other, pursuant to the requirements of other Policies in this Future Land Use Element, so that one or more of the following provisions are accomplished: a. there have been provisions made which buffer incompatible uses from dissimilar uses; b. incompatible uses are made to be more compatible to each other through limiting the intensity and scale of the more intense use; c. uses are transitioned through a gradual scaling of different land use activities through the use of innovative development techniques such as a Planned Unit Development.</p>	<p>The neighboring properties to the water treatment plant are either undeveloped or currently in agricultural use such as citrus or pasture. There will be the typical landscape buffering around the perimeter (see Exhibit 5).</p> <p>The well sites will be designed to be subtle and unnoticeable, especially where they are closer to residential development. Each wellsite will be screened from offsite view and landscaping will be provided around the perimeter (see typical site plan in Exhibit 6).</p>
<p>POLICY 2.102-A1: DEVELOPMENT LOCATION – Polk County shall promote contiguous and compact growth patterns through the development process to minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, and prevent development patterns where tracts of land are by-passed in favor of development more distant from services and existing Communities.</p>	<p>Fundamental to the future growth of the County’s urban areas, is the adequate supply of water which is not only for consumption but for fire protection as well. This project secures a consistent water supply for the next 30 years to minimize the cost of development and enable more continued contiguous and compact growth patterns</p>
<p>POLICY 2.102-A3: DISTRIBUTION - Development shall be distributed throughout the County consistently with this Future Land Use Element so that the public utility, other community services, and public transit and transportation systems can be efficiently utilized; and compact, high-density and intensity development is located where urban services can be made available.</p>	<p>This water treatment facility is needed to serve development approved within the County and municipal utility service areas. The plant does not need many urban services and has a fire station planned for the site. The well sites will be unmanned and operated through the PRWC’s SCADA system.</p>
<p>POLICY 2.102-A4: TIMING - The development of land shall be timed and staged in conjunction with the cost-effective and efficient provision of supporting community services which, at a minimum, shall require compliance with the Plan's Level of Service requirements and the County's concurrency management system.</p>	<p>This facility is planned to enable future growth in County and municipal urban service areas. In itself there is not a necessity to evaluate its concurrency. It will enable other developments throughout the County and its cities to meet their concurrency needs.</p>
<p>POLICY 2.102-A15: ADEQUATE PUBLIC FACILITIES - The County will direct new growth to areas where adequate public facilities exist or are planned; and ensure that essential services are in place to provide for efficient, cost-effective response times from the Fire Department, Sheriff’s Department, and Emergency Management Service (EMS).</p>	<p>The water treatment facility on Boy Scout Road will have six (6) operators at the facility during the day and two (2) overnight. A fire rescue station will also be located onsite. This facility is not intended to be a growth generator. It will provide potable water to other County and municipal utility systems to be distributed by each systems operation. The well sites will be unmanned and operated through the PRWC’s SCADA system.</p>

Land Development Code (LDC) Section 205, Table 2.1, Use Table for Standard Land Use Districts lists Class III Utilities as a Level 3 Conditional Use in the Agricultural/ Residential Rural district. A Level 3 Review is approved by the Planning Commission under the criteria listed in Section 906.D.7 of the LDC

Table 10

<p>The Planning Commission, in the review of development plans, shall consider the following factors in accordance with Section 906.D.7 of the LDC:</p>	
<p>Whether the proposed development is consistent with all relevant requirements of this Code;</p>	<p><i>Yes, this request is consistent with the LDC, specifically Sections 303, Class III Utilities, and 906.D Level 3 Review Procedures.</i></p>

Table 10

The Planning Commission, in the review of development plans, shall consider the following factors in accordance with Section 906.D.7 of the LDC:	
Whether the proposed development is consistent with all applicable policies of the Comprehensive Plan;	<i>Yes, this development is consistent with the Comprehensive Plan because POLICY 2.125-D1 states “utility facilities shall be permitted throughout the County in all land use classifications” and POLICY 3.105-D3 to “develop projects that are environmentally sound, sustainable and include adequate alternative water supplies within the region.”</i>
Whether the proposed use is compatible with surrounding uses and the general character of the area, including such factors as density, height, bulk, scale, intensity, traffic, noise, and appearance; and	<i>The proposed water treatment facility is far from existing development or areas planned for high intensity residential developments. It generates less traffic than an elementary school and is partnered with a fire rescue station. The well sites are unmanned, low profile, and unnoticeable once constructed.</i>
How the concurrency requirements will be met if the development were built.	<i>Water treatment plants generate an insignificant amount of vehicle travel, require no school or park capacity, must be designed to meet drainage requirements, and are a concurrency facility on their own.</i>

The request meets all conditions in Section 303 of the LDC for Class III Utilities in an A/RR land use district. These conditions are listed in the Findings of Fact on page 3 of this report.

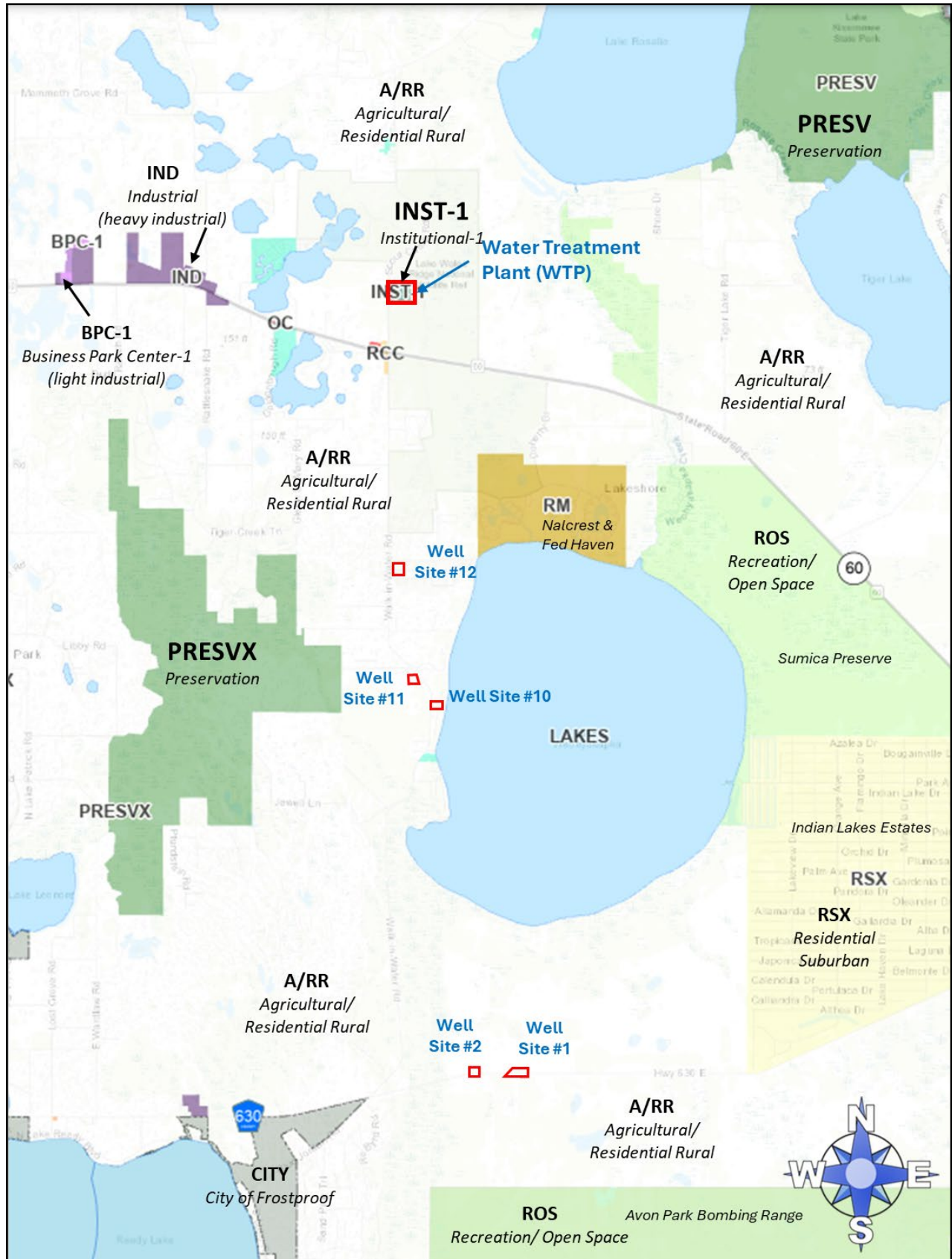
Comments from other Agencies: The Polk County Utilities, Land Development Engineering, County Surveyor, Polk County School Board, and the Polk County Public Safety Division contributed to the drafting of this report.

Exhibits:

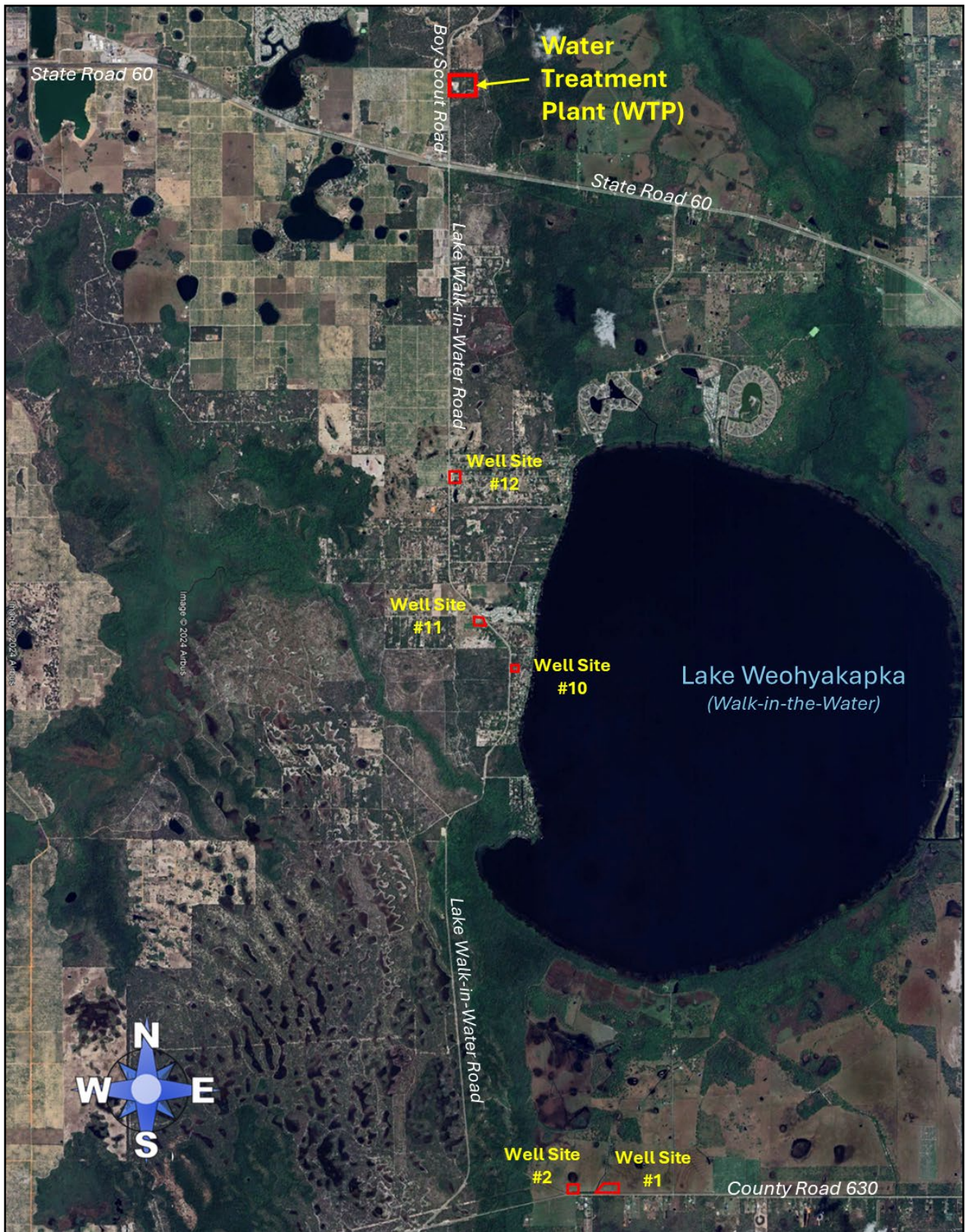
- Exhibit – 1 Location Map
- Exhibit – 2 Future Land Use Map
- Exhibit – 3 Satellite Photo (Context)
- Exhibit – 4 2023 Aerial Photo (Close-up) *of each site*
- Exhibit – 5 Water Treatment Facility Site Plan
- Exhibit – 6 Typical Photo of Well Site and Site Plan
- Exhibit – 7 Typical Lower Floridan Aquifer Well Design
- Exhibit – 8 Upper Floridan Aquifer Test Wells



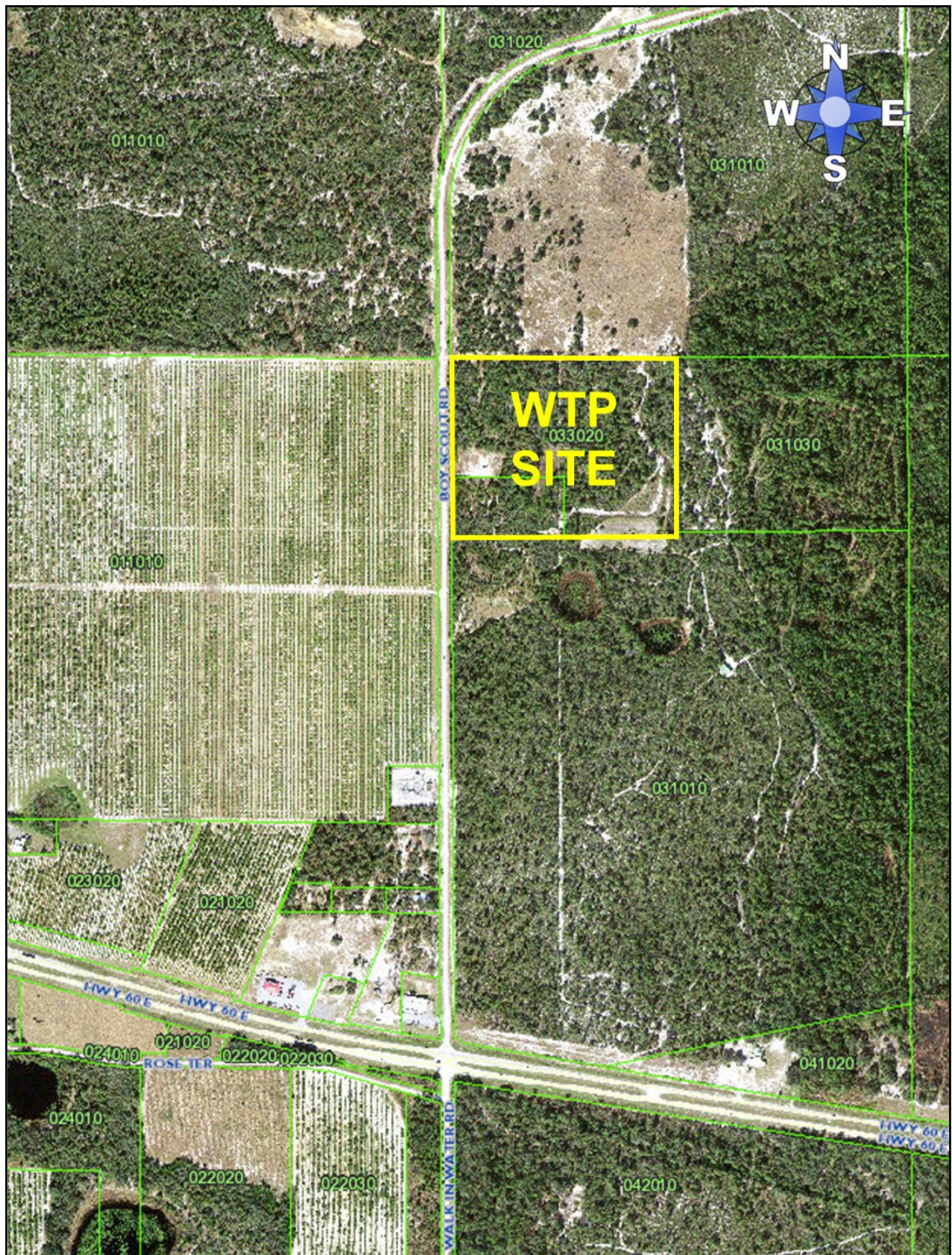
Location Map



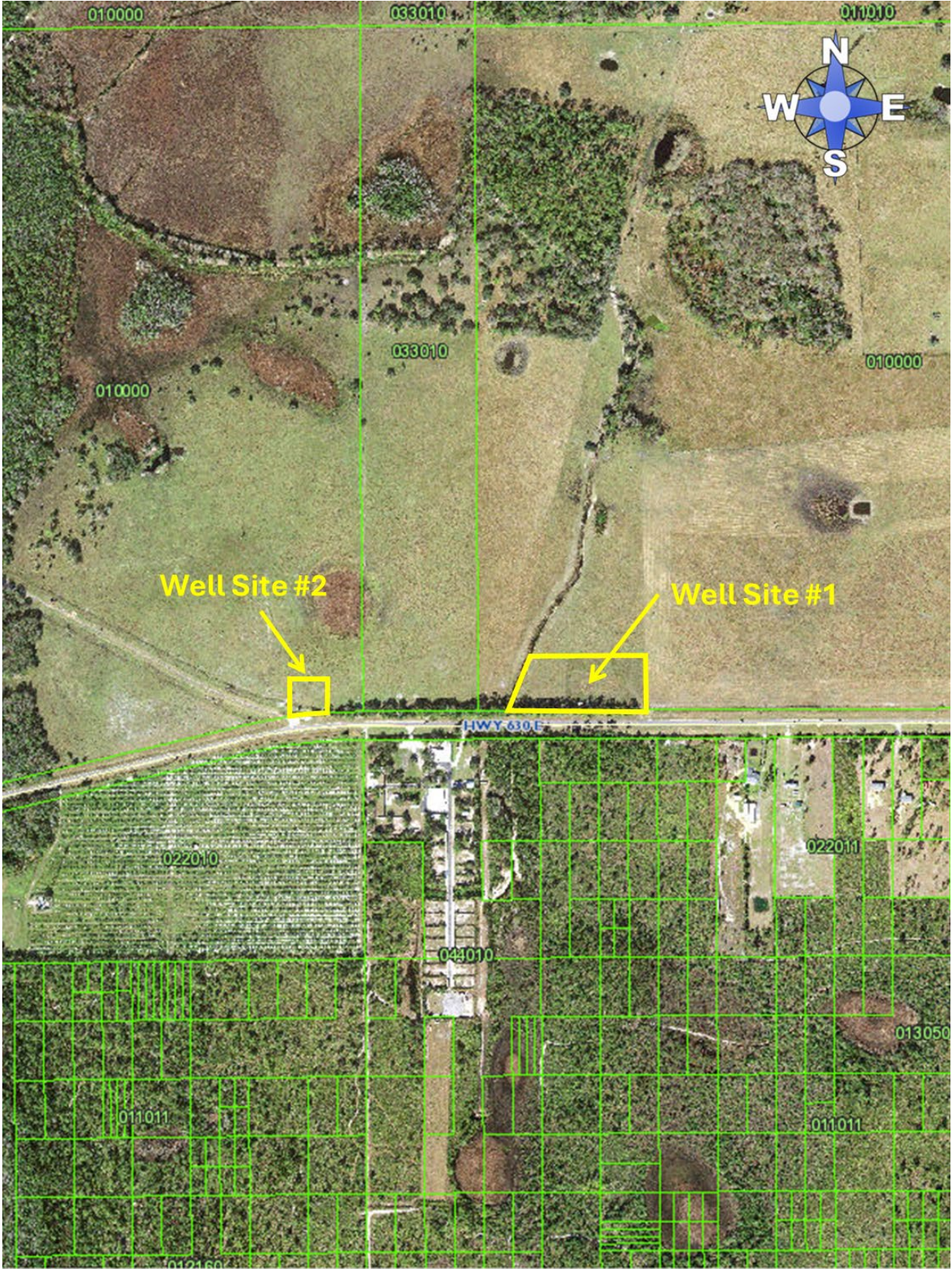
Future Land Use Map



Satellite Photo (Context)



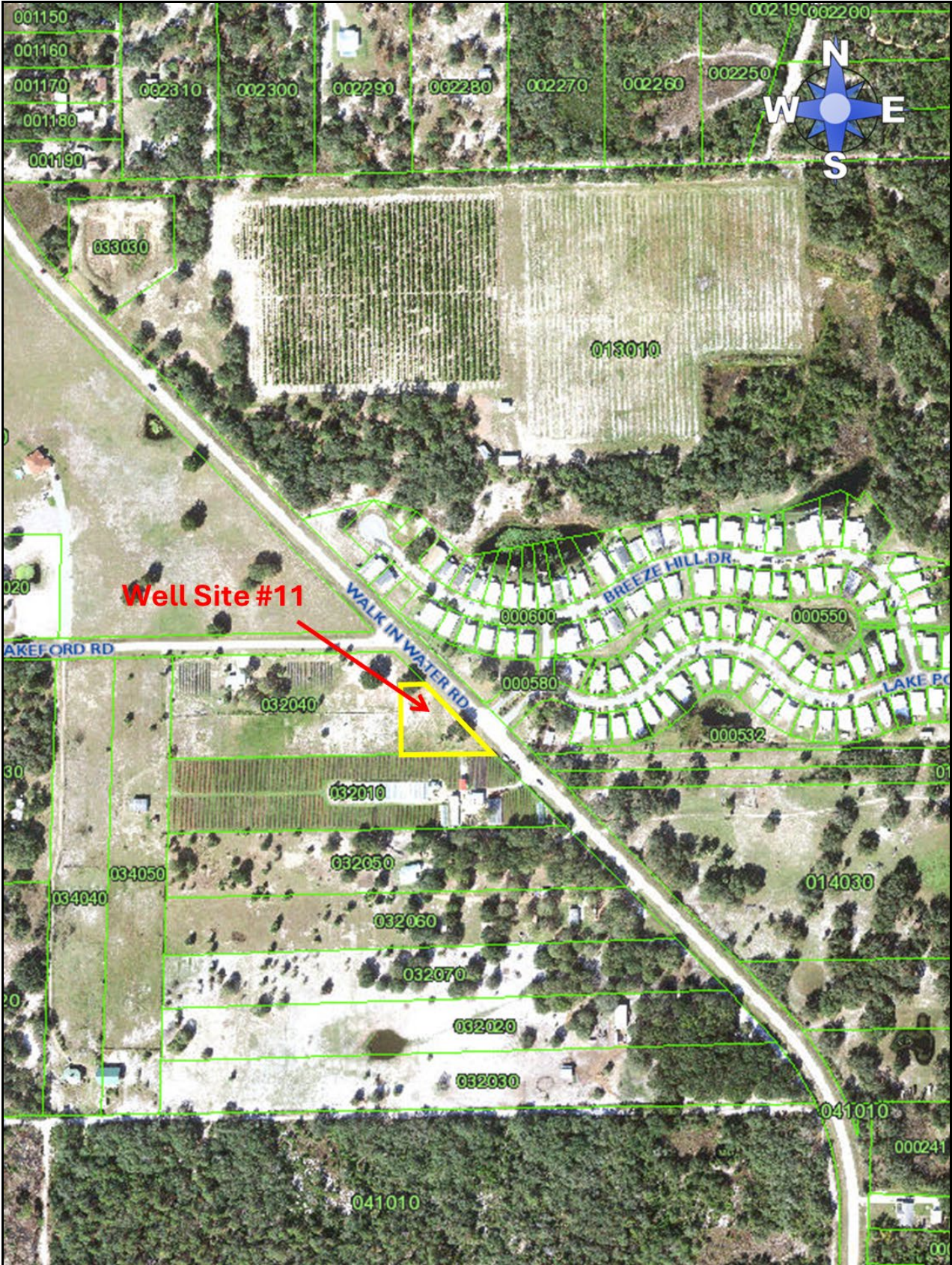
2023 Aerial (Close Up)



2023 Aerial (Close Up)



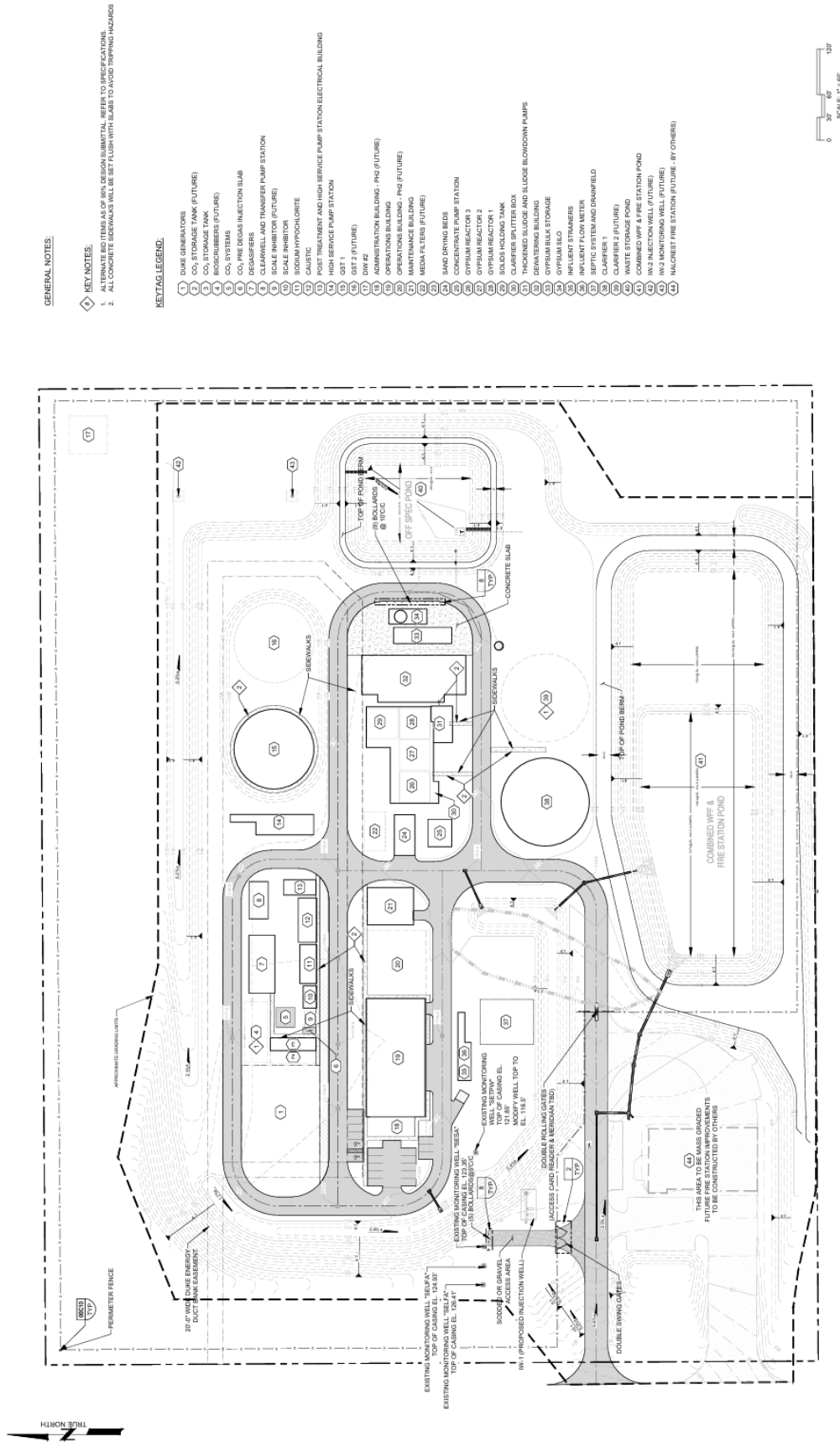
2023 Aerial (Close Up)



2023 Aerial (Close Up)



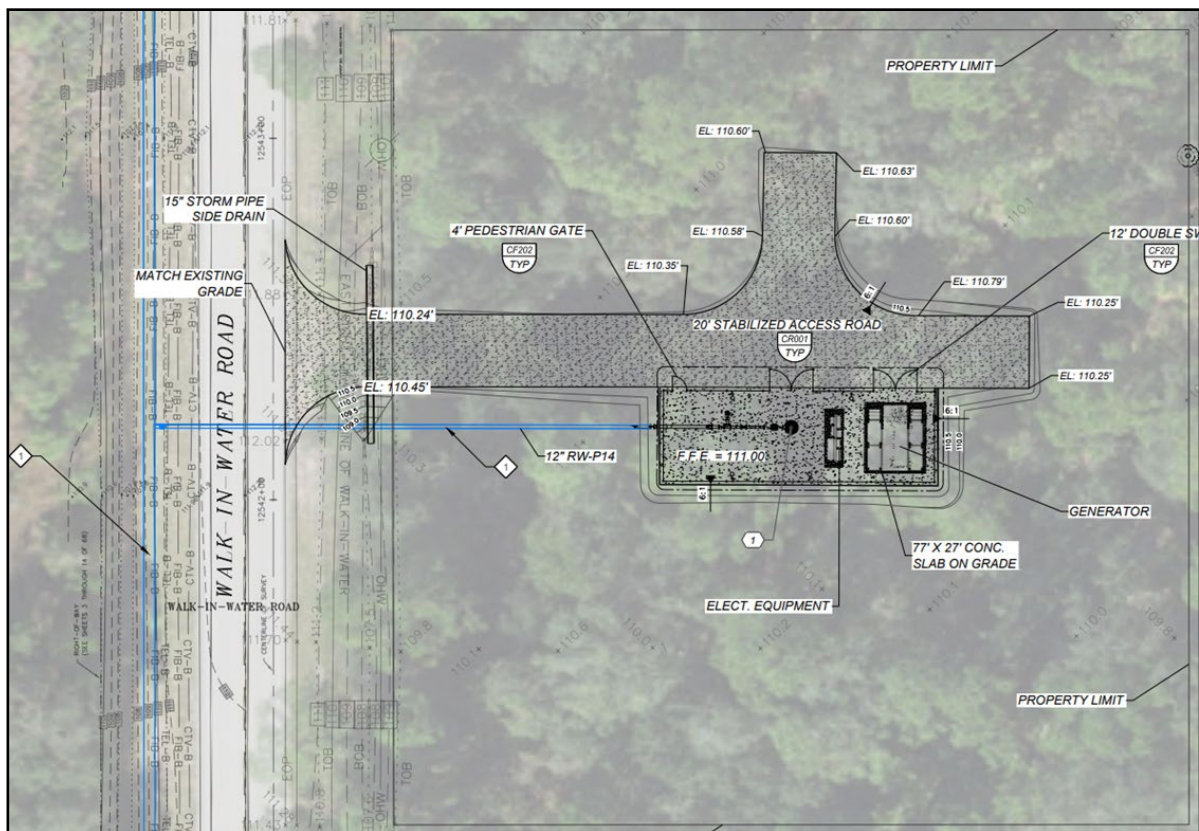
2023 Aerial (Close Up)



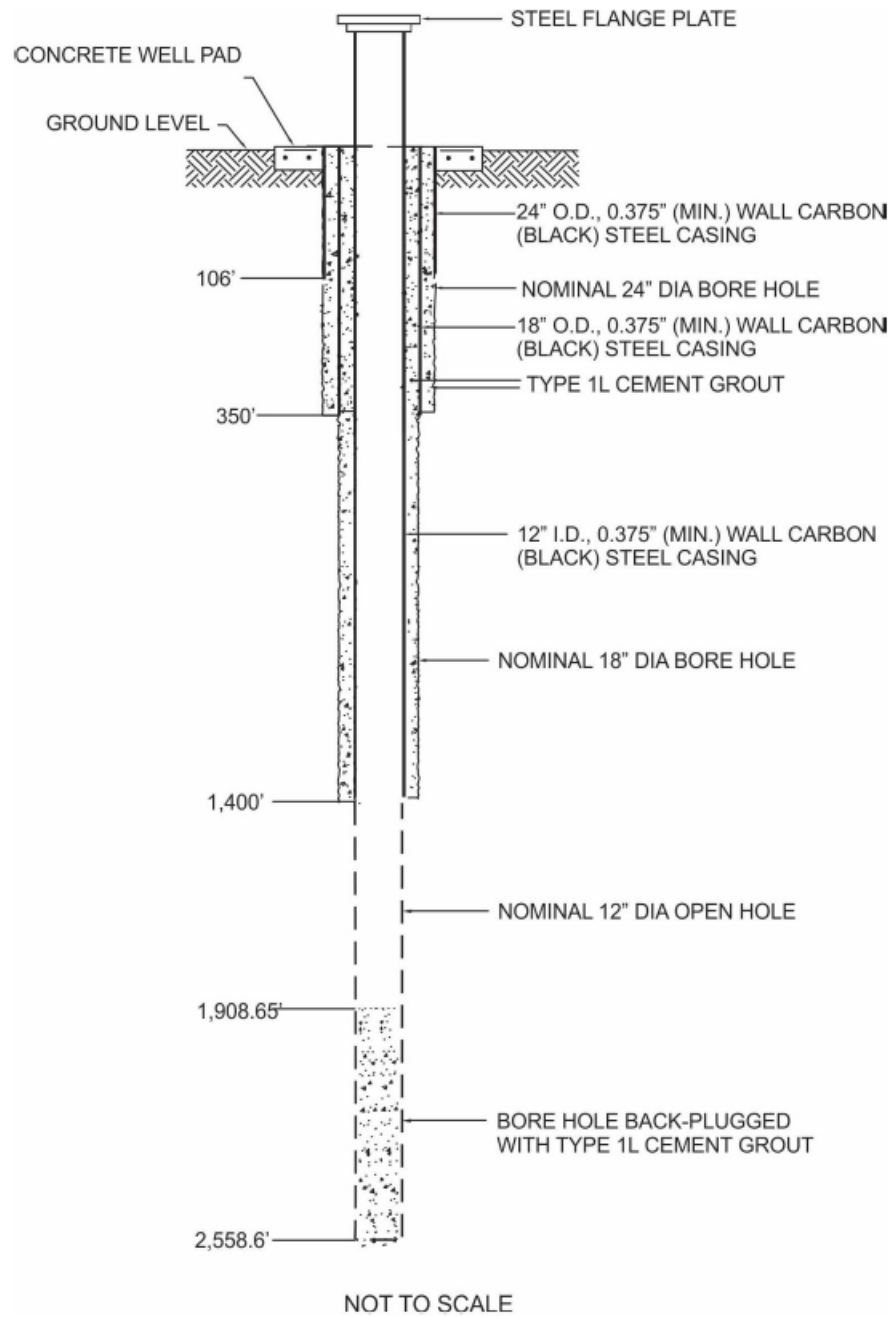
Water Treatment Facility Site Plan



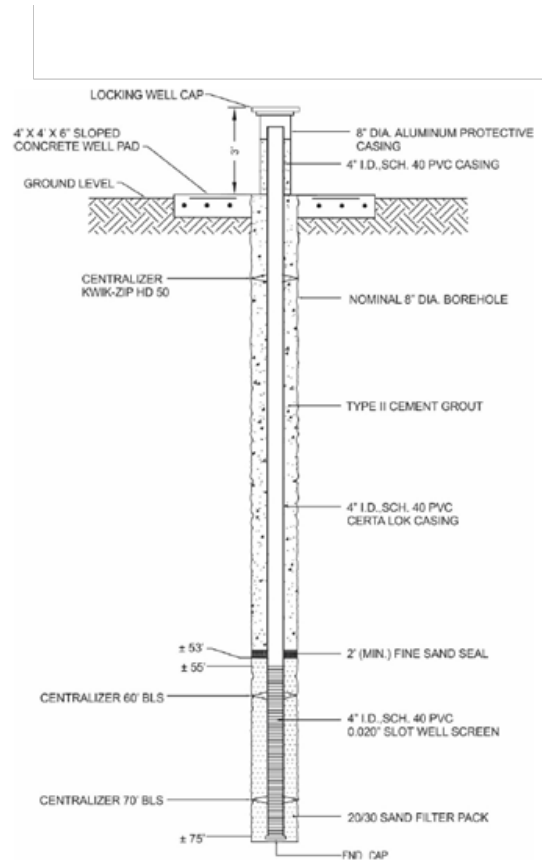
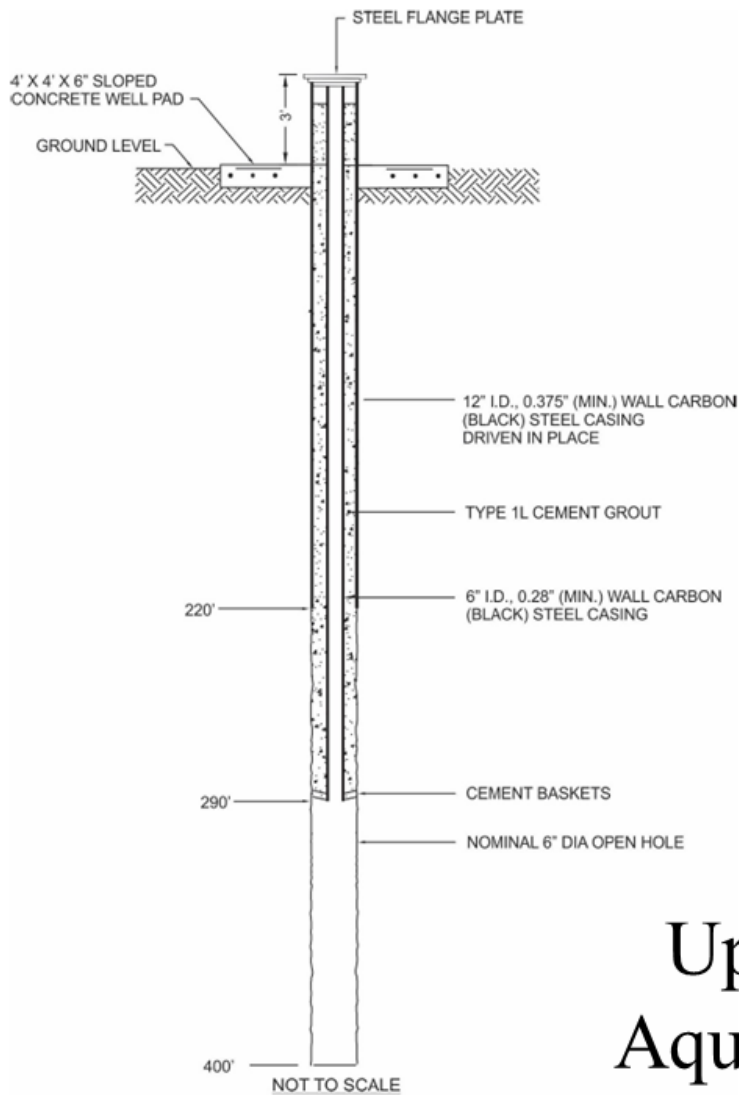
Photo of Typical Well Site and Site Plan



An as-built construction diagram of SE-TPW₃-LFA is provided as Figure 2-4.



Typical Lower Floridan Aquifer Well



Upper Floridan Aquifer Test Wells