

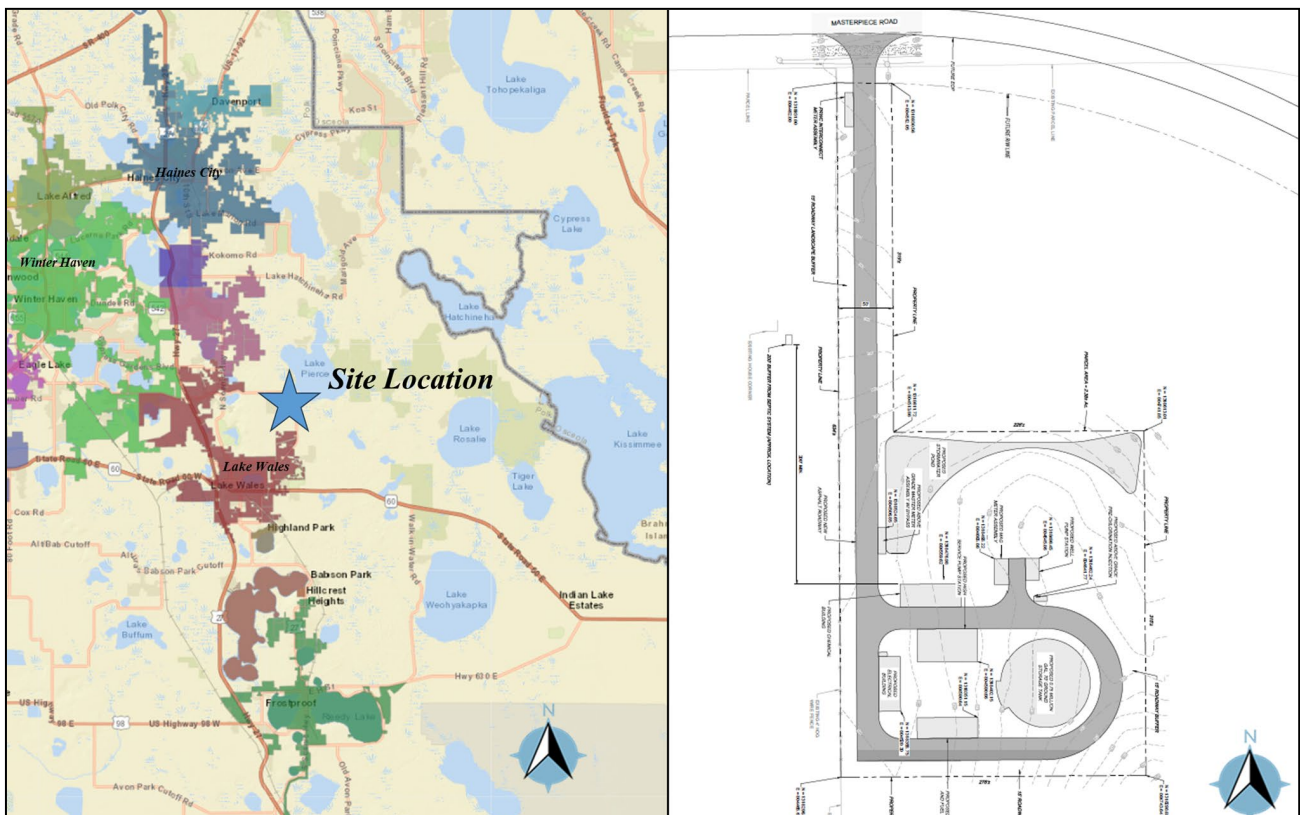
POLK COUNTY DEVELOPMENT REVIEW COMMITTEE STAFF REPORT

DRC Date:	June 5, 2025	Level of Review:	Level 3 Review
PC Date:	August 6, 2025, cont. September 10, 2025	Type:	Conditional Use
BoCC Date:	n/a	Case Numbers:	LDCU-2025-11
Applicant:	Polk County	Case Name:	ERUSA Water Treatment Plant
		Case Planner:	Ian Nance

Request:	Conditional Use request for a Water Treatment Plant with a 0.75-Million-Gallon Ground Storage Tank and support facilities (Class III Utilities).
Location:	South and west of Masterpiece Road, south of Timberlane Drive, north of Skipper Trail, south and west of Lake Pierce, east of Longhorn Drive, south of Dundee, and north of Lake Wales in Section 17, Township 29, Range 28.
Property Owners:	Polk County
Parcel Number (Size):	282917-000000-041020 (+/- 17.36 acres)
Future Land Use:	Residential Suburban (RS)
Development Area:	Suburban Development Area (SDA)
Nearest Municipality:	Lake Wales
DRC Recommendation:	Approval
Planning Commission Vote:	Pending

Site Location

Site Plan



Summary:

Polk County Utilities (PCU) is proposing a Water Treatment Plant (Class III Utility) which includes a 0.75-million-gallon Ground Storage Tank and support facilities to serve the East Regional Utility Service Area (ERUSA) on approximately 2.38 acres of the subject parcel. This receiving facility will blend Alternative Water Supply (AWS) water being provided by the Polk Regional Water Cooperative (PRWC) with raw water from a new Upper Floridian Aquifer well and provide treated potable water across the eastern portion of the ERUSA service area.

The tank is 70 feet in diameter with an overall height of approximately 37 feet to the top of the aerators. The site is within a Residential Suburban (RS) future land use designation that allows a maximum height of 50 feet. Large-acreage single-family lots are located to the west and south. In accordance with the Land Development Code (LDC) Compatibility standards, all structures will be set back a minimum of 50 feet from adjoining residential property lines with Type “C” landscape buffering.

Once constructed, the facility will be operated via the County Utility Division’s supervisory control and data acquisition (SCADA) system from offsite, requiring occasional visits for system cleaning and maintenance. The facility will include multiple onsite structures including an electrical building, treatment building, high service pump station, and an emergency backup generator, as well as the subject tank. These mechanical components are specifically designed by the manufacturers to be placed in residential settings and mitigate any noise pollution.

Access will be provided by a commercial driveway onto Masterpiece Road, a Rural Major Collector (RMC) roadway. Class III utility uses such as this generate little-to-no consistent impacts on traffic, schools, emergency response, parks, utilities, or other public services. No wetlands or flood zones are located on the subject site, though a species walkover will be required to document and mitigate any possible impacts to protected species.

This facility will be rated for 1.63 MGD, meeting projected future demands to 2045. PCU staff has found through system modeling that the nearby Timberline plant can be decommissioned once this new facility is operational. This will enable greater efficiency in the overall system. This facility is critical for supplying potable water to the ERUSA, meets the relevant standards in the Comprehensive Plan and LDC, made compatible with surrounding uses through LDC provisions, and staff recommends approval.

****This case was presented and continued from the August 6th Planning Commission hearing due to an advertising error****

Findings of Fact

- *This is a request for Conditional Use Approval of a potable Water Treatment Plant (Class III Utilities) to include a 0.75-million-gallon Ground Storage Tank and support facilities to serve the East Regional Service Area (ERUSA) on approximately 2.38 acres of the subject parcel.*
- *The County purchased the subject property on March 20, 2024 (OR Book 13055 Pages 2031-2033).*
- *The subject site is within a Residential Suburban (RS) future land use designation in the Suburban Development Are (SDA).*
- *Comprehensive Plan Policy 2.106-A1 states, “SDAs shall be those areas within the County which are, in most cases, located between municipalities, TSDA or UGA and the Rural Development Areas (RDAs). In the SDA, agricultural activities coexist alongside low density developed areas in the fringes of municipalities and other urban centers. These areas have developed predominately residential, in a suburban pattern with County-owned, municipal or County-franchised potable-water systems, but without centralized sewer facilities and very little, if any, supporting public facilities and non-residential uses. Other urban services typically found to accompany a suburban area include, but are not limited to multimodal transportation facilities, public safety, recreational and educational services.”*
- *According to Comprehensive Plan Policy 2.125-D1 states, “The following utility facilities shall be permitted throughout the County in all land use classifications, subject to County approval, to support existing and proposed development:*
 - a. **water and sewer transmission and treatment facilities, including, without limitation, collection and distribution mains, water and sewerage-treatment facilities, and pumping facilities;***
 - b. **electrical-transmission and distribution facilities including, without limitation, electrical transmission lines, substations, and related electrical-distribution facilities;***
 - c. **communications facilities, including, without limitation, radio towers and microwave transmission facilities, (subject to other restrictions within the Plan or the County's Land Development Code);***
 - d. **public potable wells and temporary or permanent package treatment plants; and***
 - e. **natural-gas and liquefied-fuel pipelines.”***
- *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.”*

- *LDC Table 2.1 lists Class III Utilities as “C3” Conditional Uses in RS districts, requiring approval from the Planning Commission in accordance with LDC Section 906.*
- *LDC Section 303, Criteria for Conditional Uses, states “Class III utility facilities may be permitted within a residential district only if the applicant demonstrates what efforts have been made to first site the facility within a non-residential district and why those sites were not chosen. At a minimum, alternative non-residential sites within one quarter of one mile from the selected site shall be considered.”*
- *LDC Section 303, Criteria for Conditional Uses, states “For purposes of public safety and welfare, all new Class III utilities (except transmission lines) and all new electrical power substations (both Class II and Class III), shall be protected by fencing or other appropriate protection to discourage entry by animals and unauthorized persons. Fencing shall be interior to any required vegetative buffering. The minimum height for enclosures shall be six feet from finished grade level. Fencing in or adjacent to residential uses or districts shall exclude barbed or razor wire fencing materials below the height of six feet.”*
- *LDC Section 303, Criteria for Conditional Uses, states the maximum average noise levels which shall be permitted at the utility site’s perimeter on any given day, when a proposed utility locates next to a residential use or residential district is 65 dB(A).*
- *The zoned schools for the site are Spook Hill Elementary; McLaughlin Middle; and Winter Haven Senior.*
- *Fire response to this site is primarily from Polk County Fire Rescue Station 44, located at 1695 Masterpiece Road, Lake Wales. EMS response to this site is primarily from Polk County Fire Rescue Station 26, located at 2902 State Rd 60 E, Lake Wales.*
- *The site is served by the Polk County Sheriff’s Office Southeast District Command Center, located at 4011 Sgt. Mary Campbell Way, Lake Wales.*
- *The site is in the ERUSA. An 8-inch potable water main is in the north right-of-way of Masterpiece Road.*
- *The site access to the subject property is on County Road 17A (Masterpiece Road/Road No. 971504) a County-maintained Rural Major Collector roadway.*
- *There are no wetlands and floodplains on the site. The nearest surface water is Lake Pierce to the east.*
- *The site where the tanks are to be located is comprised of Astatula Sands, according to the U.S. Department of Agriculture, Soil Conservation Service, Polk County Survey.*
- *According to FNAI Biodiversity Matrix, the subject site (Unit ID 43633) no endangered species have been identified onsite. The property is not located within the Polk Green District. No conservation easements are adjacent to the property.*
- *The site is not within an airport flight path and height notification zone.*
- *This application has been reviewed for consistency with LDC Sections 906, 303, and 220.*

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-2025-11.**

Planning Commission: *The Planning Commission will vote on this application on August 6, 2025.*

CONDITIONS OF APPROVAL

Based upon the findings of fact, the DRC recommends APPROVAL of LDCU-2025-11 with the following conditions:

1. This approval shall be for a Water Treatment Plant (Class III Utilities) with a 0.75-million-gallon Ground Storage Tank and support facilities, as described in the staff report. [PLG]
2. Additional accessory structures necessary for the operation of this facility may be permitted as minor modifications to the site plan. [PLG]
3. The site plan included herein together with the conditions of approval shall be considered the “Binding Site Plan.” Any modifications to LDCU-2025-11, 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. [PLG]

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.

Table 1

Northwest: RS Masterpiece Road Pasture	North: RS Masterpiece Road Vacant County Property	Northeast: LR Masterpiece Road Event Facility
West: RS SFR +/- 5.6 ac.	Subject Property: RS Vacant	East: LR/RS Event Facility/Pasture
Southwest: RS Un-Platted Vacant Lots > 4 ac.	South: RS Un-platted Vacant Lots >4 ac./SFR	Southeast: RS Pasture

The subject property is located to the southwest side of Lake Pierce. Staff has reviewed aerial imagery dating to 1941. The lodge at the Bella Cosa event facility on the lake shore has been there since 1925 and is utilized for hosting weddings. The subject site has always been vacant and used possibly for ranching purposes. In the 1980's, a handful of single-family homes were built nearby on properties exceeding five acres. The property directly north of the subject property was approved for a Suburban Planned Development (LDSPD-2021-2) by the BoCC on December 14, 2021. However, the County's Parks & Natural Resources Division purchased this property in December 2024.

Most of the properties immediately surrounding the site are vacant or are large-acreage single-family lots, though residential development intensifies to the southwest in the Lake Pierce Ranchettes subdivision. Single-family lots here range from 0.50 acres to exceeding an acre. This subdivision is an anomaly in the area, though, platted prior to the LDC and Comprehensive Plan through a prior zoning ordinance.

Compatibility with the Surrounding Land Uses and Infrastructure:

The Comprehensive Plan defines Compatibility in Section 4.400 as "A condition in which land uses or conditions can coexist in relative proximity to each other in a stable fashion."

Planning staff analyzes a site plan for compatibility by reviewing several factors: the type and intensity of adjacent uses versus the proposed use; how the proposed development interacts with the surrounding area in relation with existing uses; access to roads and where traffic generated from the site will travel; the proximity to retail, employment, emergency services, mass transit, parks, and other public services; and how the applicant addresses possible incompatibilities that might arise from the proposed use by utilizing mitigating strategies found in the Comprehensive Plan or through Conditions of Approval agreed upon by the applicant and staff.

A. Land Uses:

Polk County Utilities (PCU) is proposing a Water Treatment Plant (Class III Utility) which includes a 0.75-million-gallon Ground Storage Tank and support facilities to serve the East Regional Utility Service Area (ERUSA) on approximately 2.38 acres of the subject parcel. This receiving facility will blend Alternative Water Supply (AWS) water being provided by the Polk Regional Water Cooperative (PRWC) with raw water from a new Upper Floridian Aquifer well and

provide treated potable water across the eastern portion of the ERUSA service area. This facility will be rated as 1.63 MGD, meeting future demands at a built-out year of 2045.

Ground storage reservoirs can be made compatible almost anywhere through buffering and proper site location. Ground storage tanks occupy visual space but cause few if any other externalities. The tank is 70 feet in diameter with an overall height of approximately 37 feet to the top of the aerators. The site is within a Residential Suburban (RS) future land use designation that allows a maximum height of 50 feet. The majority of the facility structures are set back approximately 350 feet south of Masterpiece Road. A Type “A” buffer will be required along Masterpiece, while a Type “C” buffer will be placed on west and southern borders along with maintaining much of the existing vegetation on those sides. The tank and non-residential structures will be set back a minimum of 50 feet from any residential property line, in accordance with compatibility standards found in LDC Section 220.

LDC Section 303, Criteria for Conditional Uses, states the maximum average noise levels permitted at the utility site’s perimeter on any given day, when a proposed utility locates next to a residential use or residential district, is 65 dB(A). The high-service pump station houses the distribution system pumps which are often the primary noise source along with the on-site well and an emergency backup generator. These mechanical components are specifically designed by the manufacturers to be placed in residential settings to mitigate noise pollution. In the case of an emergency scenario where the backup generator is required, the generator is fully enclosed in a sound attenuated enclosure and strategically placed on the site away from neighboring properties as feasibly possible.

Finally, the presence of this facility will not create high traffic demands. Once constructed, the facility will be operated via the County Utility Division’s supervisory control and data acquisition (SCADA) system from offsite. There will only be occasional visits for system cleaning and maintenance. A commercial driveway will be constructed onto Masterpiece Road and not require access through nearby residential properties or subdivisions.

B. Timing & Infrastructure:

Polk County Comprehensive Plan Policy 2.102-A3 states, “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.”

Staff finds there to be more than adequate infrastructure to support the placement of the storage tank on this site. This tank together with its new high service pumps for the potable water treatment facility will enhance efficiency and create a more consistent flow through the water system.

LDC Section 303, Criteria for Conditional Uses, states “Class III utility facilities may be permitted within a residential district only if the applicant demonstrates what efforts have been made to first site the facility within a non-residential district and why those sites were not chosen. At a minimum, alternative non-residential sites within one quarter of one mile from the selected site shall be considered.”

County staff has reviewed potential surrounding non-residential sites that would operate as efficiently as the chosen location. Aside from Leisure/Recreation (LR) land use designations along the lake, there are none. This site is well within what could be considered classic Residential

Suburban (RS) and Suburban Development Area (SDA) designations. The area is rural in nature, and the residential development that does exist typically consists of larger lots than one would find in other, more-urban development areas where densities can intensify due to the presence of centralized wastewater, which does not currently exist in this portion of the County.

Nearest and Zoned Elementary, Middle, and High School

School capacity is not a concern for utility 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 operations.

The zoned schools for the site are Spook Hill Elementary; McLaughlin Middle; and Winter Haven Senior. The nearest schools are Spook Hill Elementary and Lake Wales Senior High.

Table 2

Name of School	Average driving distance from subject site
Spook Hill Elementary	6 Miles
McLaughlin Middle	8 Miles
Winter Haven Senior	14 Miles
Lake Wales Senior	6 Miles

Source: Polk County School Board GIS

Nearest Sheriff, Fire, and EMS Station

Polk County Fire Rescue provides Advanced Life Support transport to all residents and visitors of Polk County. It also provides fire suppression, rescue services, and fire prevention services to all unincorporated Polk County and the municipalities of Eagle Lake, Polk City, Mulberry, Lake Hamilton, and Hillcrest Heights. Emergency response is considered effective if response times are within eight (8) minutes in rural and suburban areas and 13 minutes in urban areas.

Fire response to this site is primarily from Polk County Fire Rescue Station 44, located at 1695 Masterpiece Road, Lake Wales. EMS response to this site is primarily from Polk County Fire Rescue Station 26, located at 2902 State Rd 60 East, Lake Wales. Response times can vary significantly based on many factors but are within the suburban levels on average.

Table 3

	Name of Station	Distance	Response Time*
Sheriff	Southeast District Headquarters 4011 Sgt. Mary Campbell Way, Lake Wales	±6 miles	11:09 minutes 32:20 minutes
Fire	Polk County Fire Rescue Station 44 1695 Masterpiece Road, Lake Wales	±2 miles	4-6 minutes
EMS	Polk County Fire Rescue Station 26 2902 State Rd 60 East, Lake Wales	±6 miles	8-10 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.

This water treatment plant will be an unmanned facility. Aside from construction, there should be little demand for fire/rescue services resulting from the operation of this site. There are not many combustible features to a water treatment facility of this size.

The site is in the Polk County Sheriff's Office Southeast District, which is headquartered at 4011 Sgt. Mary Campbell Way in Lake Wales. Sheriff response times are not as much a function of the distance to the nearest Sheriff's substation, but more a function of the overall number of patrol officers within the County.

The PCSO is always trying to improve response times, especially for Priority 1 Calls, by employing new technologies such as Emergency 1 Dispatch (E1D) and Live911. E1D is a program designed to alert deputies at the earliest possible moment of a call for service that is being classified as a true emergency. E1D alert notifications are sent to deputies via their agency-issued smart phones as text messages, alerting deputies of the call type and address of the emergency. Similarly, Live911 technology allows deputies to hear emergency calls in real-time as the dispatcher is receiving the information. Both E1D and Live911 enable deputies to self-dispatch to these in-progress, high-risk incidents as dispatchers collect additional information about the call, thus reducing our response time to emergency situations.

Patrol staff in each district also monitors the response times for their areas and tries to manage their shifts according to manpower, hotspots, traffic obstructions/construction sites, etc. Areas that are spread out tend to have slightly longer response times because of the vast land mass of their district and time of travel. Since patrol deputies are not sitting in the office waiting on a call, it is easier for patrol staff to assign them to certain sectors or beats based on areas with higher call volume to reduce response time; however, this cannot be predicted precisely.

Water and Wastewater Demand and Capacity:

This water production and proposed storage facility will not require any water or wastewater. It will continue to provide water services.

A. Estimated Demand and Service Provider:

The site is within an RS future land use district. The by-right density provided by LDC Table 2.2 is one dwelling unit per five acres (1DU/5AC). Pursuant to LDC Section 303, up to 3 DU/AC could be constructed here, if a site plan can meet locational criteria found within this section. Single-family dwelling units are assumed to require 360 gallons per day (GPD) of potable water and create 270 GPD in wastewater demand; however, there are no wastewater lines available at this location, and the SDA does not typically account for them. Residential units would need individual septic systems.

As a water storage facility, there will be no demand on the system. There are no onsite offices or restrooms. Table 4, below, reflects the differences between the theoretical impact of the proposed utility versus the basic level and the highest levels of residential development permissible under the current land use district, development area, and overall acreage of the subject parcel.

Table 4

Subject Property	Estimated Impact Analysis		
	Demand as Currently Permitted in RS 1 DU/5 AC	Maximum Permitted in RS (3 DU/AC)	Proposed Plan
±17.36 Acres RS			
Permitted Intensity	Three (3) Single-Family Dwellings	52 Single-Family Dwellings	Class III Utility
Potable Water Consumption (GPD)	1,080 GPD	18,720 GPD	0 GPD
Wastewater Generation (GPD)	810 GPD	14,040 GPD	0 GPD

Source: Polk County Concurrency Manual & Polk County Utilities

B. Available Capacity:

The East Public Water System is currently permitted for 0.884 MGD with a flow of 0.444 MGD. With the completion of this facility and alternative water sources, the permitted water limits are anticipated to increase to 1.474 MGD by 2029, with an anticipated incremental increase in flow (+/- 0.450 MGD) by this time.

C. Planned Improvements:

This project is one of many in this region to provide potable water to southeast Polk County. With portions of Polk County lying within the Southern Water Use Caution Area (SWUCA), as identified by the Southwest Water Management District, there has been a significant effort by the State and additional stakeholders to address the water use in the region. This facility will blend an Alternative Water Supply (AWS) being provided by the Polk Regional Water Cooperative (PRWC) with raw water from a new Upper Floridian Aquifer well and provide treated potable water across the eastern portion of the ERUSA service area.

Roadways/ Transportation Network

The Polk County Transportation Planning Organization (TPO) monitors traffic congestion on over 425 roadway segments (950 directional links). The Roadway Network Database (RND) contains current traffic data for all arterial and collector roads and includes information on the current traffic volume and level-of-service for these major roads. The RND contains over 26 fields of transportation data for over 1,300 miles of state, County, and city roads in Polk County – one of the largest road networks in the State of Florida.

Much of the transportation data contained in the updated RND is based on traffic counts taken recently by the TPO and Florida Department of Transportation (FDOT) and is used to calculate the level of service and how much capacity is available on a given road based on the road's level of service (LOS) standard. Also included are several safety and multi-modal indicators that help us track some of the TPO's performance measures and targets. This includes a calculation of crash rates, as well as if there is a presence of transit services, sidewalks and bicycle facilities for each road segment.

The report identifies both daily and peak hour traffic volumes. Daily traffic volumes are reported in Annual Average Daily Traffic (AADT) – the typical traffic volume on a weekday over a 24-hour period. Peak hour traffic represents the highest hourly traffic volume for period between 4 – 7 p.m. It is reported as both a two-way volume and as directional volumes (east and west or north and south).

The peak hour traffic volumes are used to estimate the level-of-service for each roadway, in each direction. Level-of-service refers to the quality of traffic flow. It is the primary measure of traffic congestion. Level-of-service (LOS) is measured on a scale of 'A' to 'F' with LOS 'A' being the best (free-flow traffic) and LOS 'F' being the worst (severe traffic congestion).

A. Estimated Demand:

Class III Utilities do not 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.

There will not likely be any increase in transportation demand because of this approval. After construction of the ground storage tank and supporting facilities, the plant will be operated through the County's supervisory control and data acquisition (SCADA) system. There are no offices or habitable structures planned onsite that will draw personnel beyond the occasional visits for testing and maintenance.

The site is within a RS future land use district. The by-right density provided by LDC Table 2.2 is one dwelling unit per five acres (1DU/5AC). Pursuant to LDC Section 303, up to 3 DU/AC could be constructed here, if a site plan could meet locational criteria found within this section. It is assumed that each residential unit will generate 7.81 AADT and 1.00 Peak PM Hour trip.

As a water storage facility, there will be few regular demands on the traffic system. Table 5, below, reflects the differences between the theoretical impact on traffic by this utility versus the basic and the highest levels of residential development permissible under the current land use district, development area, and overall acreage of the subject parcel.

Table 5

Subject Property	Estimated Impact Analysis		
	Demand as Currently Permitted in RS (1 DU/5 AC)	Maximum Permitted in RS (3 DU/AC)	Proposed Plan
±17.36 acre RS			
Permitted Intensity	Three (3) Single-Family Dwellings	52 Single-Family Dwellings	Class III Utility
Average Annual Daily Trips (AADT)	24	406	<1
PM Peak Hour Trips	3	52	<1

Source: Polk County Concurrency Manual

This request will not require either a major or minor traffic study since the average annual daily trip rate (AADT) will be less than 50 trips per day. A commercial driveway will be installed. This will lessen the damage experienced to Masterpiece Road (CR 17A) as maintenance vehicles visit the site.

B. Available Capacity:

The project will have direct access to Masterpiece Road (CR 17A). This road is broken into two road classifications, one going east-west (Road No. 971504) and north-south (Road No. 982901), with access being from the former roadway segment. TPO tracks concurrency across the entirety of this stretch from SR 17 to the west and Mammoth Grove Road to the southeast (Links 4030 N/S). Each segment is designated as a Rural Major Collector.

Although the request will have a 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 brief 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
4030N	Masterpiece Road From: Mammoth Grove Road To: SR 17	C	495	D
4030S	Masterpiece Road From: SR 17 To: Mammoth Grove Road	C	486	D

Source: Polk County Transportation Planning Organization, Concurrency Roadway Network Database January 17, 2025

C. Roadway Conditions

Masterpiece Road is classified as a Rural Major Collector. The pavement width adjacent to the site is approximately 22 feet with a right-of-way of 80 feet. The projected AADT is to be under the threshold of 90 AADT set by LDC Section 705 for required intersection improvements. Development sites accessing a collector roadway that is substandard due to pavement width shall increase the pavement width to 24 feet in both directions and equally on both sides of the road along the existing roadway right-of-way.

The speed limit heading west on Masterpiece Road is 55 MPH. The speed limit slows at the curved intersection with Timberlane Road to 45 MPH before increasing again to 55.

D. Planned Improvements:

A roundabout is planned for the intersection of Masterpiece Road and Timberlane Road, though it is not yet listed in the 5-year CIP.

E. Sidewalks

There are no sidewalks along the frontage of the site. In the SDA, LDC Section 707 does not currently require sidewalks unless for an SPD. Furthermore, the site is not within two miles of a school, and no habitable structure is planned onsite, two other factors used for requiring sidewalks. The County, however, maintains the option of adding a sidewalk during the engineered site plan review process.

F. Mass Transit

There are no mass transit services provided to the area. It is not likely that any will be provided soon. The water treatment plant is not permanently staffed. It is operated remotely through Polk County's SCADA system. When staff are needed at the site, they have service vehicles.

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.

A. Location:

No regional parks are located near this proposed facility. A neighborhood park is located to the southwest in the Lake Pierce Ranchettes subdivision. A public boat ramp is located on Lake Pierce to the northeast.

B. Services:

A basketball court and a playground are located at the neighborhood park in Lake Pierce Ranchettes subdivision.

C. Environmental Lands:

The closest Environmental Lands with public access is the Allen David Broussard Catfish Creek Preserve State Park on the east side of Lake Pierce. This preserve covers more than 8,000-acres of scrub, sandhill and flatwoods land and offers 6-miles of hiking trails, 7-miles of equestrian trails and wildlife viewing opportunities. The site is not within the Polk Green district, and no conservation easements are adjacent to the site.

D. Planned Improvements

There are no planned improvements to park facilities in this area, according to the County's 5-year capital improvements plan.

Environmental Conditions

The Polk County Comprehensive Plan has a Conservation Element. Division 2.300 of the Comprehensive Plan mentions, "The goal, objectives, and policies of the Conservation Element are designed to protect the natural resources which make Polk County a special place while preventing degradation of the environment and allowing development and economic expansion to occur." There should be no serious environmental conditions that need to be addressed with this subject site.

A. Surface Water:

The site is in the Catfish Creek basin with a positive stormwater outfall. Lake Pierce is less than ¼-mile to the east. According to the Polk County Water Atlas, Lake Pierce is an approximately 3,856-acre natural lake within the Kissimmee River Watershed. This waterbody is impaired, according to the Florida Dept. of Environmental Protection's (FDEP) implementation of the Impaired Waters Rule (IWR) due to several water quality factors including high levels of phosphorus. The FDEP evaluates whether waters meet their designated uses, which include aquatic life use support, primary contact and recreation use support, fish and shellfish consumption use support, and drinking water use support.

The Lake Vegetation Index (LVI) is a bioassessment tool created by the FDEP and monitored by the Polk County Water Atlas to assess the biological condition of aquatic plant communities in Florida lakes. According to the Polk County Water Atlas, "It utilizes a multi-metric index that evaluates how closely a lake's plant community compares to a lake containing minimal human disturbance (known as a reference lake) and is based on a field assessment of aquatic and wetland plants. Plants respond to disturbances such as the introduction of invasive exotic species (hydrilla as an example), lakeshore alterations such as creating beaches, and introduction of excess nutrients received by the surrounding watershed (use of fertilizers)."

The latest LVI assessment published on 8/10/2023 describes Lake Pierce as healthy, a status which it has maintained since 2009.

Generally, the site slopes to the northeast and towards the lake from approximately 125' from its highest point to 88' to a concrete ditch along Masterpiece Road. The site plan shows stormwater ponds onsite to account for the increase of impervious surface on the subject property. These will be designed in accordance with SWFWMD and County standards and reviewed during the engineered site plan review process. Combined with the well-drained soils, there are no anticipated impacts to nearby surface waters.

B. Wetlands/Floodplains:

There are no wetlands or 100-year flood hazard areas onsite. The nearest flood hazard and wetland areas are along the shores of Lake Pierce.

C. Soils:

The site is comprised of favorable soils for development, according to the U.S. Department of Agriculture, Soil Conservation Service (USDA, SCS) Polk County Survey. There are no limitations to a ground storage facility onsite. No septic systems will be needed for this use.

Table 7

Soil Name	Septic Tank Absorption Field Limitations	Limitations to Small Commercial Buildings	% of Site (approximate)
Astatula sand (46)	Slight	Slight, but poor filtration	100%

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

D. Protected Species

According to FNAI Biodiversity Matrix, the subject site (Unit ID 43633) no endangered species have been identified onsite, though given the ecology of the area, a species survey is warranted and will be required prior to construction.

E. Historical & Archeological Resources:

No protected archeological resources are located onsite, according to the Florida Department of State, Division of Historical Resources. The Bella Cosa to the east is listed on the National Register of Historic Spaces. This 14-room hotel and restaurant serves as a wedding venue on Lake Pierce.

F. Wells (Public/Private)

No existing public or private wells are indicated onsite.

G. Airports:

The nearest airport is Southerly Airport, a private airstrip located north of Lake Pierce. Cherry Pockets, a resort on the north shore of Lake Pierce, was also approved for a seaplane base.

Economic Factors:

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 SWUCA 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 experiencing 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 data-gathering and analysis into the causes of these environmental declines, the FDEP 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. 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 water resources needed to be a collective and collaborative process.

The Southwest Florida Water Management District is the 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. In addition, low-interest state revolving funds and federal WIFIA loans will be used to help finance the project and give members time to generate future revenue for repayment of the project loans.

Despite 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. The individual utilities will make decisions for any changes to their customer drinking water rates. Water conservation will ultimately be a critical factor that lessens the financial burdens on average consumers.

Water storage systems provide financial benefits to the utility provider and ultimately taxpayers. These tanks act as capacitors to mitigate surge demand, which provides balanced water pressure. There is also less strain on other parts of the system when storage is available. In the long run, maintenance costs are lower, there are fewer pipe bursts, and water outages are less likely.

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

The property is in the Suburban Development Area (SDA). Comprehensive Plan Section 2.106-A1 states, *"SDAs shall be those areas within the County which are, in most cases, located between municipalities, TSDA or UGA and the Rural Development Areas (RDAs). In the SDA, agricultural activities coexist alongside low density developed areas in the fringes of municipalities and other urban centers. These areas have developed predominately residential, in a suburban pattern with County-owned, municipal or County-franchised potable-water systems, but without centralized sewer facilities and very little, if any, supporting public facilities and non-residential uses. Other urban services typically found to accompany a suburban area include, but are not limited to multimodal transportation facilities, public safety, recreational and educational services."*

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."* To better serve existing development and additional

development in the future, there is a need for more water storage so that efficient flows can be maintained to distribute this water to existing and new customers.

Table 8, to follow, provides an analysis of the proposed request when compared to the typical policies of the Comprehensive Plan selected by staff for evaluation of development proposals. Based upon this analysis, the proposed request is consistent with these policies.

Table 8

Comprehensive Plan Policy	Consistency Analysis
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.	The proposed facility will not exceed the height district for the RS future land use (50'). The tank and all supporting facilities will be set back 50 feet from residential properties. Landscaping will be planted in accordance with LDC standards. Equipment onsite will not exceed LDC standards for noise at the property line (65dBA).
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.	This potable water storage tanks are needed to enable more “contiguous and compact growth patterns.”
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.	This request is in the ERUSA. This is a greatly needed component of the overall distribution of potable water throughout the network. This will improve the operation of the system and contribute to more consistent water pressure.
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.	This ground storage facility is needed to serve current development as well as potential future development.
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).	The subject property is located within an area of the County that has adequate public safety services as identified in the staff report. Ground storage reservoirs are essential to maintaining adequate water pressures in a water system so that fire hydrants have adequate flow for their emergency use.

LDC Table 2.1 listed Class III Utilities as a “C3” conditional use requiring Planning Commission approval. A Level 3 Review is approved by the Planning Commission under the criteria listed in Section 906.D.7 of the LDC

Table 9

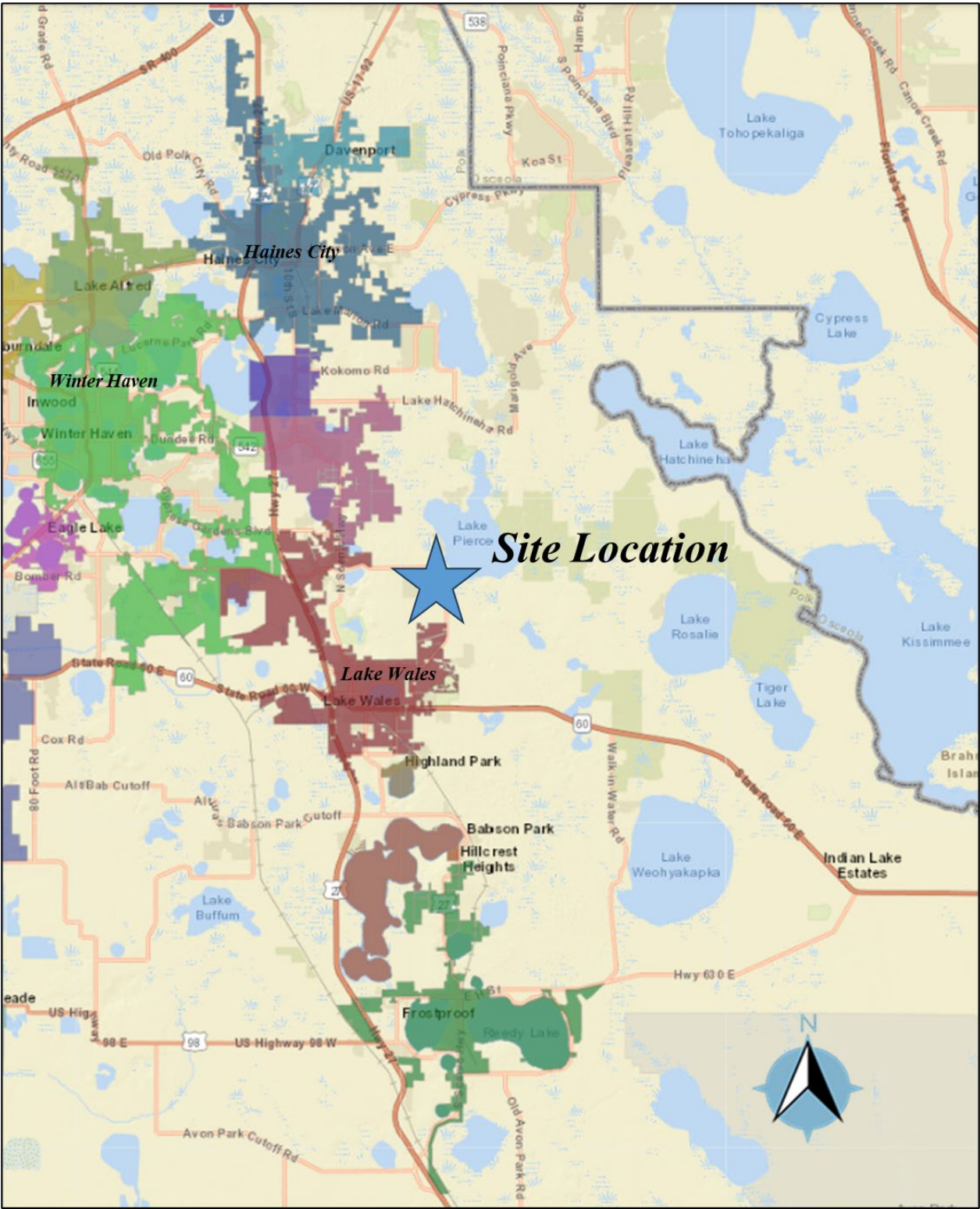
The Planning Commission, in the review of development plans, shall consider the following factors in accordance with Section 906.D.7 of the LDC:	
Whether the proposed development is consistent with all relevant requirements of this Code;	<i>Yes, this request is consistent with the LDC Section 303, Class III Utilities and 906.D Level 3 Review Procedures.</i>
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”</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 surrounding properties are currently vacant or are single-family homes on large-acreage lots. The site plan demonstrates adherence to compatibility standards.</i>
How the concurrency requirements will be met if the development were built.	<i>Ground storage water tanks 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 the conditions in Section 303 of the LDC for Class III Utilities in an RS land use district, as listed in the Findings of Fact of this report.

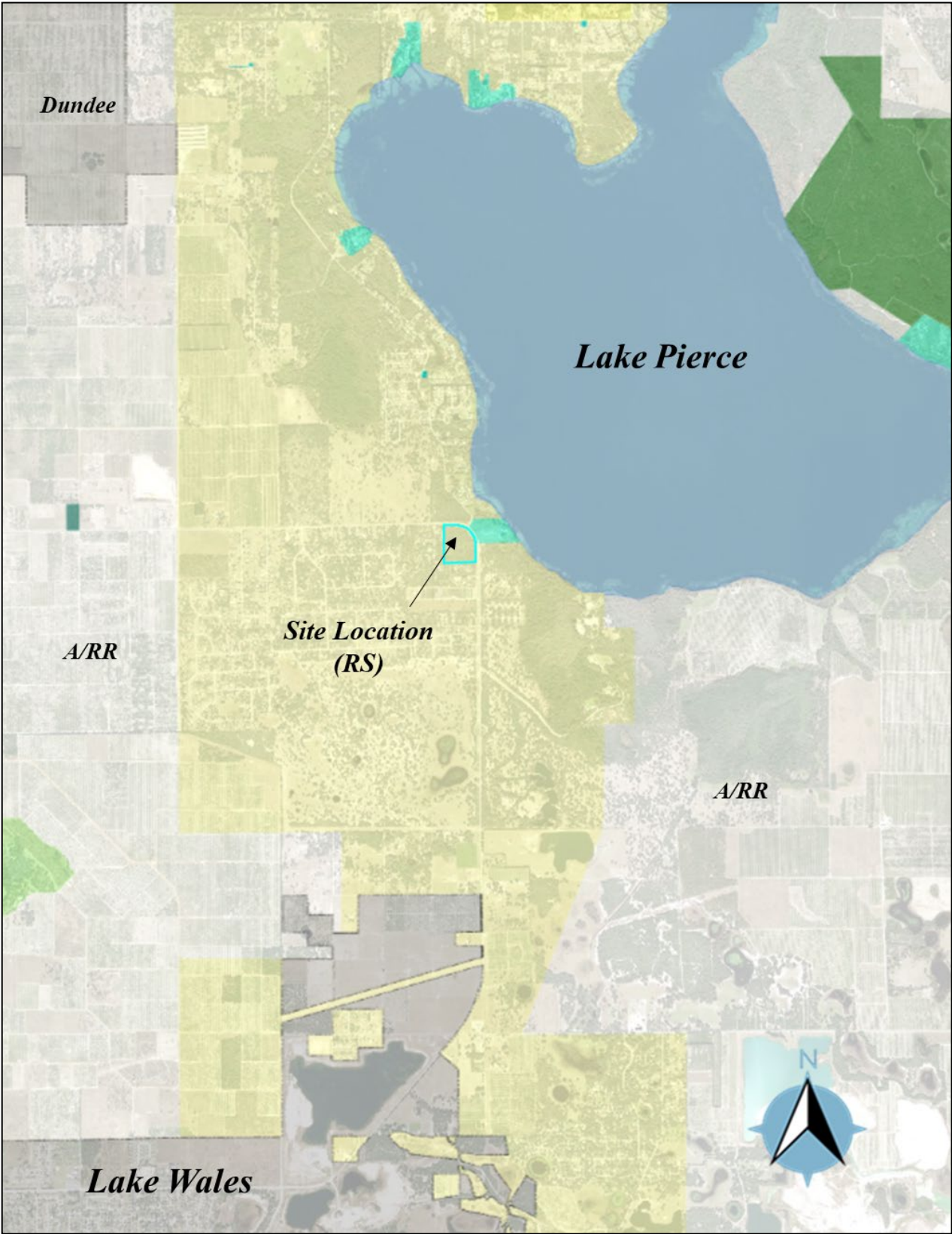
Comments from other Agencies: The Polk County Utilities, Land Development Engineering, County Surveyor, Polk County School Board, and the Polk County Public Safety Division contributed to the drafting of this report.

Exhibits:

- Exhibit 1 Location Map
- Exhibit 2 Future Land Use Map
- Exhibit 3 2023 Aerial Image (Context)
- Exhibit 4 2023 Aerial Image (Close)
- Exhibit 5 Site Plan



Location Map



Future Land Use Map



2023 Aerial Image (Context)



2023 Aerial Image (Close)

Case Overview

Level 3/IAN