DELISI
Land Use Planning & Water Policy

MarySue Groth, Senior Planner
Lee County Community Development
1500 Monroe St.
Fort Myers, FL 33902

April 24, 2026

Re: White Willow RPD
DCI2025-00028
Sufficiency Re-Submittal #2

Ms. Groth,

In response to the insufficiency letter dated March 16, 2026, enclosed are the following items for your review:

1. Master Concept Plan
2. Title Certificate
3. Boundary Survey
4. Characterization of Ground and Surface Water Resources Report

In addition to the above items, written responses to the comments are provided below:

Development Services

Development Services has reviewed the plans provided and offers the following comments. These comments are intended to make the applicant aware of issues with the design that may cause delays or possible changes at time of the development order submittal.

INFORMATIONAL COMMENT: Development order approval is required in addition to this zoning action. Compliance with Chapter 10 of the Lee County Land Development Code will be reviewed further at that time.

INFORMATIONAL COMMENT: Pursuant to LDC Section 10-296(k)(4), all streets ending in cul-de-sacs that are over 250 feet long must have a standard "No Outlet" traffic sign installed at the street entrance and paid for by the developer. At time of development order the applicant must demonstrate compliance with this requirement.

The informational comments are acknowledged.

DOT Stipulations for approval:

1. No schedule of deviations was included in submittal 2. Deviations from Submittal 1 were reviewed during Submittal 2. If no changes are proposed to the deviations as originally proposed, then it is stipulated that there is no objection to the proposed schedule of deviations.

Understood.

2. The project is subject to proportionate share contribution toward signalized access at the full median opening opposite Southampton Drive, should warrants be met.

Comments acknowledged.

Environmental comments:

1. Please demonstrate compliance with LDC Section 10-418 for lake bank slope and littoral plantings.

Per our e-mail exchange on 4/10/26, please see the cross section for the lake bank slope on the Master Concept Plan. At the time of local development order, the developer will further demonstrate compliance with LDC Section 10-418.

2. Please revise MCP to show lake management easement on both lakes per LDC Section 34-373(6)(a).

Please see the attached revised Master Concept Plan which now shows the lake maintenance easement.

Legal Review

LDC §34-202(a)(7) Title Certification.

- A commitment for title insurance is also not an accepted form of title certification. The boundary survey will need to be revised to reflect the accepted title certification.

Please submit one of the accepted forms of title certification and a revised boundary survey indicating the new title certification as the basis of the boundary survey.

The certification of title must be in one of the following forms:

i. Title certificate or title opinion, no greater than 90 days old at the time of the initial development order submittal. The title certification submittal must be either an opinion

of title meeting the Florida Bar Standards prepared by a licensed Florida attorney or a certification of title/title certification prepared by a title abstractor or company.

ii. Title insurance policy with appropriate schedules, no greater than five years old at the time of the initial development order submittal and an affidavit of no change covering the period of time between issuance of the policy and the application date. If submission of a complete affidavit of no change is not possible, a title certificate, or title opinion must be submitted in the alternative.

Please see the attached title certification. Please also see the attached updated boundary survey which references the title certification.

Natural Resources

Please revise the Surface Water Quality Monitoring Plan to substitute Total Nitrogen and Total Phosphorus for Orth-phosphate and Total Kjeldahl Nitrogen.

Please locate surface water monitoring locations at final outfall(s).

Please see the attached revised Characterization of Ground and Surface Water Resources Report

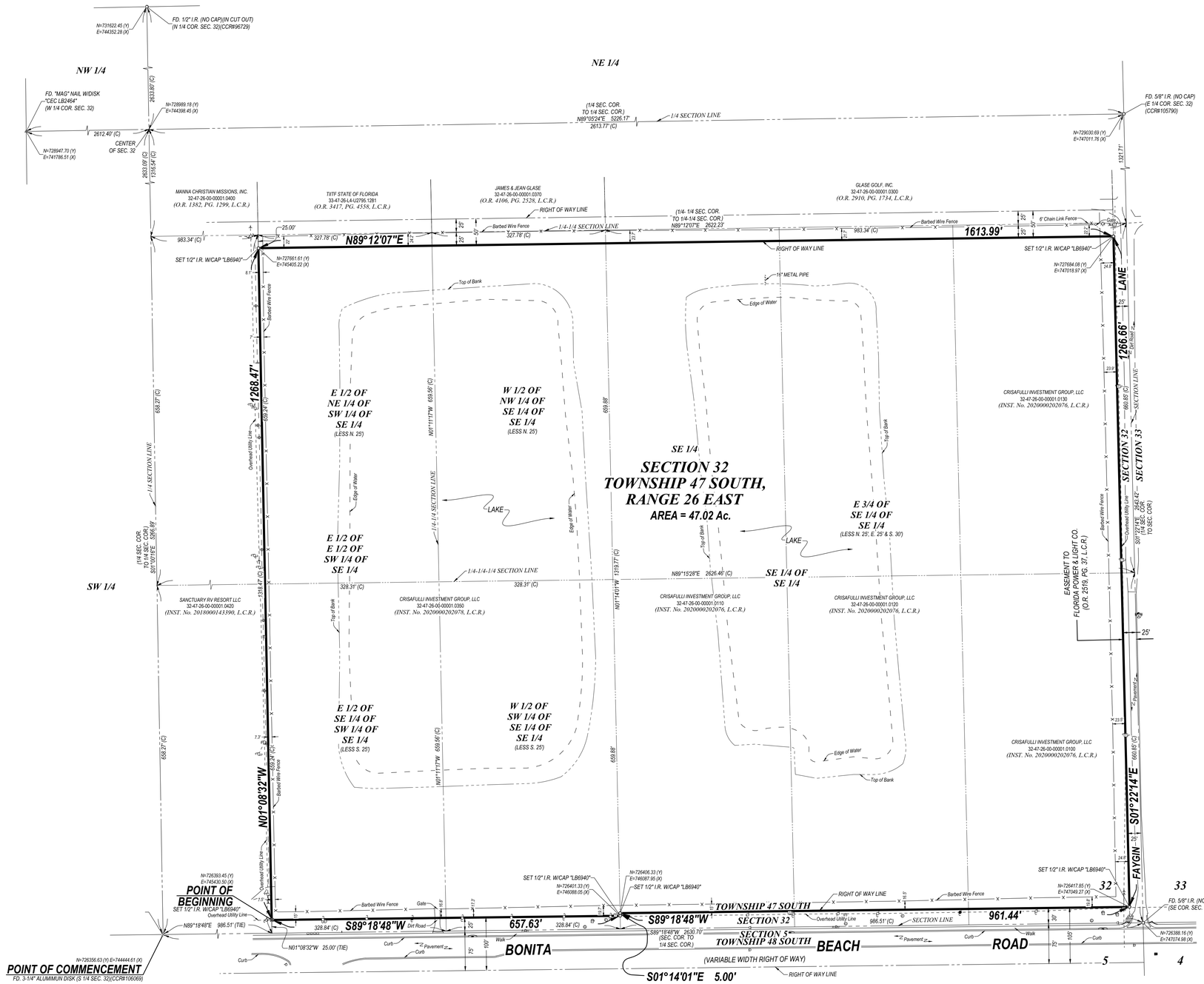
If there are any questions, please do not hesitate to call me.

Sincerely,

DeLisi, Inc.



Daniel DeLisi, AICP
President



0 50 100 200
SCALE IN FEET

N

(NSRS2011)
NAD 1983
FLORIDA PLANE
COORDINATE SYSTEM
(WEST ZONE)

LEGEND:

A.E.	ACCESS EASEMENT	C.M.	CONCRETE MONUMENT	F.P. & L.	FLORIDA POWER & LIGHT CO.	L.B.E.	LANDSCAPE BUFFER EASEMENT	P.B.	PLAT BOOK	R.C.P.	REINFORCED CONCRETE PIPE	▲	SET "MAG" NAIL WITH DISC STAMPED LB6940	⌯	FLOOD LIGHT	☆	BACK FLOW ASSEMBLY
B.M.	BENCHMARK							PG.	PAGE			●	SET 1/2" IRON ROD WITH CAP STAMPED LB6940	⌯	CONCRETE POWER POLE	AIR	AIR RELEASE VALVE
(C)	CALCULATED	COR.	CORNER	FRAC.	FRACTION	L.C.R.	LEE COUNTY RECORDS	P.K.	PARKER-KALON	REF.	REFERENCE	■	SET 4"x4" CONC. MONUMENT STAMPED LB6940	⌯	WOOD POWER POLE	IRR	IRRIGATION VALVE
CCR#	CERTIFIED CORNER RECORD	Δ=	DELTA ANGLE=	I.E.	IRRIGATION EASEMENT	L.C.U.E.	LEE COUNTY UTILITY EASEMENT	P.R.M.	PERMANENT REFERENCE MONUMENT	R/W	RIGHT OF WAY	▲	FOUND NAIL AS NOTED	⌯	GUY ANCHOR	IRS	IRRIGATION SERVICE
		(D)	DEED	INST.	INSTRUMENT					TYP.	TYPICAL	□	FOUND CONC. MONUMENT AS NOTED	☎	TELEPHONE BOX	●	WELL
C/L	CENTER LINE	D.B.	DEED BOOK	I.P.	IRON PIPE	L.M.E.	LAKE MAINTENANCE EASEMENT	PROP.	PROPERTY	SEC.	SECTION	○	FOUND IRON PIPE OR IRON ROD AS NOTED	⌯	ELECTRIC BOX	(S)	SANITARY MANHOLE
CONC.	CONCRETE	D.E.	DRAINAGE EASEMENT	I.R.	IRON ROD			P.V.C.	PLASTIC PIPE	W/	WITH	▨	DRAINAGE INLET	⌯	ELECTRIC METER	SOS	SANITARY SERVICE
CB=	CHORD BEARING=	EL.	ELEVATION	L=	LENGTH=	(M)	MEASURED	P.U.E.	PUBLIC UTILITY EASEMENT	WIT.	WITNESS	ⓓ	DRAINAGE MANHOLE	CTV	CABLE TV BOX	▽	SIGN
CD=	CHORD DISTANCE=	FD.	FOUND	L.A.E.	LAKE ACCESS EASEMENT	O.R.	OFFICIAL RECORD BOOK	R=	RADIUS=			▭	MITERED END SECTION	WV	WATER VALVE	✉	MAIL BOX
CH=	CHORD BEARING & DISTANCE=	F.D.O.T.	FLORIDA DEPARTMENT OF TRANSPORTATION	LB	LICENSED BUSINESS	(P)	PLAT					•	YARD DRAIN	⌯	WATER BOX	⌯	FIBER OPTIC CABLE MARKER
												☼	LIGHT POLE	⌯	FIRE HYDRANT	GAS	GAS LINE MARKER
														GV		GV	GAS VALVE

NOTES:

1. DATE OF LAST FIELD WORK: JUNE 10, 2025.
2. THIS SURVEY DOES NOT MAKE ANY REPRESENTATION AS TO ZONING OR DEVELOPMENT RESTRICTIONS ON SUBJECT PARCEL.
3. THIS SURVEY WAS PERFORMED FOR THE PURPOSE SHOWN HEREON AND DOES NOT MAKE ANY REPRESENTATION AS TO THE DELINEATION OF ANY JURISDICTIONAL LINES EXCEPT AS SHOWN OR NOTED HEREON.
4. NO ENVIRONMENTAL ASSESSMENT OR AUDIT WAS PERFORMED ON SUBJECT PARCEL BY THIS FIRM.
5. ALL DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF. UNLESS OTHERWISE NOTED DISTANCES ARE ALSO (U.S. SURVEY FEET) GROUND AND CAN BE MULTIPLIED BY 0.999950 TO OBTAIN GRID DISTANCES.
6. BEARINGS AND COORDINATES HEREON ARE STATE PLANE FLORIDA WEST ZONE (NAD1983)(INSRS 2011) AND ARE BASED THE SOUTH LINE OF SOUTHEAST QUARTER (SE 1/4) OF SECTION 32 TO BEAR N89°18'48"E.
7. THERE ARE NO IMPROVEMENTS OTHER THAN THE SUBSTANTIAL VISIBLE IMPROVEMENTS SHOWN.
8. THERE ARE NO VISIBLE ENCROACHMENTS OTHER THAN THOSE SHOWN.
9. OWNERSHIP OF ANY FENCE SHOWN HEREON IS UNKNOWN.
10. ACCORDING TO F.I.R.M. No. 12071C0678F, EFFECTIVE DATE: AUGUST 28, 2008, THE PROPERTY IS LOCATED IN FLOOD ZONE X (OTHER AREAS).
11. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH TITLE CERTIFICATION PREPARED BY: PAVESE LAW FIRM, EFFECTIVE DATE: APRIL 13, 2026 AT 5:00PM.
12. ELEVATIONS SHOWN ARE IN FEET ABOVE NORTH AMERICAN VERTICAL DATUM 1988 AND ARE BASED ON A LEVEL LOOP BY THIS FIRM FROM NATIONAL GEODETIC SURVEY BENCH MARK " I 75 Y 10" (PID=AD5941)(ELEVATION = 12.40').

DESCRIPTION (TITLE CERTIFICATION):

A tract or parcel of land being a portion of those lands described in deeds recorded in Instrument No's. 2020000202076 and 2020000202078, Lee County Records, lying in Section 32, Township 47 South, Range 26 East, Lee County, Florida, said tract or parcel of land being more particularly described as follows

COMMENCING at the South Quarter corner of said Section 32 run N89°18'48"E along the South line of the Southeast Quarter (SE 1/4) of said Section 32 for 986.51 feet to the Southwest corner of the East Half (E 1/2) of the East Half (E 1/2) of the Southwest Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) of said Section 32; thence run N01°08'32"W along the West line of said Fraction for 25.00 feet to an intersection with the North line of the South 25 feet of said Section 32 and the POINT OF BEGINNING.
From said Point of Beginning continue N01°08'32"W along said West line for 1,268.47 feet to an intersection with South line of the North 25 feet of said Fraction; thence run N89°12'07"E along said South line and continuing along the South line of the North 25 feet of the Southeast Quarter (SE 1/4) of the Southeast Quarter (SE 1/4) of said Section 32 for 1,613.99 feet to an intersection with the West line of the East 25 feet of said Section 32; thence run S01°22'14"E along said West line for 1,266.66 feet to an intersection with the North line of the South 30 feet of said Section 32; thence run S89°18'48"W along said North line for 961.44 feet to an intersection with the West line of the East Three-Quarters (E 3/4) of the Southeast Quarter (SE 1/4) of the Southeast Quarter (SE 1/4) of said Section 32; thence run S01°14'01"E along said West line for 5.00 feet to an intersection with the North line of the South 25 feet of said Section 32; thence run S89°18'48"W along said North line for 657.63 feet to the POINT OF BEGINNING.
Containing 47.02 acres, more or less.

Bearings hereinabove mentioned are State Plane for the Florida West Zone (NAD1983)(NSRS 2011) and are based on the South line of the Southeast Quarter (SE 1/4) of said Section 32 to bear N89°18'48"E.

THIS SURVEY IS FOR THE BENEFIT OF:

I HEREBY CERTIFY THAT THIS SURVEY WAS DONE UNDER MY DIRECTION AND SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS PER CHAPTER 5J-17.050 THRU 052 F.A.C, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES.

Digitally signed by Scott A Wheeler
Date: 2026.04.24 10:54:33 -04'00'

SCOTT A. WHEELER (FOR THE FIRM - LB-6940)
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO.5949

DATE SIGNED:

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED OR DIGITAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Barraco and Associates, Inc.
CIVIL ENGINEERING - LAND SURVEYING
LAND PLANNING
www.barraco.net
2271 McGREGOR BLVD., SUITE 100
FORT MYERS, FLORIDA 33901
PHONE (239) 461-3170
OFFICE LOCATIONS:
FORT MYERS | PANAMA CITY BEACH
FLORIDA BUSINESS REGISTRATIONS
ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

PULTE HOME CORPORATION
24311 WALDEN CENTER DRIVE
SUITE 300
BONITA SPRINGS, FLORIDA 34134

PHONE (239) 498-7711
FAX (239) 498-7707

WWW.PULTEHOMES.COM

PROJECT DESCRIPTION

A PARCEL OF LAND IN SECTION 32, TOWNSHIP 47 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA

PROJECT SURVEYOR

SCOTT A. WHEELER
LICENSE NUMBER
5949
STATE OF FLORIDA
PROFESSIONAL SURVEYOR AND MAPPER

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED OR DIGITAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

FILE NAME	24350S02.DWG
LAYOUT	1
LOCATION	J:\24350\DWG\SURVEYING\
PLOT DATE	FRI. 4-24-2026 - 10:45 AM
PLOT BY	PETER OLSEN

DRAWING DATA	
SURVEY DATE	06-10-2025
DRAWN BY	P. OLSEN
CHECKED BY	SAW
SCALE	1"=100'
FIELD BOOK	671/37-42

PLAN REVISIONS	
02-05-2026	REV. PER TITLE COMMITMENT
04-24-2026	REV. PER TITLE CERTIFICATION

STRAP NUMBERS

BOUNDARY SURVEY

PROJECT / FILE NO.	SHEET NUMBER
24350 32-47-26	1 OF 1

PAVESE LAW FIRM

CHARLES BRYAN CAPPS
Board Certified Real Estate Attorney
Board Certified Condominium and Planned Development Law Attorney
Direct dial: (239) 336-6219
Email: cbc@paveselaw.com

1833 Hendry Street, Fort Myers, Florida 33901 | P.O. Drawer 1507, Fort Myers, Florida 33902-1507 | (239) 334-2195 | Fax (239) 332-2243

TITLE CERTIFICATION
WHITE WILLOW

Pavese Law Firm (as Agent/Title Company)

Plat Number:
Development Order Number:

Effective Date of Title Certification: April 13, 2026 at 5:00 PM

Certified To: City of Bonita Springs and Lee County Board of County Commissioners

I have searched the Public Records of Lee County, Florida and have examined the title to the real property more particularly described in the metes and bounds description attached hereto as Exhibit "A." I have made a careful examination of the Public Records of Lee County, Florida, with respect to the real property described in attached Exhibit "A." Based on the foregoing, we hereby certify Record Title to the above described real property, as of the Effective Date of the Title Certification set forth above, is vested in:

Title to the property is vested in:

Crisafulli Investment Group, LLC, a Florida limited liability company by virtue of that certain Warranty Deed recorded in Official Records Instrument No. 2020000190104 and corrected by that certain Corrective Warranty Deed recorded in Official Records Instrument No. 202000202078 and Warranty Deed recorded in Official Records Instrument No.2020000190107 and corrected by that certain Corrective Warranty Deed recorded in Official Records Instrument No. 2020000202076, Public Records of Lee County, Florida.

The following are all of those persons or entities holding a mortgage secured by the property:

None

All property taxes, due and owing, have been paid on the land described herein as of the date of this opinion.

The following are all easements and rights of way affecting the property to be platted, whether recorded or unrecorded:

1. Florida Power & Light Easement recorded in Official Records Book 2519, Page 37, Public Records of Lee County, Florida.

All Recording references are to the public records of Lee County, Florida.

Note, this is not a certification of ownership or entry rights of any oil, gas, and mineral rights or interests.

This certification is provided pursuant to the requirements of § 177.041, Florida Statute, for the uses and purposes specifically stated therein and is not to be used as the basis for the issuance of a title insurance commitment or policy. Pursuant to s. 627.7843, Florida Statutes, the maximum liability of the issuer of this property information report for errors or omissions in this property information report is limited to the amount paid for this property information report, and is further limited to the person(s) expressly identified by name in the property information report as the recipient(s) of the property information report.

By: _____
Charles Bryan Capps
Partner

Barraco and Associates, Inc.
www.barraco.net
Civil Engineers, Land Surveyors and Planners

EXHIBIT "A"

DESCRIPTION

Parcel in
Section 32, Township 47 South, Range 26 East
Lee County, Florida

A tract or parcel of land being a portion of those lands described in deeds recorded in Instrument No's. 2020000202076 and 2020000202078, Lee County Records, lying in Section 32, Township 47 South, Range 26 East, Lee County, Florida, said tract or parcel of land being more particularly described as follows

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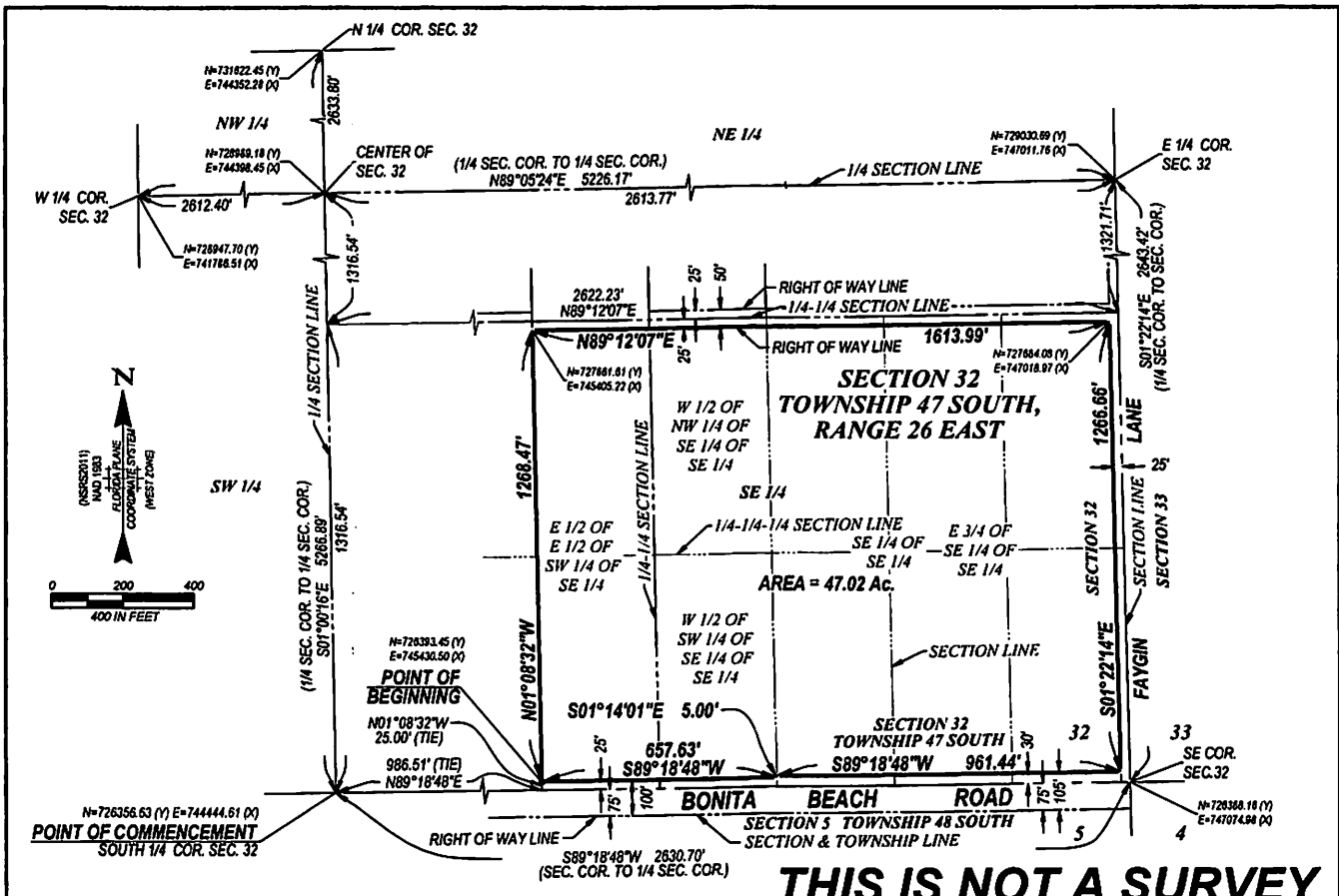
Bearings hereinabove mentioned are State Plane for the Florida West Zone (NAD1983)(NSRS 2011) and are based on the South line of the Southeast Quarter (SE 1/4) of said Section 32 to bear N89°18'48"E.

Digitally signed by
Scott A Wheeler
Date: 2026.01.30
'10:35:57 -05'00

SCOTT A. WHEELER LICENSE NUMBER 5949 STATE OF FLORIDA PROFESSIONAL SURVEYOR AND MAPPER

Scott A. Wheeler (For The Firm)
Professional Surveyor and Mapper
Florida Certificate No. 5949

L:\24350 - Bonita Beach 50\Survey\Descriptions\Survey\24350S02.doc



THIS IS NOT A SURVEY

Digitally signed by Scott A Wheeler
Date: 2026.01.30 10:36:13 -05'00'

SCOTT A. WHEELER (FOR THE FIRM - LB-6940)
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5949

DATE SIGNED:

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED OR DIGITAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

NOTES:

1. ALL DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF. UNLESS OTHERWISE NOTED DISTANCES ARE ALSO (U.S. SURVEY FEET) GROUND AND CAN BE MULTIPLIED BY 0.999950 TO OBTAIN GRID DISTANCES.
2. INST. No.- DENOTES INSTRUMENT NUMBER, LEE COUNTY PUBLIC RECORDS.
3. O.R. - DENOTES OFFICIAL RECORD BOOK, LEE COUNTY PUBLIC RECORDS.
4. BEARINGS AND COORDINATES SHOWN ARE STATE PLANE FLORIDA WEST ZONE (NAD1983)(NSRS 2011) AND ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 32 TO BEAR N89°18'48"E.
5. DESCRIPTION IS ATTACHED.

Barraco and Associates, Inc.
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FORT MYERS | PANAMA CITY BEACH
FLORIDA CERTIFICATE OF AUTHORIZATION
ENGINEERING 7988 - SURVEYING LB-6940

PREPARED FOR

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BONITA SPRINGS, FLORIDA 34134
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PROJECT DESCRIPTION

A PARCEL OF LAND IN SECTION 32, TOWNSHIP 47 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA

PROJECT SURVEYOR

STATE OF FLORIDA

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED OR DIGITAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

FILE NAME	
LAYOUT	
LOCATION	
PLOT DATE	
PLOT BY	PETER OLSEN
DRAWING DATA	
SURVEY DATE	
DRAWN BY	P. OLSEN
CHECKED BY	SAW
FIELD BOOK	

PLAN REVISIONS

STRAP NUMBERS

SKETCH TO ACCOMPANY DESCRIPTION

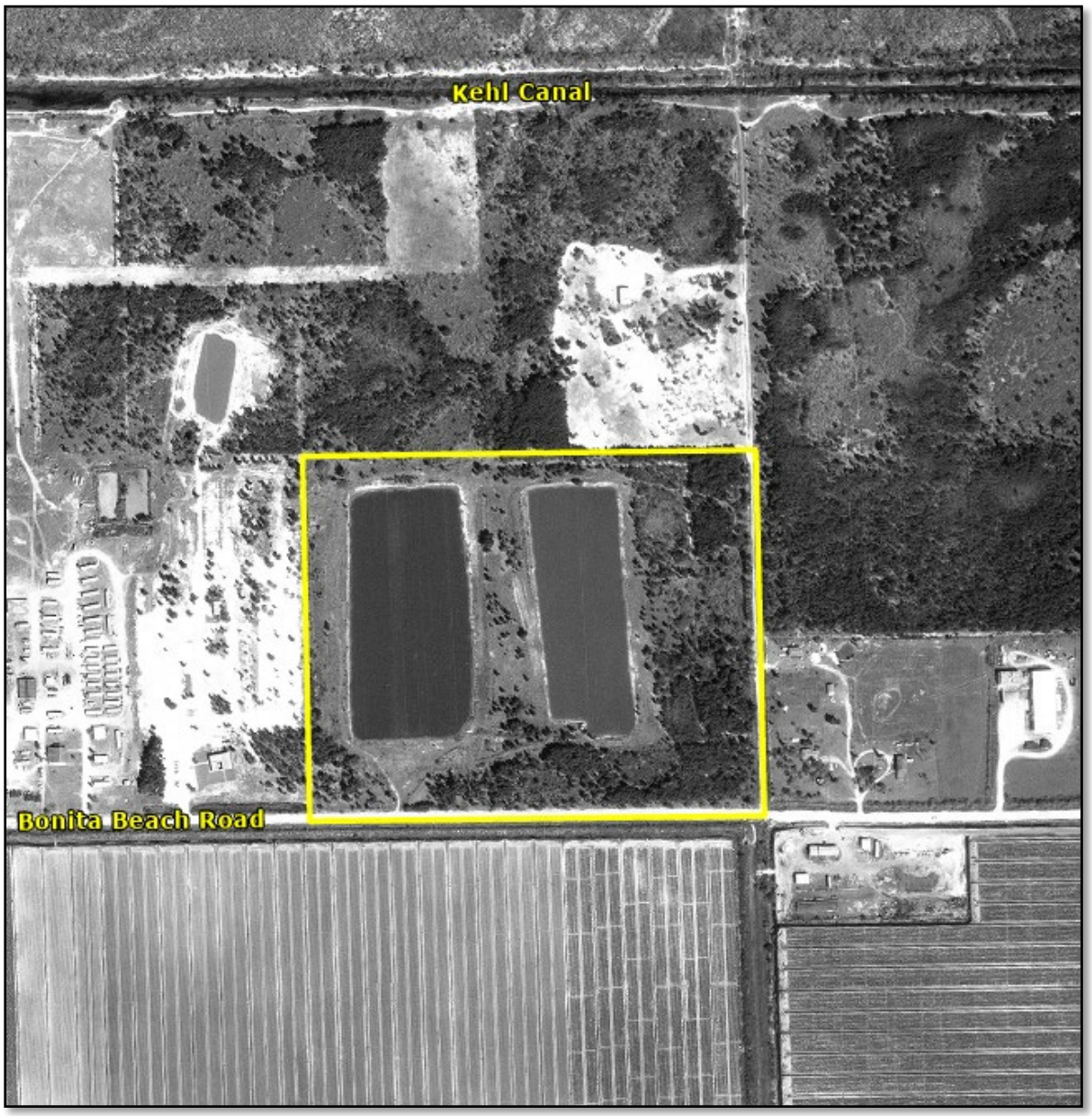
PROJECT / FILE NO.	SHEET NUMBER
24333 23-47-26	2 OF 2

CHARACTERIZATION OF GROUND AND SURFACE WATER RESOURCES

White Willow

Lee County, Florida

April 2026



1986 aerial photograph, obtained from the Florida Department of Transportation

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1.0 INTRODUCTION

The White Willow project (subject property) is located in southern Lee County, Florida, approximately 1.5 miles east of Interstate 75 and immediately north of Bonita Beach Road (County Road 865). The property comprises approximately 50 acres and is owned by Crisafulli Investment Group, LLC. It lies along the southern boundary of the County's Density Reduction / Groundwater Resource (DR/GR) Future Land Use area (**Figure 1**) and within the DR/GR's Flint Pen sub-watershed (**Figure 2**). The site is currently zoned Agricultural (AG-2), and the Applicant is requesting a Comprehensive Plan Amendment and zoning change to allow for a proposed residential development.

The subject property and surrounding lands have experienced significant disturbance beginning with the excavation of the Kehl Canal in the early 1960s. The canal, constructed to drain lands east of the Imperial River, severed hydrologic connections between the site and the Corkscrew Swamp Regional Ecosystem Watershed (CREW) and altered historical north-to-south surface water flow paths. The subject property is located approximately 1,300 feet south of the Kehl Canal and is within Water Body Identification (WBID) 3258EE, which the Florida Department of Environmental Protection (FDEP) has designated as impaired for dissolved oxygen (DO).

The property contains two (2) centrally located, rectangular historic (pre-1980) limestone mining pits totaling approximately 15 acres, or about 30 percent of the site. In addition to the excavations, legacy mining features such as disturbed land surfaces, drainage ditches, and several debris piles remain onsite and contribute to the site's altered hydrologic conditions.

As a result of these historic land uses, surface water hydrology on the property differs substantially from pre-development conditions. Mining-related disturbances have fragmented natural flow paths and created isolated subbasins with limited surface water connectivity. Groundwater hydrology has also been altered due to limestone excavation that penetrated the upper Tamiami Formation, a geologic unit comprising the unconfined Surficial Aquifer System (Water Table Aquifer).

In accordance with Lee County's Comprehensive Plan (the Lee Plan), the Applicant's request is consistent with policies addressing groundwater recharge and wetland resource protection and is designed to improve existing site-specific water resource conditions. The proposed development incorporates site design and water management strategies intended to restore hydrologic functions that have been altered by prior land use activities on the subject property.

The proposed residential development advances key Lee Plan directives related to:

- Groundwater protection and recharge (consistent with Lee Plan Goals 33 and 63)
- Surface water quality improvement (consistent with Lee Plan Goals 60 and 61)
- Preservation and ecological restoration (consistent with Lee Plan Goal123)
- Reclamation and beneficial reuse of disturbed lands (consistent with Lee Plan Objective 10.1)
- Encouragement of development that enhances DR/GR environmental functions (consistent with Lee Plan Objective 33.1)

The project's stormwater management system will utilize the existing mine pits for stormwater treatment and attenuation, thereby improving water quality and providing substantial flood storage capacity. This approach is consistent with Lee Plan Goals 60 and 61 and promotes enhanced water quality and improved stormwater management. Routing treated stormwater into the limestone pits will also increase infiltration and support protection of the Surficial Aquifer, consistent with Goals 33 and 63, which emphasize groundwater recharge and resource protection within DR/GR lands. In addition, extensive nuisance and exotic vegetation removal, together with ecological restoration of disturbed areas, aligns with Goal 123, which encourage restoration and enhancement of degraded natural systems.

The development's proposed use of both stormwater and groundwater for irrigation reduces aquifer stress and supports water conservation. This aligns with Lee Plan Goal 60 (surface water management) and Goal 63 (groundwater protection). The centralized irrigation system promotes landscape water use efficiency and prevents over-irrigation, furthering water conservation and efficient water management. In addition, the proposed quarterly surface water quality monitoring and annual reporting support the Lee Plan's objectives under Goal 61 to maintain and improve surface water quality.

In summary, the project is expected to deliver the following water resource and environmental benefits:

- **Improved surface water quality and attenuation:** The engineered stormwater management system will utilize the existing limestone mining pits for treatment and attenuation, resulting in improved surface water quality and increased flood storage capacity. The storage available within the water-filled mine pits will help address historic flooding concerns while also improving water quality conditions, including increased DO.
- **Enhanced groundwater recharge and aquifer protection:** Routing treated stormwater into the historic limestone pits will promote mixing, increase infiltration, and enhance recharge to the shallow aquifer system. This approach leverages the storage capacity created by past excavation and its penetration into the underlying aquifer (see Integrated Modeling Report provided separately).
- **Restoration of degraded ecological conditions:** Due to the site's disturbed condition, significant nuisance and exotic vegetation occurs throughout the uplands and disturbed wetland areas. Removal of this vegetation will support both hydrologic and ecological restoration across the project site.
- **Conjunctive use of groundwater and stormwater for irrigation:** The development proposes to use both groundwater and captured stormwater for irrigation, with groundwater serving only as a supplement to surface water supplies stored within the project's lakes. Irrigation withdrawals will occur from these lakes, conserving groundwater withdrawals from the Lower Tamiami Aquifer and contributing to the project's overall resource benefits.
- **Master-controlled irrigation system promoting water conservation:** A master-controlled irrigation system will regulate the initiation and duration of irrigation events, increase water-

use efficiency and prevent individual homeowners from adjusting irrigation timers. Future enhancements may include integrated communication between the surface water pump station controllers and the augmentation well pump stations.

- **Enhanced Lake Management Practices and ongoing water quality monitoring:** The project includes Enhanced Lake Management Practices designed to protect water resources on site. This plan provides for quarterly surface water quality monitoring of the existing water-filled limestone pits. Monitoring results will function as an early-warning system for potential resource impacts and will be submitted after each sampling event and summarized in an annual report.

Collectively, these measures deliver a level of water resource and environmental protection that not only meets but exceeds the future land use standards envisioned in the Lee Plan.

2.0 PROPERTY SETTING

Prior to anthropogenic alterations, the southern portion of Lee County's DR/GR area, including the CREW Flint Pen Strand, was generally characterized by a complex mosaic of wet prairies, marshes, and cypress forests, interspersed with isolated, slightly elevated areas of open rangeland and Pine Flatwoods. As shown on the pre-development 1958 historical aerial photograph (**Figure 3**), the project site consisted of Hydric Flatwoods and Cypress Communities, punctuated by elongated Pine Flatwoods "islands" corresponding to slightly elevated historic marine deposits. Defined surface water flow-ways or conveyance features, common in DR/GR areas further north, were not evident on the project site. Instead, historic surface water movement appears to have occurred as dispersed sheet flow around the Flatwoods islands.

This unique historic landform in the project vicinity likely originated as relict coastal dunes deposited roughly parallel to historic shorelines. These dunes formed elongated, gently sloping sand ridges that are presently occupied by Pine Flatwoods. Due to their isolated nature, these ridges are hereafter referred to as "islands." They appear to have been superimposed on a nearly level marine terrace, which over time developed into the Hydric Flatwoods and Cypress Community wetlands characteristic of southern DR/GR lands. Post-depositional erosion and dissolution of the underlying Tamiami Formation limestone likely accentuated elevation differences between the dunes and surrounding wetlands, further defining the Flatwoods islands.

Historic surface water sheet flow was significantly altered in the early 1960s with the excavation of the Kehl Canal. As shown in **Figure 4**, the canal was constructed to extend and define the Imperial River watershed and to drain lands to the east. In combination with the extension of East Terry Street, the Kehl Canal appears to have completely cut off and isolated the subject property from the northern DR/GR lands, including the CREW. Flow records for the Kehl Canal indicate high seasonal variability. During drought conditions, the canal can exhibit virtually no flow, whereas wet season flows have been reported to reach approximately 1,500 cubic feet per second (cfs).

Average monthly flows in the Kehl Canal range from as low as 0.2 cfs during the dry season to approximately 1,300 cfs during the rainy season (CH2M HILL, July 1996). The canal not only intercepts overland surface water flows from the north but also lowers Water Table Aquifer levels in

its vicinity, further affecting the hydrology of nearby wetlands. This hydrologic isolation has contributed to the property's presently altered conditions and supports the Applicant's proposed removal of the project area from the DR/GR classification. Evidence of this alteration is apparent in 1968 aerial imagery (**Figure 4**), which shows many of the Flatwoods islands appearing drier, with exposed, light-colored soil boundaries likely caused by desiccated soils.

Prior to 1980, the project site was cleared of vegetation for limestone mining, resulting in the creation of two rectangular pits. Upon cessation of mining, approximately 15 acres (30 percent) of the site became water-filled mining pits. Additional mining-related disturbances, including areas stripped of overburden, debris piles, and drainage ditches, have further altered the property. The post-mining topography is clearly evident in the LiDAR imagery provided as **Figure 5**. Current land surface elevations are variable due to mining but generally range from 12 to 13 feet North American Vertical Datum (NAVD).

The predominant soil type within the project area is Pompano Fine Sand, as identified by the Natural Resources Conservation Service (NRCS). Soils of the Pompano series are very poorly drained and developed from thick, nearly level sandy marine sediments. The Pine Flatwoods "islands" are underlain by Immokalee Sands, which are poorly drained soils also formed from sandy marine sediments. The NRCS soils map is shown in **Figure 6**. According to the Federal Emergency Management Agency's (FEMA) National Flood Hazard Map, the property lies within Flood Zone X, an area of minimal to moderate flood risk.

The project site is located within the State of Florida's WBID No. 3258E (Imperial River). A WBID represents a sub-watershed delineated by the FDEP based on U.S. Geological Survey (USGS) Hydrologic Unit Codes (HUCs). Surface water quality evaluations within WBID No. 3258E have verified the watershed as impaired for DO, with an established total maximum daily load (TMDL) for this constituent. Low DO in surface waters is often caused by nutrient enrichment but can also occur naturally in slow-moving, tannin-stained waters with deposits of decaying vegetation, such as swamps and sloughs. The project area's highly disturbed condition and water-filled mining pits may contribute to low DO levels. Implementation of the proposed development is expected to improve site conditions by restoring hydrologic connectivity among surface water basins and increasing mixing through the engineered stormwater management system.

3.0 HYDROGEOLOGY

Three (3) principal aquifer systems underlie the project site:

- Unconfined Surficial Aquifer System (also known as the Water Table Aquifer)
- Confined Intermediate Aquifer System
- Confined Upper Floridan Aquifer System

In southern Lee County, groundwater quality generally decreases with depth. Suitable sources for irrigation and potable water are typically located at depths less than 300 feet, while deeper units tend to be highly mineralized and saline. As a result, groundwater withdrawals are primarily focused on the shallow Surficial Aquifer System (Water Table Aquifer) and the semi-confined Lower Tamiami

Aquifer. Beneath the Lower Tamiami, a relatively fresh, confined producing zone known as the Sandstone Aquifer also exists. These shallower aquifer systems are further described below.

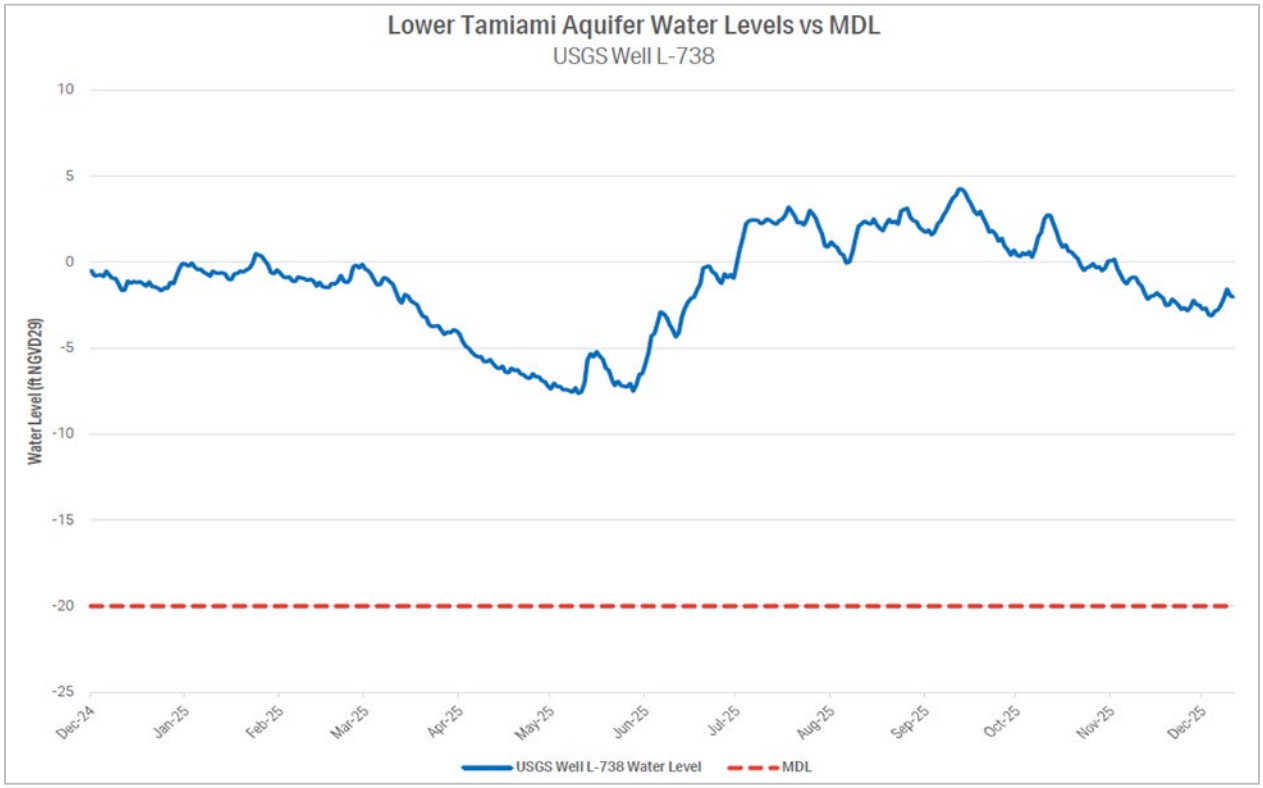
3.1 UNCONFINED WATER TABLE AQUIFER

The unconfined Water Table Aquifer originates at land surface and consists of 8 to 10 feet of unconsolidated surficial deposits of fine-grained, silty quartz sand with minor shell content. Thin, discontinuous clayey sands may overlay the uneven limestone of the upper Tamiami Formation, which includes the Ochopee and Buckingham Limestone Members and the Pinecrest Sand Member (FGS Special Publication No. 49). Water quality is fresh in areas not affected by saline intrusion, with dissolved chloride concentrations ranging from 10 to 70 milligrams per liter (mg/L). The Water Table Aquifer is highly productive. Onsite limestone mining excavated portions of the upper Tamiami Formation.

3.2 LOWER TAMIAMI AQUIFER

Beneath the upper Tamiami Formation, there are semi-confining clays and low-permeability sediments, known as the Bonita Springs Marl, which overlie the Lower Tamiami Aquifer. This aquifer is distinct from the overlying limestone and is highly productive. Water quality varies with proximity to tidally influenced water bodies, with dissolved chloride concentrations ranging from approximately 40 to 100 mg/L in non-saline areas. The Bonita Springs Marl reduces the potential for withdrawals from the Lower Tamiami Aquifer to induce drawdown in the overlying Water Table Aquifer and prevents adverse impacts to wetlands. The project's proposed irrigation system will utilize two (2) Lower Tamiami Aquifer augmentation wells to supplement surface water supplies from the stormwater management lakes - historic mining pits. It must be noted that Bonita Springs Utilities (BSU) operates a potable wellfield (Eastern Wellfield) that utilizes the Lower Tamiami Aquifer under SFWMD Water Use Permit No. 36-00008-W. To protect potable water supplies, Lee County has instituted wellfield protection zones (Lee Plan Map 4-C). As shown on **Figure 7**, due to the proximity of City of Bonita Springs wellfield, the Lee Plan 5- and 10-year travel time protection zones extend onto the subject property. No adverse drawdown or water quality impacts are anticipated to occur to City of Bonita Springs wellfield as a result of the proposed development.

Groundwater level data from the USGS Lower Tamiami Aquifer monitoring well No. L-738, located approximately 3 miles west of the subject property, indicate that long-term groundwater elevations have consistently remained above the established Maximum Developable Limit (MDL). These conditions demonstrate that groundwater resources in the vicinity of the site are being adequately maintained and that no groundwater quantity or water resource constraints are anticipated that would adversely affect the proposed development. A recent hydrograph for monitoring well No. L-738 is provided below. The location for monitoring well L-738 is shown in **Figure 1**.



3.3 SANDSTONE AQUIFER

The Sandstone Aquifer occurs within the Intermediate Aquifer System and lies below the Tamiami Formation and is separated from overlying aquifers by low-permeability clayey sediments. Depth to the top of this aquifer ranges from approximately 150 to 200 feet below land surface (bls), with thickness varying from 30 to 50 feet near the project site. It is composed of sandy limestone, sandstone, sandy dolomite, and calcareous sands, and is associated with the Peace River Formation of the Hawthorn Group (FGS Circular No. 103, 1986). Dissolved chloride concentrations generally range from 40 to 200 mg/L. Due to the occurrence of low-permeability sediments separating the Sandstone Aquifer from the overlying Water Table Aquifer, the potential for groundwater withdrawals from the Sandstone Aquifer to cause adverse drawdown in the Water Table Aquifer is considered remote.

3.4 EXISTING RECHARGE TO UNDERLYING AQUIFERS

The USGS estimates recharge at the site ranges from 0 to 3 inches per year (USGS/SFWMD, 1995). Due to the highly disturbed condition of the site, effective recharge to the Water Table Aquifer (and underlying Lower Tamiami Aquifer) is likely limited.

3.5 CONSISTENCY WITH LEE PLAN POLICIES 2.3.1 AND 2.3.2

The proposed Comprehensive Plan Amendment is consistent with Lee Plan Policies 2.3.1 and 2.3.2, which require that amendments in areas important for groundwater protection, including areas within the DR/GR area to demonstrate that the development will not adversely affect groundwater availability, recharge functions, or potable supply resources.

3.5.1 POLICY 2.3.1 – PROTECTION OF POTABLE WATER SOURCES

The SFWMD 2022 Lower West Coast Water Supply Plan Update identifies the Lower Tamiami Aquifer as a traditional freshwater resource that is incorporated into long-range planning for Lee County and the DR/GR. Regional SFWMD groundwater modeling indicated that projected withdrawals, including existing recreational and aesthetic withdrawals within and near the DR/GR result in only minor drawdowns (0.5 to 3 feet) and do not threaten long-term potable water availability. Because the irrigation demand associated with the proposed development is considered minimal, the project's groundwater use will not impair existing or future potable water resources and is therefore consistent with Policy 2.3.1.

3.5.2 GROUNDWATER RESOURCE PROTECTION AND IMPACT EVALUATION

The Lower Tamiami Aquifer is a planned and sustainable irrigation source within the regional water-supply framework. SFWMD modeling demonstrates that cumulative future withdrawals remain within sustainable aquifer yield limits, including within recharge areas associated with the DR/GR. The hydrogeologic properties of the Lower Tamiami Aquifer, high transmissivity, substantial thickness, and protection by an overlying confining unit further support its ability to accommodate low-intensity landscape irrigation without compromising recharge or inducing undesirable water-level changes. Groundwater flow modeling (see **Section 5** below) of the proposed residential irrigation demands, and the detailed integrated modeling analysis clearly demonstrate no adverse impacts to the DR/GR and the overall water resources will occur. In fact, recharge potential increases because of the proposed development.

The project will also incorporate efficient water use practices, including a master-controlled irrigation system whereby no individual homeowner can initiate or prolong irrigation cycles, and the conjunctive use of surface water (detained stormwater) for irrigation, thereby minimizing groundwater withdrawals and ensuring protection of DR/GR recharge functions. Therefore, the proposed withdrawals are consistent with Policy 2.3.2.

The Lower Tamiami Aquifer's favorable hydrogeologic characteristics, its planned use in regional water-supply strategies, and the modest irrigation demand associated with the proposed development collectively demonstrate that the project's groundwater use is sustainable, low-impact, and fully compatible with the protective intent of Lee Plan Policies 2.3.1 and 2.3.2, including the County's goals for safeguarding the DR/GR groundwater resource area.

4.0 PROPOSED IRRIGATION DEMANDS AND SOURCES

A review of existing reclaimed water pipelines indicates that none are located in proximity to the subject property. Therefore, all irrigation supplies must be derived onsite. As shown on the Applicant's Concept Plan provided as **Figure 8**, stormwater will be treated within the reconfigured limestone mining water-filled pits. These surface water bodies afford an opportunity for stormwater capture and reuse for irrigation. However, during prolonged droughts, surface water supplies for irrigation are anticipated to be limited. Therefore, supplies are proposed to be augmented by the use of groundwater from the Lower Tamiami Aquifer. It is estimated that two (2) Lower Tamiami Aquifer wells will be required to irrigate an estimated landscaped area of approximately of 7.2 acres.

Using the SFWMD Blaney-Criddle irrigation allocation calculator, a preliminary estimate of the development's irrigation demand is approximately 25,974 gallons per day (gpd), with a peak dry season (maximum month) demand of approximately 1.18 million gallons. Considering the combined surface areas of the stormwater lakes and reconfigured mine pits portrayed in the conceptual development layout (**Figure 8**), the estimated daily irrigation demand of 25,974 gallons would only lower the combined surface water bodies by less than an inch each day. The SFWMD Blaney-Criddle irrigation documentation s provided as **Attachment A**.

The proposed conjunctive use of both ground and surface water supplies is anticipated to conserve groundwater resources proposed to be derived from the Lower Tamiami Aquifer when adequate surface water supplies are readily available, thereby furthering the project's resource benefits. In addition, the project proposes a master-controlled irrigation system that will regulate both the initiation and overall duration of irrigation events in order to increase irrigation water use efficiency and enhance water conservation (i.e., no individual homeowner will have access to irrigation timers).

5.0 GROUNDWATER FLOW MODELING

To demonstrate that the proposed use of the Lower Tamiami Aquifer for supplemental irrigation will not cause adverse impacts to surrounding existing legal users, a single-layer groundwater flow model was developed using capabilities of AquiferWin32 to evaluate potential drawdown impacts resulting from the proposed maximum monthly withdrawals. The analytical groundwater modeling scenario includes one stress period that represents transient / future or proposed conditions and was run for 90-days with no recharge to simulate the maximum monthly allocation for the three driest months of the year (March, April, and May). The Hantush and Jacob, 1955 (Leaky Aquifer) solution was utilized in this modeling scenario.

The results of the 90-day maximum monthly modeling scenario are shown for the Lower Tamiami Aquifer in **Figure 9**. The greatest drawdown predicted to occur as a result of the requested maximum month quantity is approximately 0.05 feet and occurs within the property boundary at the proposed well nodes. Per Section 3.1.2 of the SFWMD's Applicant Handbook, modeling analyses must include proposed wells, as well as any other permitted groundwater withdrawals within the "cone of depression" of proposed use. SFWMD defines the "cone of depression" of the proposed use as the 1.0-foot drawdown contour for confined aquifer systems. However, as shown in **Figure 9**, no drawdown greater than 1.0 foot is predicted as a result of the maximum monthly groundwater model. Therefore, the potential for harm to occur to existing legal users as a result of the requested allocation is considered to be de minimis and not adverse and a cumulative impact assessment was not performed.

A statement from a Professional Geologist certifying the results of these groundwater flow modeling scenarios is provided herein as **Attachment B**, and the required modeling files will be provided to District staff under a separate cover.

6.0 BONITA SPRINGS EASTERN WELLFIELD PROTECTION

The Bonita Springs Eastern Wellfield is a critical public water supply facility serving southern Lee County and the City of Bonita Springs. The proposed residential development is located within the

5- and 10-year groundwater travel time zones for the wellfield and has been evaluated for consistency with the Lee County Comprehensive Plan (Lee Plan) and the Lee County Land Development Code (LDC) wellfield protection standards applicable to public water supply facilities.

The proposed residential use is a permitted and compatible land use within the designated travel time zones and complies with Lee County's Wellfield Protection Ordinance and LDC provisions regulating development within wellfield protection areas. The development avoids prohibited or restricted land uses identified in the LDC that could pose an unreasonable risk to groundwater quality or the operation of public water supply wells. No industrial uses, bulk fuel storage, hazardous waste facilities, chemical manufacturing, or other high-risk activities regulated or prohibited by the LDC are proposed.

In accordance with the Lee Plan and applicable LDC utility requirements, the development will be served by centralized potable water and centralized sanitary sewer service. The use of central sewer eliminates on-site wastewater treatment systems and septic tanks, thereby reducing the potential for nutrient loading, pathogens, or other contaminants to enter the groundwater within the wellfield travel time zones, consistent with LDC wellfield protection objectives.

Hazardous material use and storage within the development will be limited to normal residential household quantities, consistent with LDC restrictions applicable within wellfield protection areas. No above-ground or underground fuel storage tanks, vehicle maintenance facilities, or bulk chemical storage are proposed. Any temporary construction-related fueling, equipment servicing, or material storage will comply with LDC spill prevention, secondary containment, and cleanup requirements to protect groundwater quality.

Stormwater management systems are designed to meet or exceed Lee County LDC and SFWMD water quality and treatment standards. Stormwater runoff will receive appropriate treatment prior to discharge or infiltration to minimize pollutant migration within the wellfield travel time zones, consistent with Lee Plan Policy 63.1.2 and corresponding LDC performance standards. Untreated stormwater infiltration within sensitive portions of the wellfield protection area is avoided, and pretreatment is provided where infiltration practices are utilized.

During site clearing, grading, and construction activities, erosion control, sediment management, and spill prevention best management practices required by the LDC will be implemented to prevent contaminants from entering surface waters or the groundwater system. Landscaping and site maintenance will comply with LDC landscaping standards and Lee County fertilizer regulations, with an emphasis on native or low-input plant species to reduce irrigation and fertilizer demands and minimize nutrient loading to groundwater.

The site design incorporates open space areas and pervious surfaces consistent with the LDC to maintain groundwater recharge functions while preventing land uses or activities that could degrade groundwater quality within the wellfield protection area. These measures further support Lee Plan Goal 61 (Water Resources) and Objective 61.2 by maintaining pre-development hydrologic conditions to the maximum extent practicable and protecting groundwater recharge and water quality.

Through compliance with the Lee Plan and the LDC wellfield protection standards, the proposed residential development ensures that land use within the 5- and 10-year travel time zones of the Bonita Springs Eastern Wellfield protects public drinking water supplies, minimizes contamination risk, and supports long-term potable water sustainability.

7.0 ENHANCED LAKE MANAGEMENT PRACTICES

In order to protect water resources, the following management practices are proposed for the development's stormwater lakes. It is important to note that, as the development evolves, the Best Management Practices (BMPs) proposed to protect water resources must also evolve. The following management actions provide a framework of ground and surface water protection measures that will not only safeguard but help to sustain water resource conditions. Please note that no motorized boats will be allowed on any of the project's stormwater management lakes.

Through adherence to these BMPs, the project will maintain stormwater and groundwater quality, comply with Lee County LDC and Wellfield Protection Ordinance standards, and ensure long-term protection of water resources in accordance with the Lee Comprehensive Plan. The Developer's designated maintenance entity (Community Development District [CDD] or Homeowners Associaton) will be responsible in perpetuity for the operation and maintenance of all stormwater management facilities, including regular inspection, maintenance, and surface water quality monitoring.

7.1 WATER RESOURCES BEST MANAGEMENT PRACTICES

As the project progresses from predominately a "construction phase" to "partial construction" and then ultimately to a "post-construction" phase, the BMPs must change to sustain the water resource protection measures. Construction of the proposed stormwater management system will occur relatively quickly. However, it is important that proper management practices be maintained to safeguard the water resources through the long-term operational phase.

7.1.1 CONSTRUCTION PHASE BMPS

All construction activities will comply with Lee County Wellfield Protection Ordinance No. 07-35, in accordance with Section 14-214 for Protection Zone No. 1 and Section 14-208 requirements for handling, storage, and use of regulated substances. The general contractor will ensure that all contractors and subcontractors evaluate site conditions prior to starting work to minimize risks to water resources and that any regulated substances are stored and handled in a manner that prevents accidental releases.

Contractors will maintain spill containment and cleanup equipment onsite and will be familiar with manufacturer safety data sheets and procedures for handling accidental releases. Any spill of a regulated substance will be reported immediately to the Developer, who will notify the Lee County Division of Natural Resources and the FDEP.

7.1.2 POST-CONSTRUCTION PHASE BMPS

Upon completion of construction, all remaining regulated substances and containment systems will be removed from the site. Turbidity control, erosion management, and stormwater protection measures consistent with SFWMD, FDEP National Pollutant Discharge Elimination System (NPDES) permits, and Florida Stormwater Sedimentation Control standards will be implemented throughout construction until vegetation or other stabilization measures are established.

After the issuance of the Lee County Certificate of Compliance or SFWMD Stormwater Management System Certification, the project will transition to the post-construction phase, with the primary focus being the maintenance of the stormwater management lakes and associated conveyance and control structures.

7.2 LAKE MAINTENANCE

Proper maintenance of stormwater wet detention areas is essential in Florida to ensure long-term water quality protection and flood control. These systems are designed to capture and treat runoff by allowing suspended solids, nutrients, and other pollutants to settle before the water is discharged downstream. Without regular upkeep, such as managing vegetation, removing accumulated sediment, and maintaining control structures, detention ponds can lose storage capacity and treatment efficiency, leading to degraded water quality and increased flood risk. Routine maintenance of these areas helps preserve the ecological function of these systems and supports compliance with state and local water management regulations.

7.2.1 NUISANCE AND EXOTIC VEGETATION CONTROL

The controlling entity will be responsible for the removal (in perpetuity) of all nuisance and exotic vegetation from the stormwater management system as defined by the Lee County LDC.

The stormwater lakes must be inspected annually, and any prohibited vegetation must be removed by the use of hand-clearing or appropriate chemical treatment. Only aquatic-approved compounds may be utilized in the stormwater management system lake. Herbicides and/or algaecides may only be applied by a licensed professional applicator who meets the requirements of Lee County, and in accordance with manufacturer specifications. All applicable local, state and/or federal guidelines and requirements will also be followed.

7.2.2 LITTORAL VEGETATION PRESERVATION

Littoral zone vegetation is required to be installed and maintained. The littoral zone provides habitat for wading birds, fish and aquatic invertebrates. Littoral vegetation also helps stabilize the lake shoreline and helps prevent erosion.

Littoral plants that die will be replaced in accordance with Lee County LDC requirements. The presence of littoral plants in the lake is desirable and may also help to improve the water quality. The spread of littoral plants will be encouraged throughout the designated littoral areas. Mechanical trimming, mowing or the use of land-based herbicides on desirable littoral plants is prohibited. Any trimming or removal of vegetation required to promote the survival and viability of littoral vegetation will be performed by hand or by approved aquatic herbicides and methods.

7.2.3 FERTILIZER APPLICATION

Strict adherence will be maintained with Lee County's Fertilizer Ordinance No. 08-08. Any person(s) applying fertilizers must have received a limited certification in compliance with Florida Statute (F.S.) 482.1562 prior to application of any and all fertilizers.

All professional landscape businesses must register with Lee County prior to performing landscape fertilization services within unincorporated Lee County. At least one (1) employee of a firm employed to perform landscape fertilization services must be a Certified Professional Landscaper. Proof of completion of a Lee County-approved BMP training program must be provided to the Division of Lee County Natural Resources. At least one (1) BMP-trained employee must be present onsite while fertilizers are applied. A registration decal provided by the division must be displayed on all company vehicles.

7.3 EROSION PROTECTION AND LAKE BANK MAINTENANCE

Lake banks are generally susceptible to erosion due to overland flow of stormwater runoff, wave action, and the natural seasonal fluctuation of water levels. Accordingly, lake banks are designed to minimize this potential for erosion.

Lake banks will be inspected annually to identify areas of erosion. Once identified, the erosion will be repaired and the source of erosion shall be eliminated, if possible. Where excessive erosion occurs, repair of the lake banks and/or enhancement of stabilization measures may be necessary.

7.4 PESTICIDE, HERBICIDE AND/OR FUNGICIDE APPLICATIONS

All applications of pesticides, herbicides, algaecides and/or fungicides shall be applied by a licensed professional applicator, meet the requirements of Lee County, be applied in accordance with the manufacturer's specifications, and shall meet all applicable local, state and/or federal guidelines and requirements. Only approved aquatic herbicides may be used to treat the stormwater management system. The following BMPs are part of an Integrated Pest, Disease, and Herbicide Program.

The application of pesticides, herbicides and/or fungicides will only be performed by certified contractors. The use of any chemical product in a manner that will allow airborne or waterborne entry of such products into the surface water management system is prohibited. This requirement shall not apply to the chemical agents used by certified lake management specialists for the control of algae and nuisance vegetation within the stormwater management system lakes. However, application of such agents shall be in compliance with the requirements of Lee County, applied in accordance with the manufacturer's specifications, and meet all applicable local, state and/or federal guidelines and requirements. Pesticides, fungicides, and herbicides will be used only in response to a specific problem and in the manner and amount recommended by the manufacturer. Broad application of pesticides, fungicides and herbicides as a preventative measure is strongly discouraged.

8.0 SURFACE WATER QUALITY MONITORING

8.1 GENERAL DATA QUALITY OBJECTIVES

All surface water quality samples will be collected in accordance with Chapter 62-160, Florida Administrative Code (F.A.C.), and the FDEP's Standard Operating Procedures (SOPs) DEP-SOP-001/01 FQ 100 Field Quality Control Requirements. Surface water quality sampling will be performed four (4) times per year (March, June, September, and December).

The purpose of the surface water monitoring program is to assure stormwater discharges from the subject property meet all applicable requirements of Chapter 62-302, F.A.C., Surface Water Quality Standards, before discharging surface water from the stormwater management system.

Additionally, monitoring will verify the efficacy of the BMP's described above. Please note that if there is no flow observed from the outfalls at the time of sample collection, the "no -flow" condition will be noted, and no surface water sample will be taken. If flow has occurred in the last 30 days, a sample shall be collected just upstream of the control structure to represent the discharged water.

8.2 SURFACE WATER QUALITY MONITORING

As shown in **Figure 10**, baseline water quality samples will be collected from both lakes. As shown in **Figure 10**, sampling location SW-1 is adjacent to the property outfall. Both locations will then be sampled four times per year (March, June, September, and December). Surface water quality grab samples will be collected per FDEP SOP protocol and analyzed by a National Environmental Laboratories Accreditation Conference (NELAC/TNI)-certified laboratory. The surface water quality parameters to be tested, as well as the laboratory's Accuracy, Precision, and Minimum Method Detection Limit (MDL), are summarized in **Table 1**. Please note that the Practical Quantitation Limit (PQL) for each parameter varies between laboratories; however, the PQL typically equates to four times the MDL.

Field Parameters – Depth of Water, DO, pH, Temperature, Specific Conductance, and Turbidity

Lab Parameters –Ammonia, Biological Oxygen Demand, Chloride, Copper, Iron, Nitrate + Nitrite, Total Nitrogen, Total Phosphorus, and Zinc

Quarterly surface water quality monitoring shall be continued for a minimum of five (5) years after operational completion of the stormwater management system. After five (5) consecutive years of testing, a request for modification in the monitoring requirements may be proposed to the Lee County Natural Resources Department if it can be demonstrated that surface water quality is being maintained within applicable State standards. All surface water quality data will be supplied to Lee County as described below.

8.3 WATER QUALITY DATA REPORTING AND ANALYSIS

Surface water quality data will be submitted to Lee County Natural Resources Department staff in an approved electronic format within 30 days of receiving the water quality results from the contract laboratory. The submittal will include all field notes and field and laboratory water quality results, as well as all previously collected water quality data (i.e. the period of record). The submittals will also

include a brief narrative on the most recent sample collection, sample chain of custody, descriptions of any re-testing of erroneous values, and any water quality exceedances. Water levels will be provided in tabular and graphical forms.

By March 1 of each year, a Water Resource Summary Report for the preceding calendar year shall be supplied to Lee County Natural Resources staff that summarizes the surface and groundwater monitoring results for the development. The results will include a summary table that lists all the field and laboratory parameters for surface water, consistent with requirements of F.A.C. 62-160. Laboratory parameter concentrations that fall below the PQL for that parameter will be reported with no value; however, a value qualifier of "I" (between the MDL and PQL) or "U" (below the MDL) will be included in the summary table.

All water quality data for the analytes listed in **Table 1** that are detected in concentrations above the laboratory PQL will be reviewed, graphed and statistically analyzed for trends and exceedances above two (2) standard deviations of the mean of all values above the MDL. Any reported concentrations above the MDL will be clearly identified as well as remedial actions that were used to timely reduce that particular analyte's concentration.

8.4 REMEDIAL ACTIONS

In the event of significant surface water impact from hydrocarbon spills, pesticide or herbicide applications, or other releases, the Developer or their successor will notify the Lee County Natural Resources Division within 12 hours (or the next business day) and FDEP Office of Emergency Response within 24 hours if there is an immediate threat to human health or the environment. The Developer or their successor will coordinate assessment and remediation with Lee County and comply with all local, state, and federal permitting requirements, including installation of temporary monitoring wells or more comprehensive investigations if needed.

9.0 EXISTING ONSITE WELLS

According to Lee County's Permitted Well database, four of the five parcels within the subject property are shown to contain a single well located near the parcel centroid and classified for "Single Family" use. Two of these reported wells are mapped within existing water-filled pits, and two are mapped on upland portions of the site. Review of the associated well construction permits and available records indicates that these features represent shallow geotechnical or hydrogeologic test borings rather than active or production water supply wells. The borings appear to have been installed for site investigation purposes, are not equipped with permanent pumping infrastructure, and are not utilized for potable or irrigation supply. As such, these test borings are not expected to adversely affect groundwater resources, interfere with proposed site development, or require abandonment or protection measures beyond standard construction practices.

10.0 CONCLUSIONS

The White Willow project presents a unique opportunity to restore and enhance a highly disturbed and hydrologically impacted property. As detailed above, the proposed development demonstrates

a high level of protection, preservation, and enhancement of groundwater, surface water, and environmental resources. The project is fully consistent with the Lee Plan, including Goal 63, which protects potable water sources and safeguards wellfield areas; and Goals 60 and 61, which preserve natural drainage systems and ensure stormwater management and water quality standards are met.

Additionally, the project complies with applicable Lee County LDC requirements, including Sections 14-208 and 14-214 governing Wellfield Protection Zones, as well as stormwater, erosion control, and lake management provisions. By incorporating these measures, the White Willow development not only supports compatible residential land use but also provides measurable improvements to site-specific hydrologic and ecological conditions, ensuring long-term protection and enhancement of critical water resources in southern Lee County.

Table 1 - Surface Water Quality Analytes and Proposed Schedule for Sampling

Field Parameters					
Parameter	Units	Precision (%RPD)	Accuracy (%Recovery)	MDL	Sampling Frequency
Depth of Water	Feet	0.01	NA	NA	Quarterly
Dissolved Oxygen	mg/L	FT 1000-1	FT 1000-1	NA	Quarterly
pH	SU	FT 1000-1	FT 1000-1	NA	Quarterly
Specific Conductance	µS/cm	FT 1000-1	FT 1000-1	NA	Quarterly
Temperature	Deg C	FT 1000-1	FT 1000-1	NA	Quarterly
Turbidity	NTU	FT 1000-1	FT 1000-1	NA	Quarterly
Laboratory Parameters					
Ammonia	mg/L	*17	90-110	0.008	Quarterly
Biological Oxygen Demand	mg/L	*28	84.6-115	1	Quarterly
Chloride	mg/L	*5	90-110	0.353	Quarterly
Copper	ug/L	*10	70-130	0.346	Quarterly
Hardness	mg/L	CALC	CALC	0.682	Quarterly
Iron	mg/L	*10	70-130	29	Quarterly
Lead	ug/L	*10	70-130	0.67	Quarterly
Nitrate + Nitrite	mg/L	*5	90-110	0.004	Quarterly
Total Nitrogen	mg/L	CALC	CALC	CALC	Quarterly
Total Phosphorus	mg/L	*10	90-110	0.008	Quarterly
Zinc	mg/L	*10	70-130	0.0014	Quarterly

*Value represents percent (%) relative standard deviation (RSD).

**All values within the table above were supplied by Benchmark Enviroanalytical Laboratory and are specific to the water quality laboratory that performs the analyses.

Figures

RESPEC

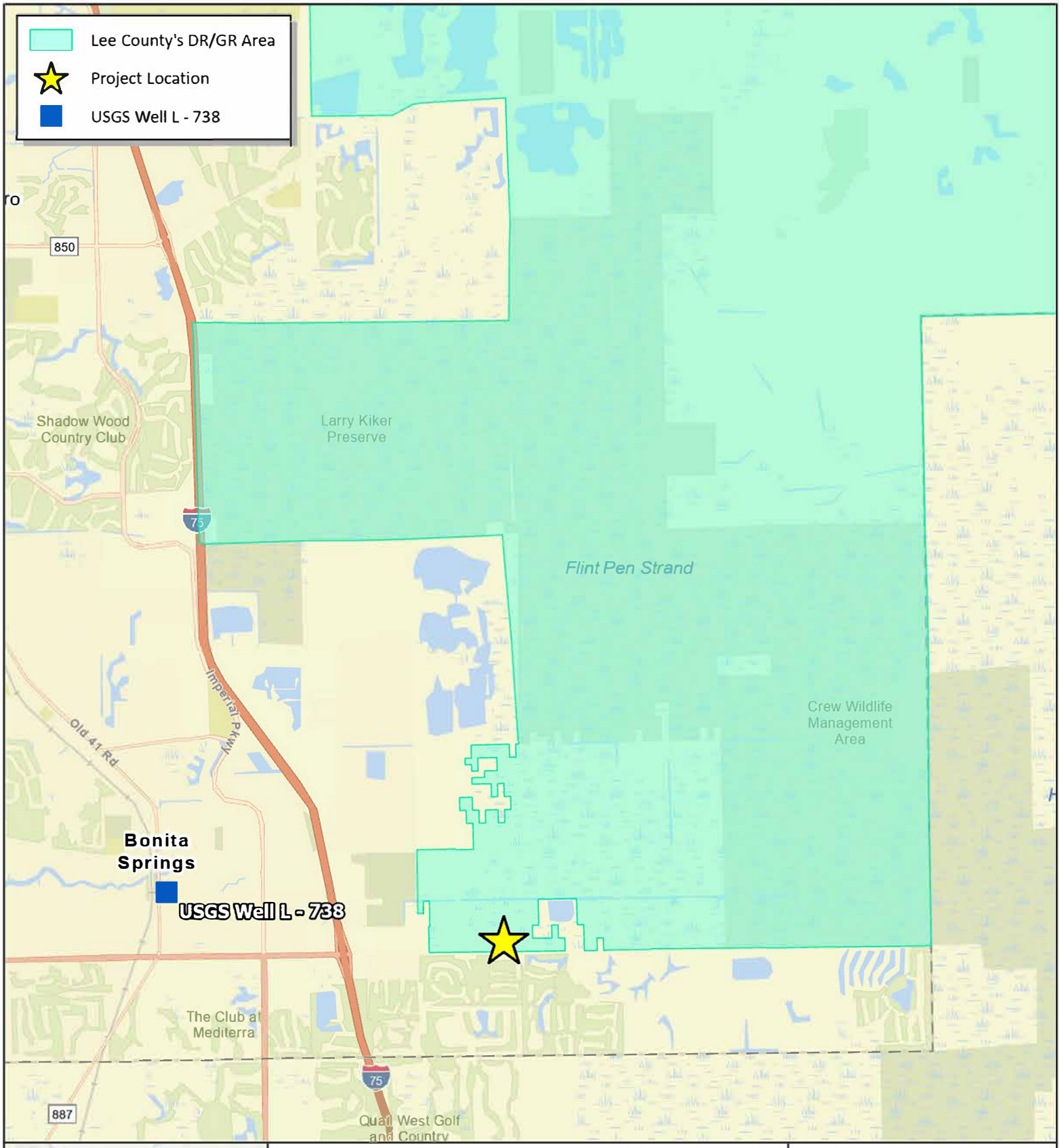




Figure 1
Density Reduction/Groundwater Resource Area
White Willow
Lee County, Florida

N

0 0.5 1 1.5 Mi

Scale: 1:80,000

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12/9/2025

Image: Esri, Lee County

RESPEC

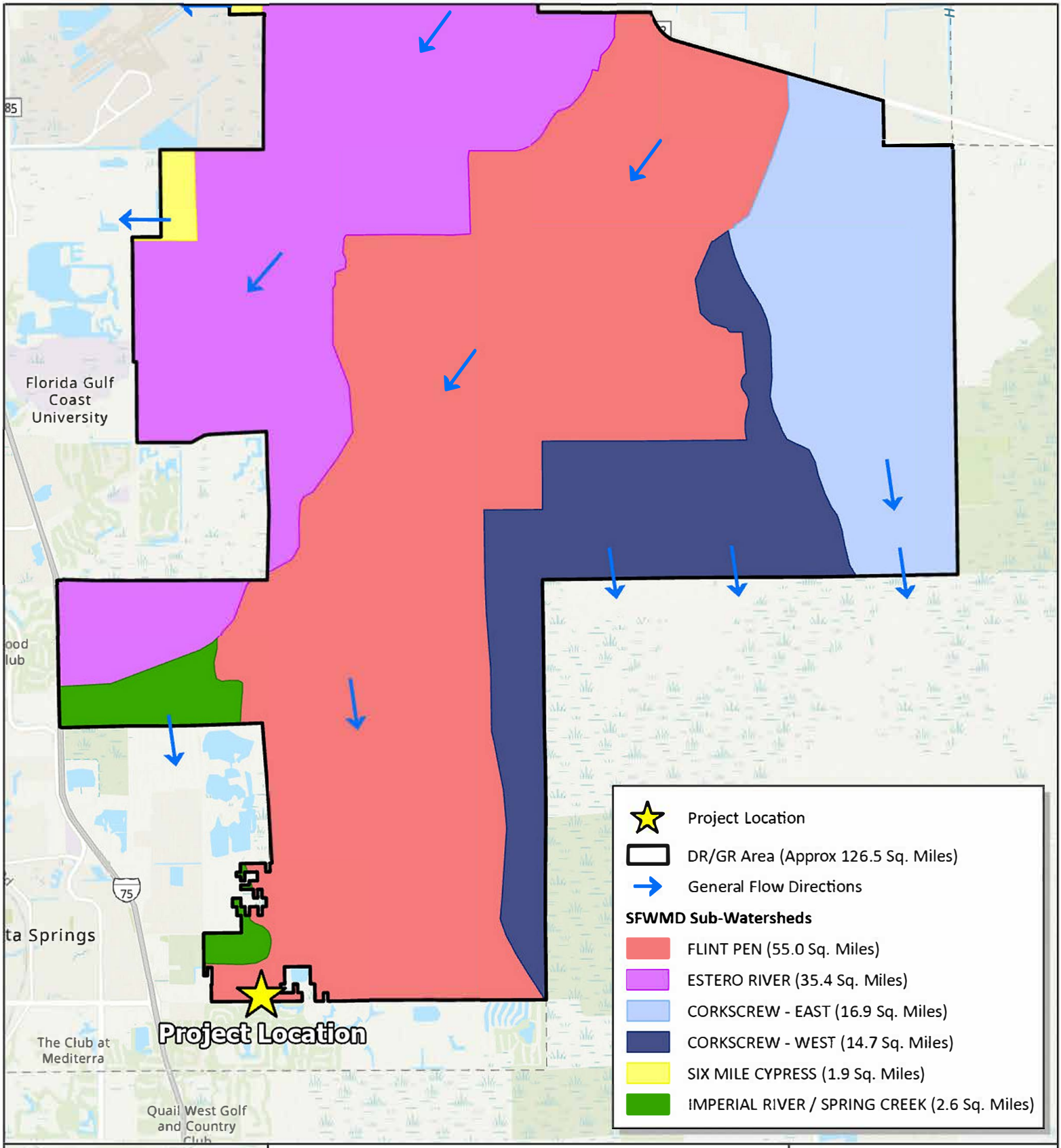




Figure 2
DR/GR Sub-Watersheds
White Willow
Lee County, Florida

N

0 1 2 Miles

Scale: 1:120,000

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12/9/2025

Image: Esri

RESPEC

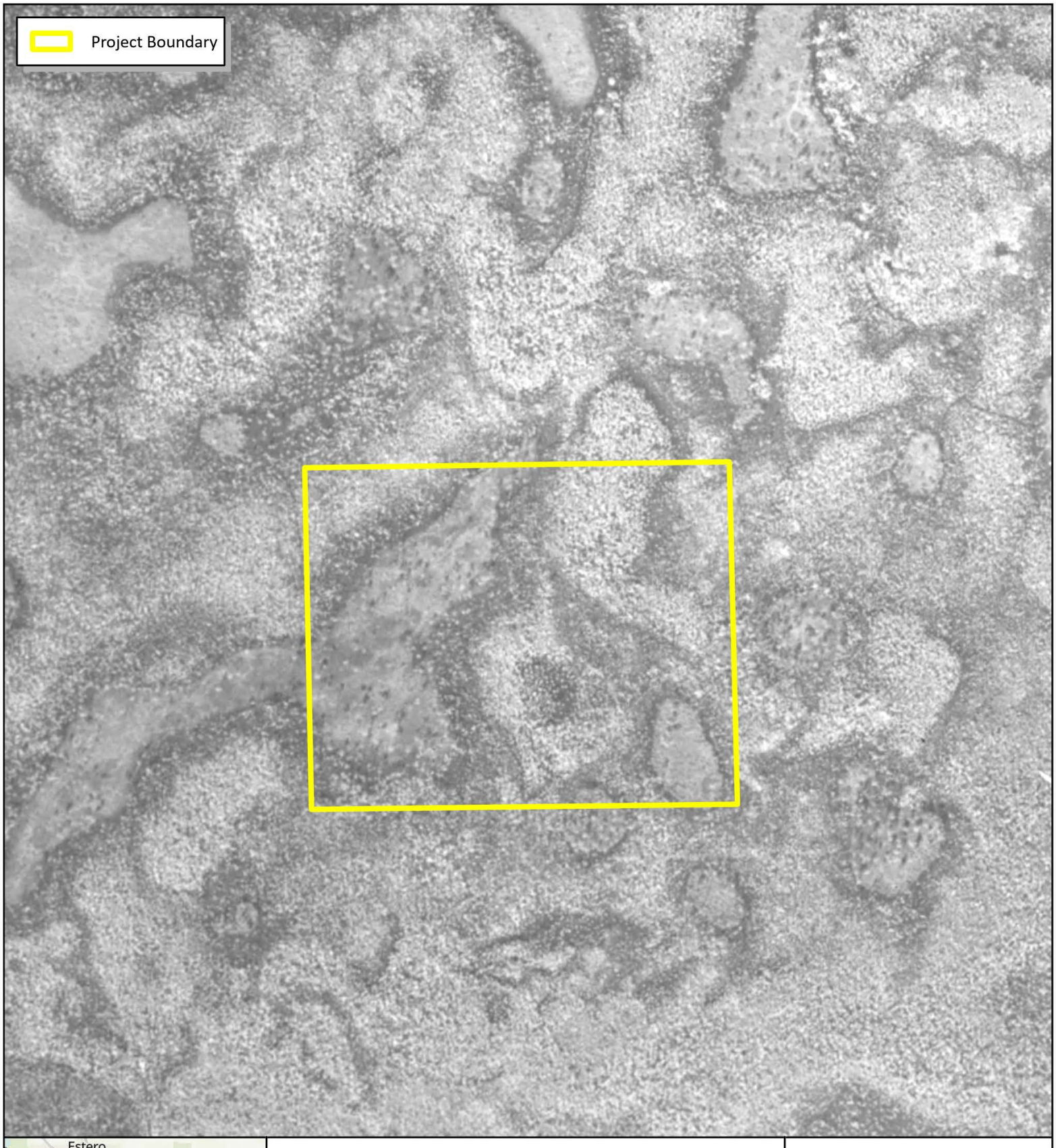




Figure 3
1958 Historic Aerial Imagery
White Willow
Lee County, Florida

N

0 500 US Feet

Scale: 1:6,000

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12/12/2025

Image: Esri, UFDC

RESPEC

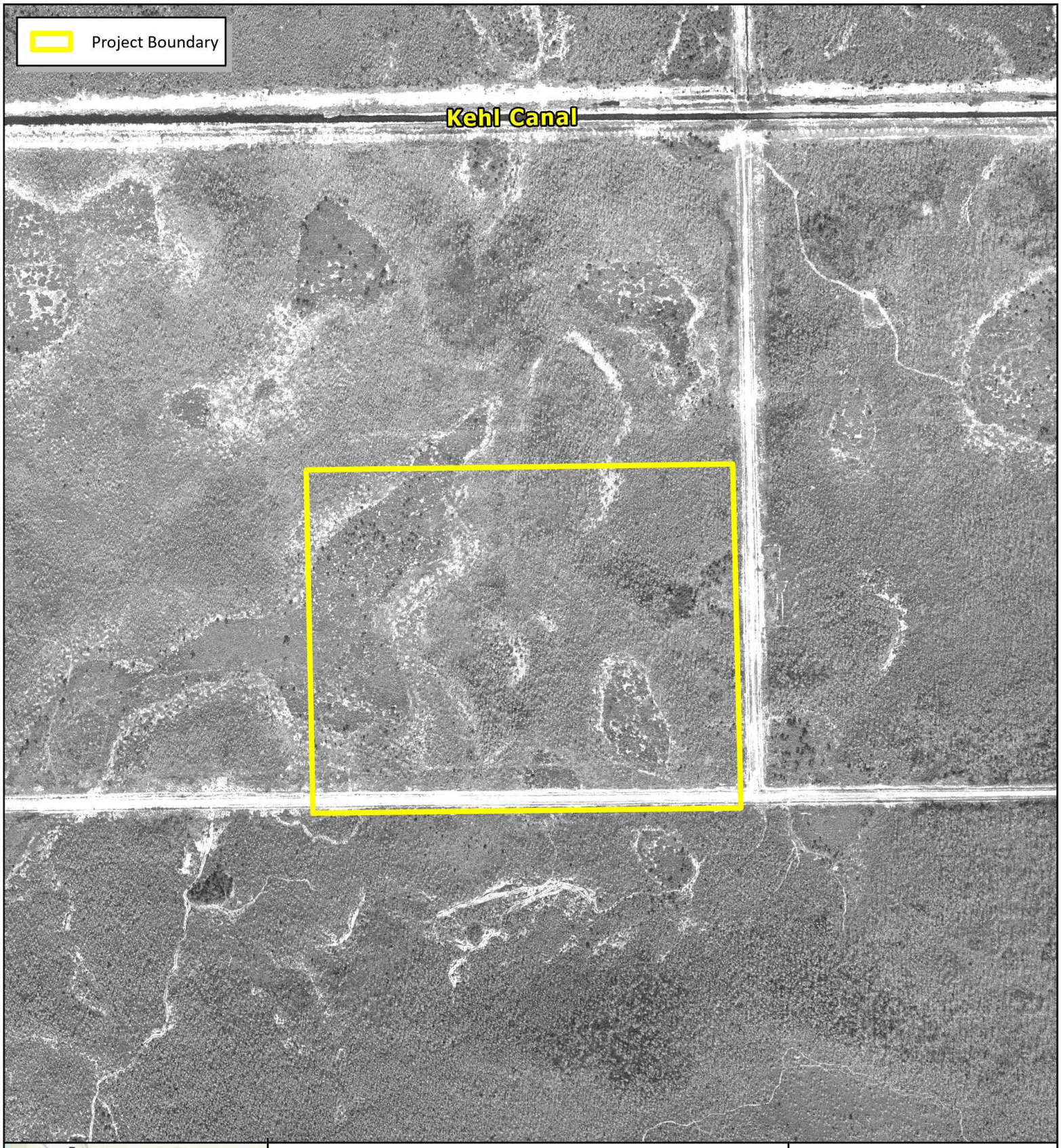




Figure 4
1968 Historic Aerial Imagery
White Willow
Lee County, Florida

N

0 500 US Feet

Scale: 1:6,000

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12/12/2025

Image: Esri, FDOT

RESPEC

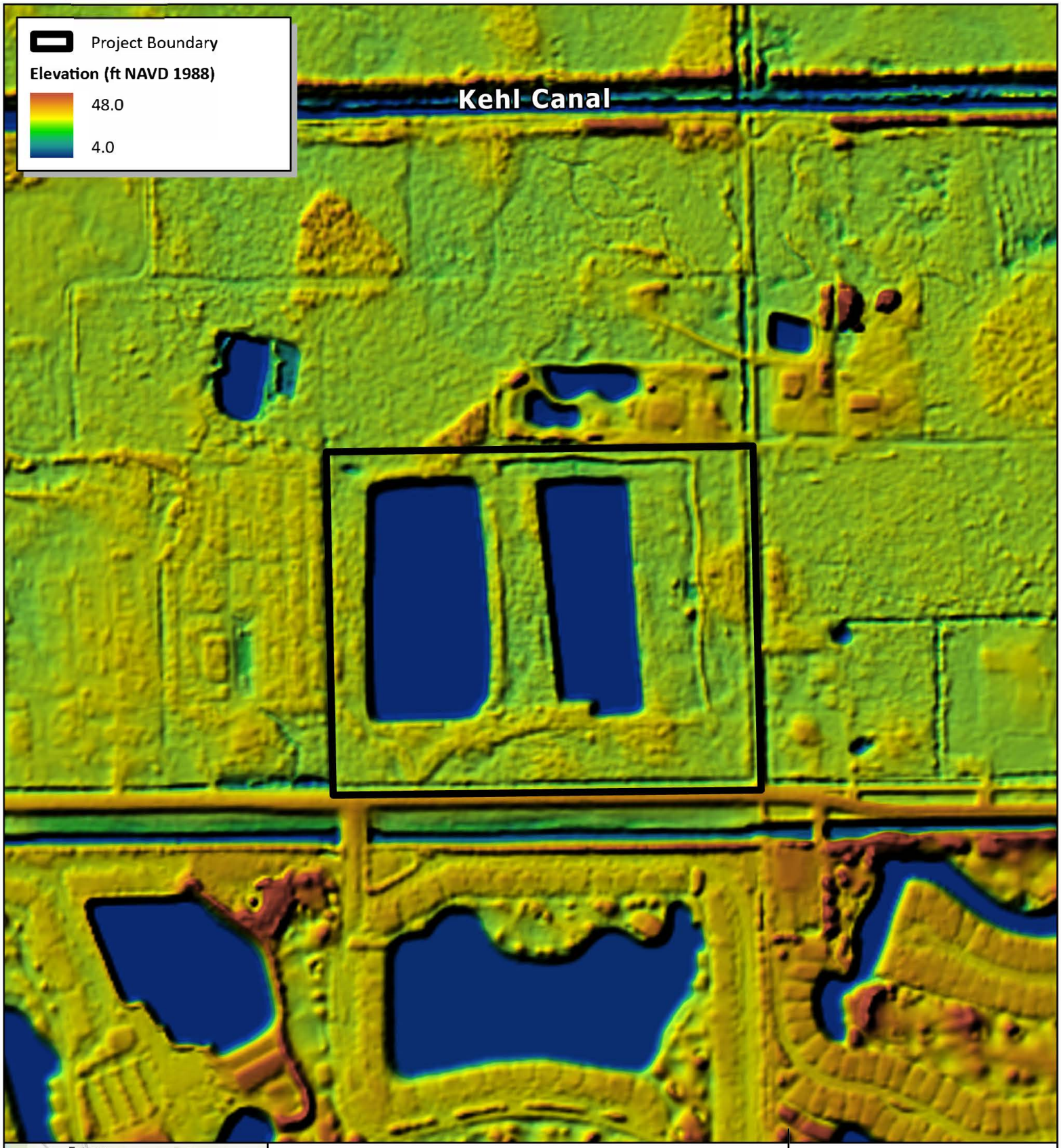




Figure 5
LiDAR
White Willow
Lee County, Florida

N

0 500 US Feet

Scale: 1:6,000

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12/9/2025

Image: Esri, Lee County 10-ft DEM (ft NAVD88)

RESPEC

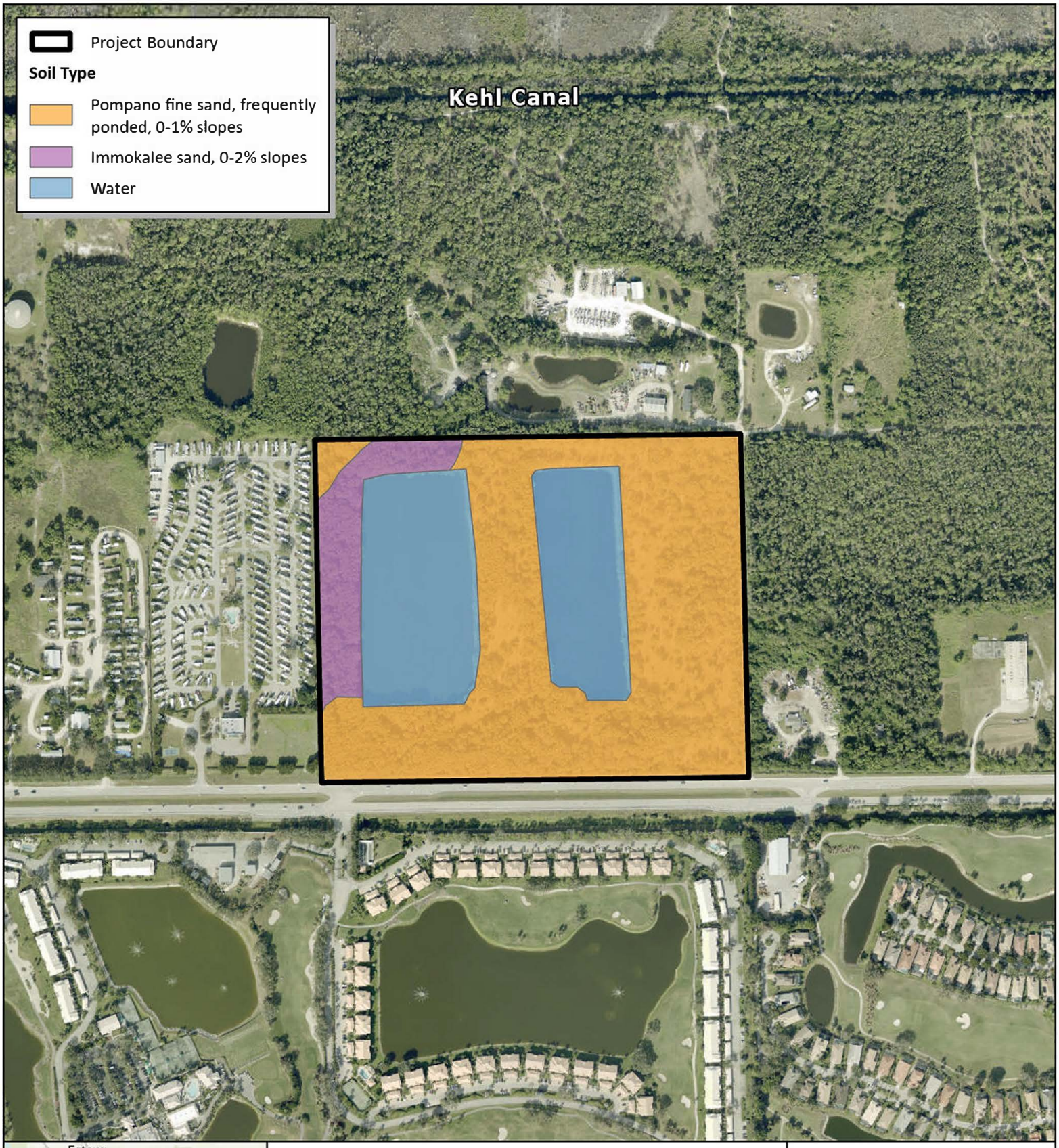




Figure 6
NRCS Soil Types
White Willow
Lee County, Florida

N

0 500 US Feet

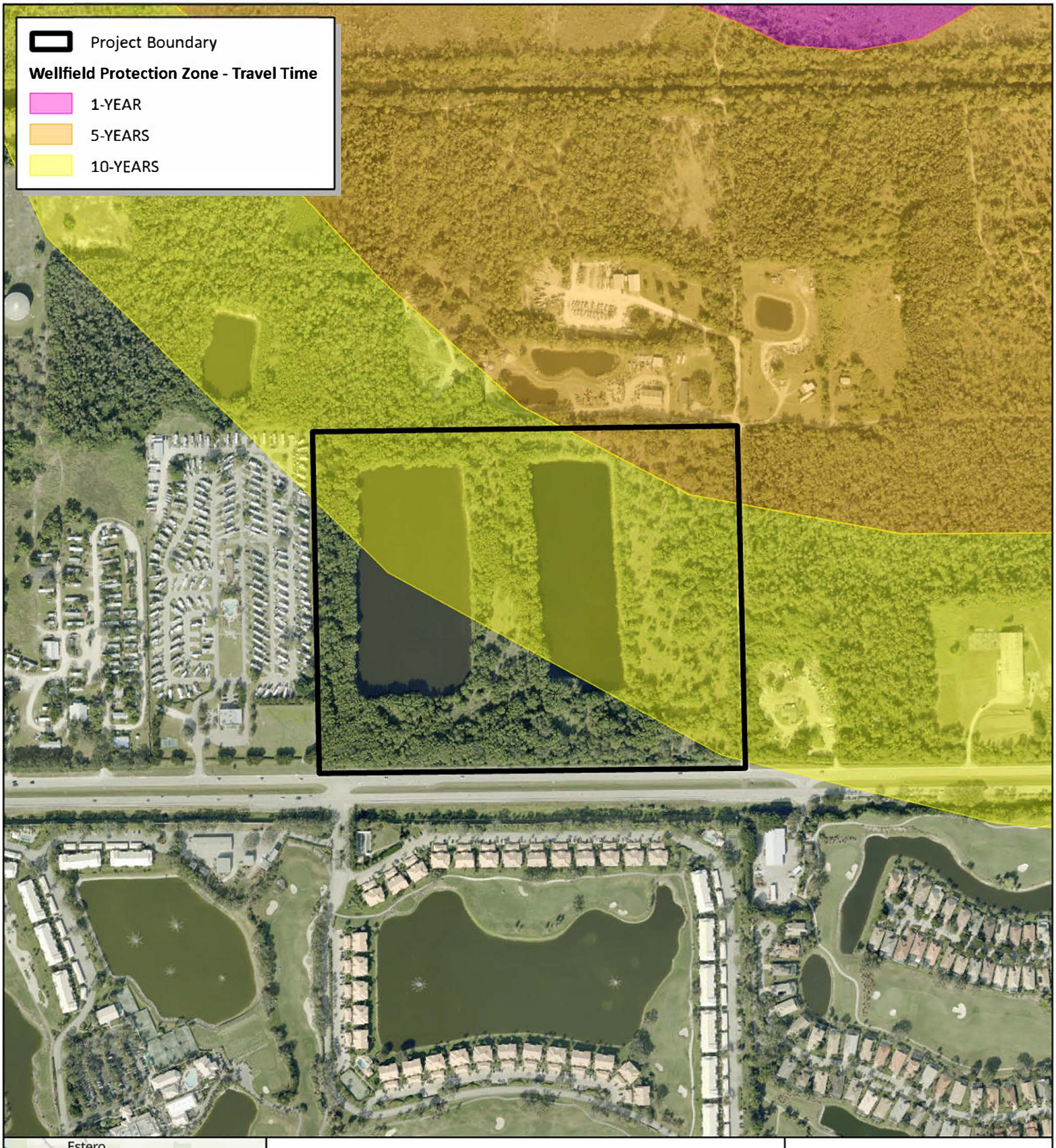
Scale: 1:6,000

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12/9/2025

Image: Esri, NRCS

RESPEC



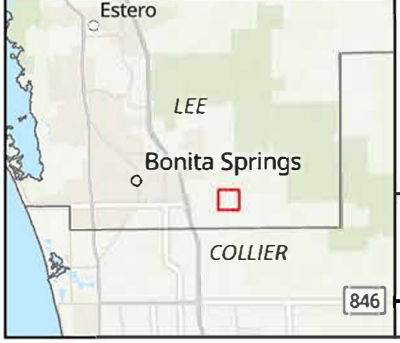


Figure 7
Wellfield Protection Zones
White Willow
Lee County, Florida

N

0 500 US Feet

Scale: 1:6,000

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12/15/2025

Image: Esri

RESPEC



Figure 8
Conceptual Plan
White Willow
Lee County, Florida

N

0 250 US Feet

Scale: 1:3,000

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12/10/2025

Image: Esri

RESPEC





Figure 9
Predicted Lower Tamiami Aquifer Drawdown
Maximum Monthly Modeling Scenario
White Willow
Lee County, Florida

N

0 250 US Feet

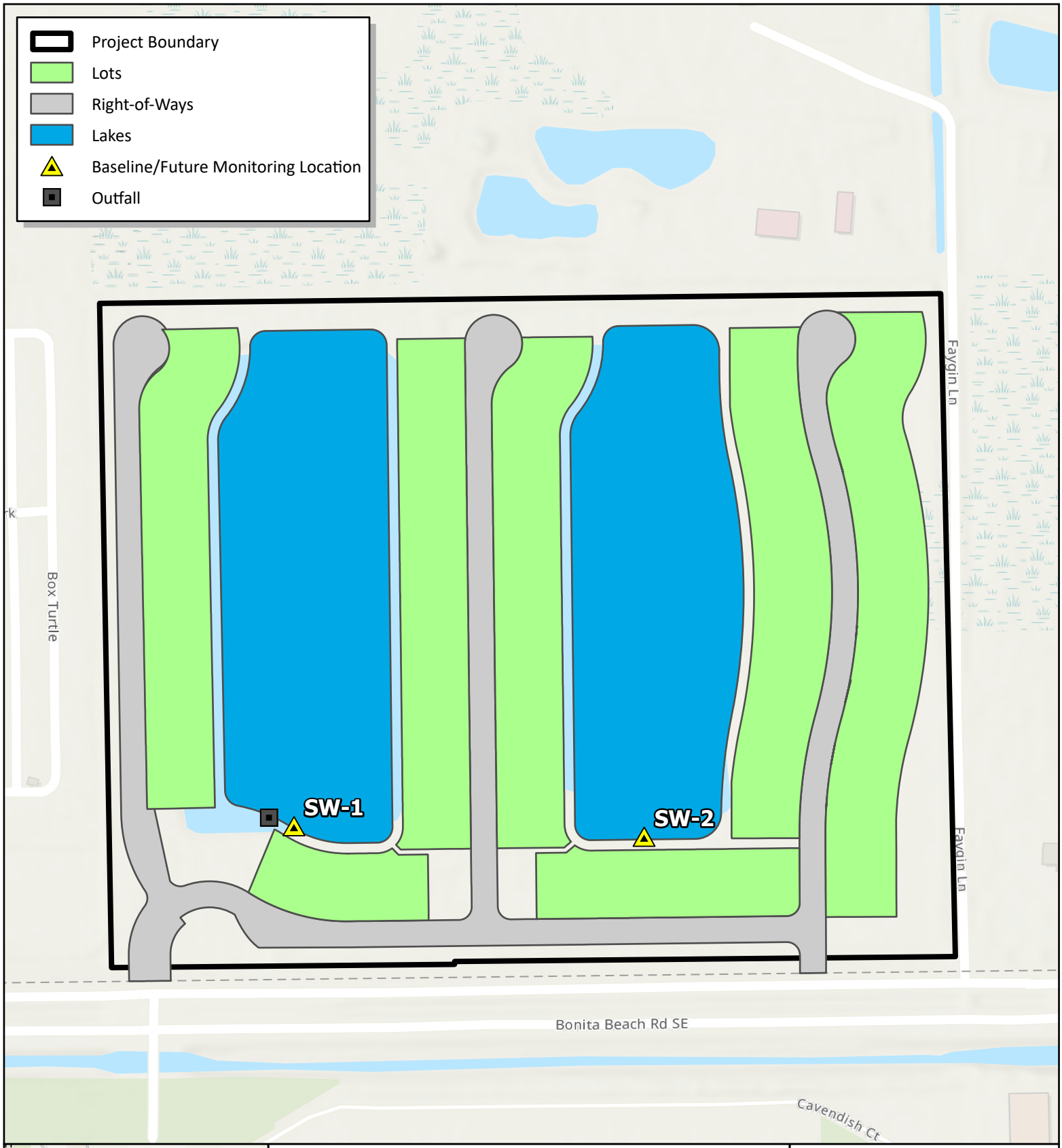
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12/15/2025

Image: Esri

RESPEC



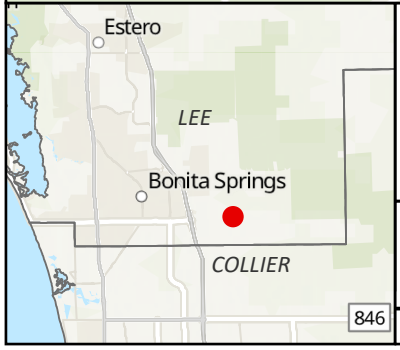


Figure 10
Water Quality Monitoring Locations
White Willow
Lee County, Florida

N

0 250 US Feet

Scale: 1:3,000

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4/9/2026

Image: Esri

RESPEC

Blaney-Criddle Irrigation Demands

Attachment A

RESPEC

Calculations Of Irrigation Requirements (1-in-10)

Rainfall Station: Naples 1-in-10
Irrigation System: Sprinkler
Irrigated Acreage: 7.24
Crop: Turf Grass
Soil Type: 0.80
Multiplier 1.30
Efficiency 0.77

Calculations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Average Rainfall (inches)	1.88	1.93	0.96	2.05	4.42	8.17	8.36	8.18	8.69	4.09	1.56	1.32	51.61
Evapotranspiration (inches)	1.93	2.21	3.76	5.09	6.66	7.44	7.88	7.51	6.47	5.00	3.22	2.26	59.43
Average Effective Rainfall (inches)	0.88	0.92	0.52	1.14	2.44	4.32	4.51	4.34	4.31	2.08	0.80	0.65	26.91
1-in-10 Effective Rainfall (inches)	0.73	0.76	0.43	0.94	2.03	3.58	3.75	3.60	3.58	1.73	0.66	0.54	22.33
Average Irrigation (inches)	1.05	1.29	3.24	3.95	4.22	3.12	3.37	3.17	2.16	2.92	2.42	1.61	32.52
1-in-10 Irrigation (inches)	1.20	1.45	3.33	4.15	4.63	3.86	4.13	3.91	2.89	3.27	2.56	1.72	37.10

1-in-10 Annual Supplemental Crop Requirement = 37.10 inches

Annual Supplemental Crop Water Use:

37.1 inches X 7.24 Acres X 1.3 X 0.02715 MG/AC-IN = 9.48 MG

1-in-10 Maximum Monthly Supplemental Crop Requirement = 4.63 inches

Maximum Monthly Supplemental Crop Water Use:

4.63 inches X 7.24 Acres X 1.3 X 0.02715 MG/AC-IN = 1.18 MG

Notes:

Evapotranspiration was calculated using a modified Blaney-Criddle method.
Average effective rainfall is the amount that is useful to crops in an average year.
Drought rainfall is the rainfall minimum representative of a 1-in-10 year drought
Drought effective rainfall is the amount that is useful to crops in a 1-in-10 year drought event.
Average irrigation is the net amount that should be required for maximum yields during an average year.
Drought irrigation is the net amount that should be required for maximum yields during a 1-in-10 year drought.

Professional Geologist Certification

Attachment B

RESPEC

RESPEC
6561 PALMER PARK CIRCLE
SUITE D
SARASOTA, FL 34238
941.552.5657

Professional Geologist Certification

The groundwater flow modeling impact analysis included as part of this document titled "Characterization of Ground and Surface Water Resources" for the White Willow property in Lee County, Florida, was completed based on sound geologic principals and the hydrogeologic data available at the time this modeling analysis was performed. The parameters and discretization of simulated withdrawals from the aquifer system are considered to be reasonably accurate; therefore, the Professional Geologist below certifies the results of the model as they pertain to the predicted groundwater impacts. All the preceding geological analysis and interpretation(s) were evaluated and supervised by Devin Lemke, P.G., a Registered Professional Geologist pursuant to Chapter 492, Florida Statutes, (F.S.) and Chapter 61G16, Florida Administrative Code, F.A.C.



12/10/2025

Devin Lemke, P.G. No. 3270
RESPEC Company, LLC
Professional Geologist

Date

LAND USE: VACANT
ZONING: AG-2
FLU: WETLAND

LAND USE: VACANT
ZONING: AG-2
FLU: WETLAND

LAND USE: VACANT
ZONING: AG-2
FLU: WETLAND

LAND USE: AGRICULTURE
ZONING: AG-2
FLU: DENSITY REDUCTION / GROUNDWATER RESOURCE

50' RIGHT OF WAY (PRIVATE)

50' MIN. EXCAVATION SETBACK

NO BUFFER REQUIRED

50' MIN. EXCAVATION SETBACK

PROPERTY BOUNDARY

20' L.M.E.

50' MIN. R.O.W.

NO BUFFER REQUIRED

SINGLE FAMILY RESIDENTIAL

LAKE

SINGLE FAMILY RESIDENTIAL

SINGLE FAMILY RESIDENTIAL

20' L.M.E.

LAKE

SINGLE FAMILY RESIDENTIAL

SINGLE FAMILY RESIDENTIAL

NO BUFFER REQUIRED

LAND USE: RESIDENTIAL
ZONING: RV-3
FLU: DENSITY REDUCTION / GROUNDWATER RESOURCE

50' MIN. R.O.W.

50' MIN. R.O.W.

20' L.M.E.

SINGLE FAMILY RESIDENTIAL (MODEL HOMES)

SINGLE FAMILY RESIDENTIAL

50' MIN. R.O.W.

FULL ACCESS GATED ENTRY

TYPE "B" BUFFER

SECONDARY EMERGENCY ACCESS 1

2 ±260' INTERSECTION SEPARATION

FAYGIN LN (NON-COUNTY MAINTAINED LOCAL)

±475' INTERSECTION SEPARATION

BONITA BEACH ROAD SE
(COUNTY MAINTAINED ARTERIAL)

LAND USE: RESIDENTIAL
ZONING: RPD
FLU: MU/PD

LAND USE: VACANT
ZONING: AG-2
FLU: WETLAND

LAND USE: VACANT
ZONING: AG-2
FLU: DENSITY REDUCTION / GROUNDWATER RESOURCE & WETLAND

LAND USE: VACANT
ZONING: AG-2
FLU: DENSITY REDUCTION / GROUNDWATER RESOURCE & WETLAND

LAND USE: AGRICULTURE
ZONING: AG-2
FLU: DENSITY REDUCTION / GROUNDWATER RESOURCE

LAND USE:

RESIDENTIAL:	18.10 AC
LAKE:	13.54 AC
ROADWAY:	6.07 AC
COMMON OPEN SPACE:	9.31 AC
TOTAL PROJECT AREA:	47.02 AC

OPEN SPACE:
ALL LOTS ARE OVER 6,500 SF (LDC SEC. 10-415(a))

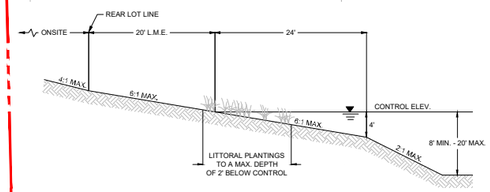
LEGEND:

LAKE

DEVIATION

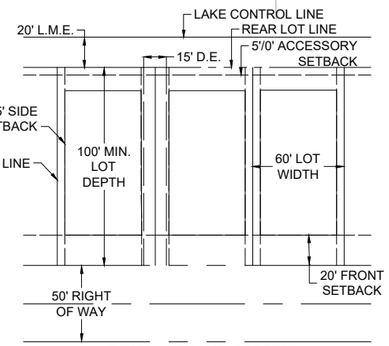
N W E S

0 40 80 160
SCALE IN FEET



TYPICAL LAKE SECTION

NOT TO SCALE



TYPICAL 60' X 130' LOT DETAIL

Barraco and Associates, Inc.
CIVIL ENGINEERING - LAND SURVEYING
LAND PLANNING
www.barraco.net
2271 McGREGOR BLVD., SUITE 100
FORT MYERS, FLORIDA 33901
PHONE (239) 461-3170
OFFICE LOCATIONS:
FORT MYERS | PANAMA CITY BEACH
FLORIDA BUSINESS REGISTRATIONS
ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

PULTE HOME CORPORATION
24311 WALDEN CENTER DRIVE
SUITE 300
BONITA SPRINGS, FLORIDA 34134
PHONE (239) 498-7711
FAX (239) 498-7707
WWW.PULTEHOMES.COM

PROJECT DESCRIPTION

WHITE WILLOW

PART OF SECTION 32,
TOWNSHIP 47 SOUTH, RANGE 26 EAST
LEE COUNTY, FLORIDA

THIS PLAN IS PRELIMINARY AND INTENDED FOR CONCEPTUAL PLANNING PURPOSES ONLY.

SITE LAYOUT AND LAND USE INTENSITIES OR DENSITIES MAY CHANGE SIGNIFICANTLY BASED UPON SURVEY, ENGINEERING, ENVIRONMENTAL AND / OR REGULATORY CONSTRAINTS AND / OR OPPORTUNITIES.

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FILE NAME	24350Z02.DWG
LOCATION	J:\24350\DWG\ZONING\
PLOT DATE	TUE. 4-7-2026 - 4:28 PM
PLOT BY	ALYSSA FONTAINE

CROSS REFERENCED DRAWINGS

PLAN REVISIONS

PLAN STATUS

MASTER CONCEPT PLAN

PROJECT / FILE NO.	SHEET NUMBER
22254	1.0