Lee County
Southwest Florida

October 26, 2023

Barbara Powell, Plan Processing Administrator
State Land Planning Agency
Caldwell Building
107 East Madison – MSC 160
Tallahassee, FL 32399-4120

Re: Small Scale Amendment to the Lee Plan
Adoption Submission Package
CPA2023-00003, Southeast Advanced Water Reclamation Facility

Dear Ms. Powell,

In accordance with the provisions of F.S. Chapter 163.3187(1), this submission package constitutes the adoption of a Small Scale Comprehensive Plan Amendment known locally as CPA2023-00003 (Southeast Advanced Water Reclamation Facility). The adopted amendment is being submitted through the small scale review process as described in F.S. Chapter 163.3187(1). The amendment is as follows:

> **CPA2023-00003, Southeast Advanced Water Reclamation Facility**
> Amend Lee Plan Map 1-A to change ±35.65 acres from the Density Reduction/Groundwater Resource future land use category to the Public Facilities future land use category. (Adopted by Lee County Ordinance 23-28)

The Local Planning Agency held a public meeting for the plan amendment on September 25, 2023. The Board of County Commissioners voted to adopt the amendment on October 18, 2023.

This small scale amendment to the Lee Plan consists of ±35.65 acres and is the fifth small scale amendment processed by Lee County this calendar year. The cumulative total number of acres for small scale amendments Lee County has approved during the 2023 calendar year is ± 192.61 acres.

The adopted small-scale comprehensive plan amendment is not within an area of critical state concern, nor does it involve a site within a rural area of critical economic concern.

The name, title, address, telephone number, and email address of the person for the local government who is most familiar with the proposed amendment is as follows:

Mr. Brandon Dunn, Manager
Lee County Planning Section
P.O. Box 398
Fort Myers, Florida 33902-0398
(239) 533-8585
Email: bdunn@leegov.com

By copy of this letter and its attachments, I certify that this amendment and supporting data and analysis have been sent on this date to the agencies listed below.

Sincerely,
Lee County Department of Community Development
Planning Section

Brandon Dunn,
Manager, Planning Section, Department Community Development

Cc Case File

Comprehensive Plan Review
Department of Agriculture and Consumer Services

Morgan Runion, AICP
Department of Education

Plan Review
Department of Environmental Protection

Alissa S. Lotane
Florida Department of State

Scott Sanders
Florida Fish and Wildlife Conservation Commission

Vitor Suguri
FDOT District One

Ms. Margaret Wuerstle
Southwest Florida Regional Planning Council

Althea P. Jefferson, AICP
South Florida Water Management District

LocaliQ
Florida
GANNETT

PO Box 631244 Cincinnati, OH 45263-1244

PROOF OF PUBLICATION

VELOPMEN-D LCBC-DEPT OF COMM DE
Lcbc-Dept Of Comm Development-D
1500 MONROE ST
Fort Myers FL 33901

STATE OF WISCONSIN, COUNTY OF BROWN

Before the undersigned authority personally appeared, who on oath says that he or she is the Legal Advertising Representative of the News-Press, a daily newspaper published at Fort Myers in Lee County, Florida; that the attached copy of advertisement, being a Legal Ad in the matter of Public Notices, was published on the publicly accessible website of Lee County, Florida, or in a newspaper by print in the issues of, on:

10/06/2023

Affiant further says that the website or newspaper complies with all legal requirements for publication in chapter 50, Florida Statutes.
Subscribed and sworn to before me, by the legal clerk, who is personally known to me, on 10/06/2023

Legal Clerk

Notary, State of WI, County of Brown

3/7/27

My commision expires

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KAITLYN FELTY
Notary Public
State of Wisconsin

NOTICE OF PROPOSED AMENDMENT TO THE LEE COUNTY COMPREHENSIVE LAND USE PLAN (ADOPTION HEARING)

The Lee County Board of County Commissioners will hold a public hearing to consider the adoption of proposed amendments to the Lee County Comprehensive Land Use Plan (Lee Plan) on Wednesday, October 18, 2023. The hearing will commence at 9:30 a.m., or as soon thereafter as can be heard, in the Board Chambers, 2120 Main Street in Downtown Fort Myers.

The Board proposes to adopt an ordinance amending the Lee Plan as follows:

CPA2023-00003: Southeast Advanced Water Reclamation Facility Amend the Future Land Use Map designation for 35.65 acres from the Density Reduction/Ground Water Resource future land use category to the Public Facilities future land use category. The subject property is located on Green Meadow Road approximately 0.2 miles east of the intersection with Alico Road.

Copies of this Notice and the proposed ordinance are available for inspection or copying during regular business hours at the Minutes Office of the Clerk of Courts of Lee County. The Minutes Office is located in the Courthouse Administration Building, 2115 Second Street, Fort Myers, Florida. This meeting is open to the public. Interested parties may appear at the meeting and be heard with respect to the proposed plan amendment. A verbatim record of the proceeding will be necessary to appeal a decision made at this hearing.

It is the intent of the Board of County Commissioners that the provisions of this Ordinance may be modified as a result of consideration that may arise during Public Hearing(s). Such modifications shall be incorporated into the final version.

Lee County will not discriminate against individuals on the basis of race, color, national origin, sex, age, disability, religion, income or family status. To request language interpretation, document translation or an ADA-qualified reasonable modification at no charge to the requestor, contact Joan LaGuardia, (239) 839-6038, Florida Relay Service 711, at least five business days in advance.

El Condado de Lee brindará servicios de traducción sin cargo a personas con el idioma limitado del inglés.

Ad #9331521 Oct. 6, 2023

LEE COUNTY ORDINANCE NO. 23-28

AN ORDINANCE AMENDING THE LEE COUNTY COMPREHENSIVE PLAN TO ADOPT A SMALL SCALE AMENDMENT (CPA2023-00003) PERTAINING TO SOUTHEAST ADVANCED WATER RECLAMATION FACILITY; PROVIDING FOR PURPOSE, INTENT AND SHORT TITLE; ADOPTION OF SMALL SCALE AMENDMENT TO LEE PLAN MAP 1-A, THE FUTURE LAND USE MAP; LEGAL EFFECT OF THE "LEE PLAN"; PERTAINING TO MODIFICATIONS THAT MAY ARISE FROM CONSIDERATION AT PUBLIC HEARING; GEOGRAPHICAL APPLICABILITY; SEVERABILITY; INCLUSION IN CODE, CODIFICATION AND SCRIVENER'S ERRORS, AND AN EFFECTIVE DATE.

WHEREAS, the Lee County Comprehensive Plan ("*Lee Plan*") and Chapter XIII, provides for adoption of amendments to the Plan in compliance with State statutes and in accordance with administrative procedures adopted by the Board of County Commissioners ("*Board*"); and

WHEREAS, the Board, in accordance with Section 163.3181, Florida Statutes, and Lee County Administrative Code AC-13-6, provide an opportunity for private individuals to request amendment to the Future Land Use Map through a small scale amendment public hearing process; and

WHEREAS, the Local Planning Agency ("*LPA*") held a public hearing on the adoption of the proposed amendment on September 25, 2023. At that hearing the LPA found the proposed amendment to be consistent with the Lee Plan and recommended that the Board adopt the amendment; and

WHEREAS, the Board made a formal finding that no significant impacts on present or future water resources will result from changing the Future Land Use Category, as required in Lee Plan Policy 2.3.1 and 2.3.2; and

WHEREAS, the Board held a public hearing for the adoption of the proposed amendment on October 18, 2023. At that hearing, the Board approved a motion to adopt proposed amendment CPA2023-00003 pertaining to Southeast Advanced Water Reclamation Facility, amending Map 1-A of the Lee Plan, the Future Land Use Map. The subject property is located on Green Meadow Road approximately 0.2 miles east of the intersection with Alico Road.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, THAT:

SECTION ONE: PURPOSE, INTENT AND SHORT TITLE

The Board of County Commissioners of Lee County, Florida, in compliance with Chapter 163, Part II, Florida Statutes, and with Lee County Administrative Code AC-13-6, conducted a public hearing to review a proposed small scale amendment to the Future Land Use Map Series of the Lee Plan. The purpose of this ordinance is to adopt the amendment to the Lee Plan discussed at that meeting and later approved by a majority of the Board of County Commissioners. The short title and proper reference for the Lee County Comprehensive Land Use Plan, as hereby amended, will continue to be the "Lee Plan." This amending ordinance may be referred to as the "Southeast Advanced Water Reclamation Facility (CPA2023-00003)".

SECTION TWO: ADOPTION OF SMALL SCALE AMENDMENT TO LEE PLAN FUTURE LAND USE MAP SERIES, MAP 1-A

The Lee County Board of County Commissioners hereby amends the existing Lee Plan, adopted by Ordinance Number 89-02, as amended, by adopting an amendment to the Future Land Use Map Series, Map 1-A, the Future Land Use Map to redesignate 35.65 acres from the Density Reduction/Ground Water Resource future land use category to the Public Facilities future land use category. The subject property is located on Green Meadow Road approximately 0.2 miles east of the intersection with Alico Road. The corresponding staff report and analysis, along with all attachments for this amendment, are adopted as "support documentation" for the Lee Plan.

SECTION THREE: LEGAL EFFECT OF THE "LEE PLAN"

No public or private development will be permitted except in conformity with the Lee Plan. All land development regulations and land development orders must be consistent with the Lee Plan as amended.

SECTION FOUR: MODIFICATION

It is the intent of the Board of County Commissioners that the provisions of this Ordinance may be modified as a result of consideration that may arise during Public Hearing(s). Such modifications shall be incorporated into the final version.

SECTION FIVE: GEOGRAPHIC APPLICABILITY

The Lee Plan is applicable throughout the unincorporated area of Lee County, Florida, except in those unincorporated areas included in joint or interlocal agreements with other local governments that specifically provide otherwise.

SECTION SIX: SEVERABILITY

The provisions of this ordinance are severable and it is the intention of the Board of County Commissioners of Lee County, Florida, to confer the whole or any part of the powers herein provided. If any of the provisions of this ordinance are held unconstitutional by a court of competent jurisdiction, the decision of that court will not affect or impair the remaining provisions of this ordinance. It is hereby declared to be the legislative intent of the Board of County Commissioners that this ordinance would have been adopted had the unconstitutional provisions not been included therein.

SECTION SEVEN: INCLUSION IN CODE, CODIFICATION AND SCRIVENERS' ERROR

It is the intention of the Board of County Commissioners that the provisions of this ordinance will become and be made a part of the Lee County Code. Sections of this ordinance may be re-numbered or re-lettered and the word "ordinance" may be changed to "section," "article" or other appropriate word or phrase in order to accomplish this intention; and regardless of whether inclusion in the code is accomplished, sections of this ordinance may be renumbered or relettered. The correction of typographical errors that do not affect the intent may be authorized by the County Manager, or his designee, without need of a public hearing, by filing a corrected or re-codified copy with the Clerk of the Circuit Court.

SECTION EIGHT: EFFECTIVE DATE

The small scale Lee Plan amendment adopted by this ordinance will be effective 31 days after adoption unless challenged within 30 days after adoption. If challenged within 30 days after adoption, the small scale amendment to the Lee Plan will not be effective until the Florida Department of Economic Opportunity or the Administrative Commission issues a final order determining the small scale amendment is in compliance with Florida Statutes, Section 163.3184. No development orders, development permits or land uses dependent on this amendment may be issued or commence before the amendment has become effective.

Commissioner Pendergrass made a motion to adopt the foregoing ordinance, seconded by Commissioner Sandelli. The vote was as follows:

Kevin Ruane	Absent
Cecil L Pendergrass	Aye
Raymond Sandelli	Aye
Brian Hamman	Absent
Mike Greenwell	Aye

DONE AND ADOPTED this 18th of October 2023.

ATTEST:
KEVIN C. KARNES
CLERK OF CIRCUIT COURT

BY: _____
Deputy Clerk

SEAL

LEE COUNTY BOARD OF
COUNTY COMMISSIONERS

BY: _____
Chair/Vice Chair

DATE: October 19, 2023

APPROVED AS TO FORM FOR THE
RELIANCE OF LEE COUNTY ONLY

_____
Lee County Attorney's Office

Exhibit A (Adopted by BOCC October 18, 2023):
Adopted existing Future Land Use Map 1-A
Adopted revisions to Future Land Use Map 1-A

CPA2023-00003

Existing Future Land Use

- Public Facilities
- Density Reduction/Groundwater Resource
- Conservation Lands - Upland
- Wetlands
- Conservation Lands - Wetland
- Subject Property

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Lee County
Southwest Florida

Map Generated: September 2023

CPA2023-00003

Proposed Future Land Use

- Public Facilities
- Density Reduction/Groundwater Resource
- Conservation Lands - Upland
- Wetlands
- Conservation Lands - Wetland
- Subject Property

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Lee County
Southwest Florida

Map Generated: September 2023

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

CORD BYRD
Secretary of State

October 20, 2023

Honorable Kevin Karnes
Clerk of the Circuit Courts
Lee County
Post Office Box 2469
Fort Myers, Florida 33902-2469

Dear Kevin Karnes:

Pursuant to the provisions of Section 125.66, Florida Statutes, this will acknowledge receipt of your electronic copy of Lee County Ordinance No. 23-28, which was filed in this office on October 19, 2023.

Sincerely,

Anya Owens
Administrative Code and Register Director

ACO/wlh

RECEIVED
By Chris Jagodzinski at 2:15 pm, Oct 20, 2023

STAFF REPORT FOR Southeast Advanced Water Reclamation Facility:

CPA2023-00003

Small-Scale Map Amendment to the Lee Plan

Recommendation:
Adopt

Amendment Type:
County Initiated
Lee County Public Utilities
Direction: 01/17/2023

Amended Element:
Lee Plan Map 1-A

Representative:
Alexis V. Crespo, AICP

Property Location:
18940 Green Meadow Rd
Fort Myers, FL 33913

Property Size:
± 35.65 acres

Community Plan Area:
Southeast Lee County

Commissioner District:
District #2

Hearing Dates:
LPA: 09/25/2023
BoCC #1: 10/18/2023

Attachments:
1: Proposed Amendments
2: Natural Resources Memo
3. Corkscrew Area Wastewater Master Planning Report
4. Applicant Materials

PURPOSE

Amend the Future Land Use Map designation on ±35.65 acres of the ±80-acre parcel from Density Reduction/Ground Water Resources (DR/GR) to Public Facilities.

SUMMARY

The requested amendment is to change the Future Land Use Map designation on ±36 acres from DR/GR to Public Facilities to allow the subject parcel, as well as the adjacent parcel to the west, currently designated Public Facilities, to be developed as a contiguous ±112-acre site. The request will allow for the development of the Southeast Advanced Water Reclamation Facility (SEAWRF) with an initial operating capacity of 6 million gallons per day (MGD) and the ability to expand to 10 MGD.

PROJECT LOCATION

The subject property is located on Green Meadow Road approximately 0.2 miles east of the intersection with Alico Road. See Figure 1, below.

Figure 1 : Aerial view of the subject property and surrounding area

RECOMMENDATION

Staff recommends that the Board of County Commissioners ***adopt*** the requested amendment based on the analysis and findings provided in this staff report.

Staff also recommends that the Board of County Commissioners make a formal finding that no significant impacts on present or future water resources will result from changing the Future Land Use Category, as required in Lee Plan Policy 2.3.1.

PART 1
STAFF DISCUSSION AND ANALYSIS

CONCURRENT REZONING

Lee County Utilities has filed a companion rezoning application (DCI2023-00011) which is being reviewed concurrently with this plan amendment request. The proposed rezoning of the property will change the zoning from Agricultural (AG-2) to Community Facilities Planned Development (CFPD) to allow the development of a public water reclamation facility.

Florida Statutes Chapter 163.3184(12) provides that "At the request of an applicant, a local government shall consider an application for zoning changes that would be required to properly enact any proposed plan amendment transmitted pursuant to this subsection." This requires that Lee County provide concurrent review of the rezoning request.

Even with the recommended adoption of the proposed amendment, Lee County Utilities must demonstrate consistency with the Lee Plan, including the proposed amendment, in order for the companion rezoning to receive a favorable recommendation.

SUBJECT PROPERTY

The subject property is located on Green Meadow Road approximately 0.2 miles east of the intersection with Alico Road and approximately 4 miles east of I-75. The property is located in the Southeast Lee County Community Plan area and is in the Density Reduction/Groundwater Resource (DR/GR) on the Future Land Use Map. The subject property is zoned Agricultural (AG-2).

The subject property was cleared prior to the 1960s and used for agricultural purposes. Historical agricultural uses included row crops through approximately 2002 when the site was converted to cattle pasture. The proposed amendments do not include the Wetlands and historic flowway immediately east of the proposed amendment area. The proposed amendment area includes the western ±36 acres of the 80-acre property. The remainder of the property will remain in the Wetlands future land use category.

The property was partially developed through a Special Exception (SEZ2008-00013) and Limited Development Order (LDO2009-00045), which allowed the construction of a 149-foot wireless communication facility and supporting infrastructure on the site.

A request to rezone the site to CFPD, DCI2018-10023, to allow a collocated wastewater treatment plant and solid waste facility was submitted in 2018. This request was subsequently withdrawn to address public concerns surrounding additional traffic and environmental impacts, complete additional public outreach, evaluate design alternatives, and to pursue this small-scale Future Land Use Amendment.

SURROUNDING PROPERTIES

Green Meadow Road abuts the subject property on the south side and includes public right-of-way (ROW) reserved for the Alico Road extension which will include a 250-foot-wide right-of-way, 4-lane arterial roadway capable of expansion to a 6-lane facility. Phase I construction adjacent to the subject property is planned for mid-year 2024 and construction is expected to be completed in late 2026.

South of Meadow Road/Alico Road extension are agricultural and single-family residential uses on parcels ranging in size from approximately 4 to 80 acres.

TABLE 1: SURROUNDING PROPERTIES INFORMATION

	Future Land Use	Zoning	Existing Use
North	Conservation Lands - Upland	AG-2	Conservation Land
East	Wetlands	AG-2	Unimproved
South	DR/GR	AG-2	ROW and Single-Family Residential
West	Conservation Lands-Wetland, DR/GR	AG-2/MEPD	Conservation Land and CEMEX Alico Road Mine

Other surrounding development in the area includes mining operations to the west, east and south as well as large-scale master planned communities south of Alico and along the Corkscrew Road corridor. Additionally, recently approved settlement agreements for "Kingston" and "FFD" will substantially increase the residential development in the surrounding area.

DISCUSSION AND ANALYSIS – MAP 1-A: FUTURE LAND USE MAP

The request is to amend the future land use category on ±35.65 acres of the ±80-acre parcel from DR/GR to Public Facilities to facilitate the development of a water reclamation facility (WRF). The subject site does not include any areas designated as Wetlands on the Future Land Use Map. The policies describing the existing and proposed future land use categories are provided below:

> **POLICY 1.4.5:** The Density Reduction/Groundwater Resource (DR/GR) future land use category includes upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed.
>
> 1. New land uses in these areas that require rezoning or a development order must demonstrate compatibility with maintaining surface and groundwater levels at their historic levels utilizing hydrologic modeling, the incorporation of increased storage capacity, and inclusion of green infrastructure. The modeling must also show that no adverse impacts will result to properties located upstream, downstream, as well as adjacent to the site. Offsite mitigation may be utilized, and may be required, to demonstrate this compatibility. Evidence as to historic levels must be submitted as part of the rezoning application and updated, if necessary, as part of the mining development order application.
> 2. Permitted land uses include agriculture, natural resource extraction and related facilities, conservation uses, public and private recreation facilities, and residential uses at a maximum standard density of one dwelling unit per ten acres (1 du/10 acres). See Objectives 33.2 and 33.3 for potential density adjustments resulting from concentration or transfer of development rights.
> 3. Private Recreational Facilities may be permitted in accordance with the site locational requirements and design standards, as further defined in Goal 13. No Private Recreational Facilities may occur within the DR/GR land use category without a rezoning to an appropriate Planned Development zoning category, and compliance with the Private Recreation Facilities performance standards, contained in Goal 13.

POLICY 1.1.8: The Public Facilities areas include the publicly owned lands within the County such as public schools, parks, airports, public transportation, and other governmental facilities. The allowable uses within these areas are determined by the entity owning each such parcel and the local government having zoning and permitting jurisdiction.

The subject request seeks to amend the future land use category from DR/GR to Public Facilities. Policy 1.4.5 describes the DRGR future land use category as "upland areas that provide substantial recharge to aquifers most suitable for future wellfield development." **Policy 1.1.8** describes the Public Facilities future land use category as areas that "include the publicly owned lands within the County such as public schools, parks, airports, public transportation, and other governmental facilities." The subject property is owned by Lee County and is currently in the DR/GR future land use category. The future land use of the property to the west was amended from DR/GR to the Public Facilities future land use category in Ordinance No. 18-25. See Figure 2, below.

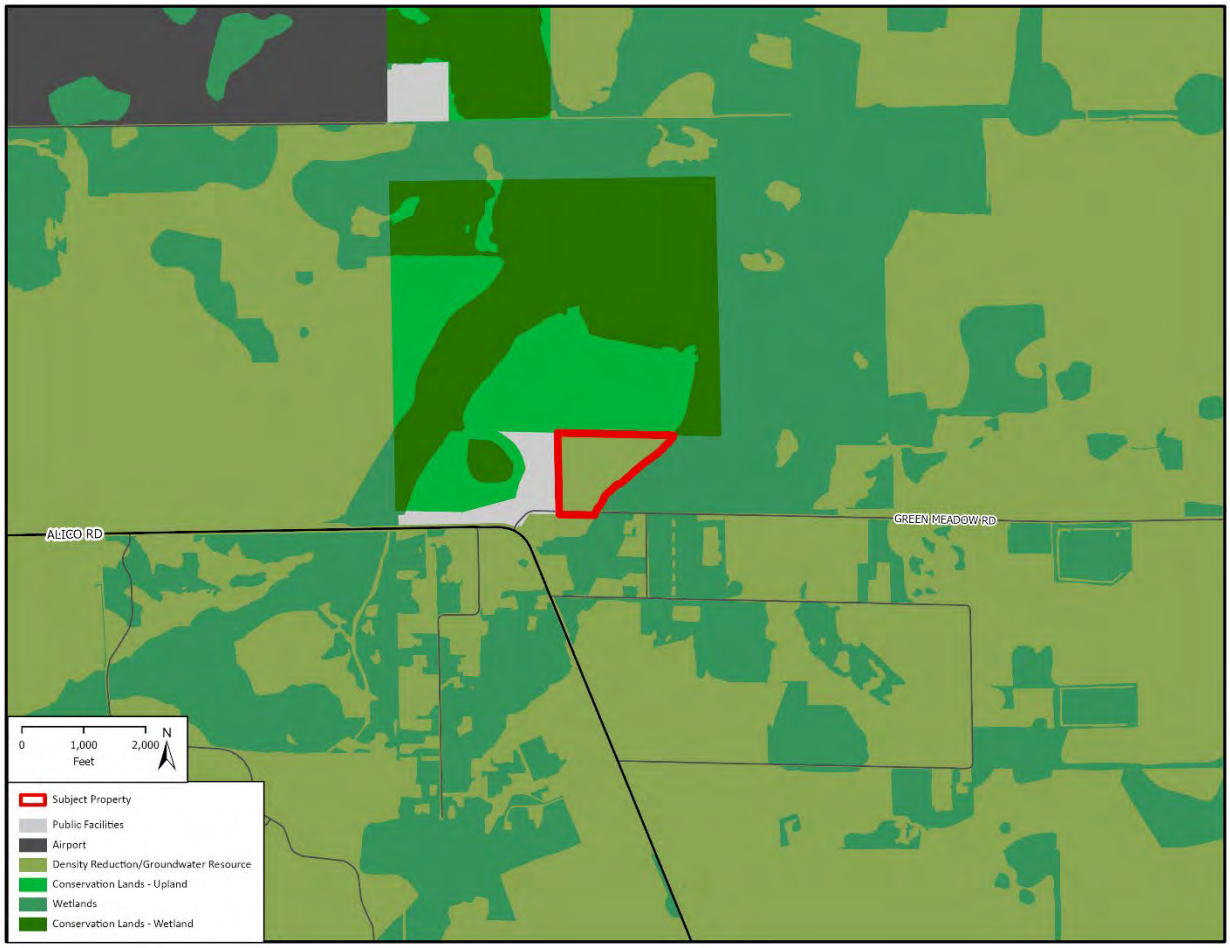


Figure 2: Existing Future Land Use Map of subject property and surrounding area.

Given the adjacent land use category, public ownership and intended future use, the request is consistent with the proposed future land use category. Although the intended use of the property is allowable in the DR/GR future land use category based on Policy 2.1.3, the proposed change to the future land use category is consistent with other Lee County Utilities facilities within Southeast Lee County, including the adjacent property to the west. Groundwater and surface water models were submitted and demonstrated

that no adverse impacts to surface or groundwater are expected from the proposed development. This is further discussed below.

The Subject property is within the Agricultural Overlay, as identified on Map 1-G. **Policy 1.6.7** describes the Agricultural Overlay special treatment area. Policy 1.6.7 provides that agricultural uses "should be protected from the impacts of new developments, and the county should not attempt to alter or curtail agricultural operations on them merely to satisfy the life-style expectations of non-urban residents." This policy is meant to protect existing agricultural uses in non-urban areas from compatibility concerns of nearby residents. Policy 1.6.7 does not prohibit the conversion of agricultural uses to other uses. Although Florida Statute 163.3177(6)(a) requires the Lee Plan's future land use element include the general distribution and location of land for agriculture, Florida Statute 187.201(22)(b)(1)) ensures the goals and policies in state and regional plans are not interpreted to restrict the conversion of agriculture lands to other uses. Similar language was deleted from the Lee Plan in Ordinance 21-09 to "remove redundancy with Florida Statute."

Goal 2 of the Lee Plan is to coordinate "the location and timing of new development with the provisions of infrastructure by government agencies." The proposed development of the SEAWRF is critical in providing centralized wastewater treatment facilities to developing communities.

Policy 2.3.1 and **2.3.2** requires applicant's amending the Future Land Use Map, for any land in the DR/GR future land use category, to analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources and to assess any significant impact that may occur to present or future water resources that will result from the proposed change. For the Board of County Commissioners to approve a change to the DR/GR future land use category, a formal finding that no significant impact will result must be made. To address these requirements a *Surface Water and Groundwater Impacts/Benefits Analysis* dated July 21, 2023 was provided. This analysis was reviewed by Natural Resources staff and found to be consistent with the requirements in **Policy 2.3.1** and **2.3.2** (see attachment 2). Therefore, the **Board of County Commissioners can make a formal finding that no significant impacts on present or future water resources will result from changing the Future Land Use Category, as required in Lee Plan Policy 2.3.1 and 2.3.2**

Policy 5.1.5 protects existing residential areas from any encroachment of uses that are potentially destructive. As previously discussed, there are no residential uses to the north, east, or west. There are residential uses south of Alico Road on relatively large parcels (approximately 4 to 80 acres). The nearest residential structure is located approximately 550 southeast of the proposed development across Green Meadow Road/Alico Road and will be buffered from the proposed development by the wetland in the southeast corner of the property, proposed to be preserved. Future residential development will be limited to areas south of the Green Meadow/Alico Road right-of-way. The proposed development of the SEAWRF will comply with landscape and buffering requirements in the LDC at time of development and will include odor abatement technology such as scrubbers and active carbon filters. The proposed development will be less intensive than existing uses in the area such as the CEMEX mining operation to the west and Florida Rock/Vulcan Materials mining operation to the east.

Opportunities for public input is required for privately initiated comprehensive plan amendments in accordance with **Objective 17.3** and **Policy 17.3.2**. Although Objective 17.3 and the subsequent policies do not apply to the proposed amendment because it was initiated by the County, a public information meeting was conducted approximately 5 miles from the subject site on 01/31/2023 by Lee County Utilities.

One of the primary intents of **Goal 33** is to protect Southeast Lee County's natural resources. Goal 33 also provides that public facilities are an allowable land use if found compatible with protecting Southeast Lee County's environment. To help determine compatibility with protecting Southeast Lee County's environment, **Policy 33.1.7** requires integrated surface and groundwater modeling to assess any adverse impacts of proposed development on surface and groundwater resources. The required models were submitted and were analyzed by the Lee County Division of Natural Resources. The review concluded that the models demonstrated no adverse impacts to surface or groundwater are expected from the proposed development. **Policy 33.1.8** describes the County's support of a comprehensive and coordinated effort to manage water resources and the protection and restoration of natural systems in Southeast Lee County. The proposed SEAWRF represents a coordinated effort to provide a solution to the need identified in the *Corkscrew Overlay Area Wastewater Master Planning Report* through the use of a centralized WWTP that will protect water resources and limit the use of individual uncoordinated septic systems thereby enhancing resource protection. The proposed project has minimal water supply demand and irrigation water will be sourced from treated effluent which is defined as an "alternative water supply" further enhancing resource protection. The proposed amendment is consistent with **Goal 33** and the applicable subsequent policies.

Goal 56 encourages utility providers to provide sanitary sewer service and wastewater treatment throughout Lee County. Furthermore **Objective 56.1** and **Policy 56.1.3**, addresses acceptable levels of sanitary sewer service and construction of sufficient treatment facilities to meet or exceed the minimum acceptable service standards. These level of service standards, as outlined in **Objective 95.1.3**, are the basis for planning and providing public facilities to meet the public need. The Corkscrew Overlay Area Wastewater Master Planning Report, completed in October 2016, identified a need to construct a WWTP in Southeast Lee County. Through significant analysis including wastewater flow projections, future development and population growth projections, the plan established that a new WWTP would be required to meet the future demand. The planning report also developed recommendations, site criteria, and timeframes necessary for construction of a new County-owned WWTP. The Corkscrew Overlay Area Wastewater Master Planning Report included an analysis of the planned development approval of Wildblue (1,096 DU), The Place at Corkscrew (1,325 DU), and Verdana (2,400 DU) in addition to other development projections to establish a total projection of 12,093 DUs within the Southeast Lee County Planning Community.

The Corkscrew Overlay Area Wastewater Master Planning Report analyzed two possible locations for the construction of a new WWTP based on the area of demand and support for fiscal and reduced environmental impact through the reduction of infrastructure. The first property identified was the location of the Corkscrew Water Treatment Plant on Alico Road approximately 0.6 miles north of the intersection of Alico Road and Corkscrew Road. Property number two was located on the north side of Corkscrew Road approximately 3.5 miles east of the intersection of Alico Road and Corkscrew Road. The plan further established that property number one provided several advantages including more developable area, less residential development immediately surrounding the location, and ease of conveying flows.

In May 2017 an addendum to the Corkscrew Overlay Area Wastewater Master Planning Report was completed. The addendum focused on a third potential location. The third location is the subject of this amendment request. The third site was selected after the completion of a due diligence siting analysis completed in 2018. The siting analysis identified the added benefit of a larger developable area and ability to maintain buffers and separation from adjacent properties.

After completion of the planning report and addendum, settlement agreements for additional density and intensity were approved for FFD[1] and Kingston[2] leading to a significant increase in projected future demand. These developments expand on the already documented need for the proposed WRF.

The proposed amendment is consistent with **Goal 56** and the applicable subsequent policies and furthers Lee County's ability to "provide sanitary sewer service and wastewater treatment facilities throughout Lee County."

Goal 63 protects the County's groundwater supplies from activities having a potential of depleting or degrading those supplies. As previously discussed, based on the requirements of **Goal 33,** and **Policies 2.3.1, 2.3.2, 33.1.7,** an integrated surface and groundwater model submitted by the applicant and reviewed by Lee County Natural Resources has demonstrated that the proposed amendment will not negatively impact the County's groundwater supplies. Additionally, the subject site is not within any Wellfield Protection Zone as identified on Map 4-C. The proposed amendment is consistent with **Goal 63**.

Policy 123.2.4 which encourages the protection of viable tracts of sensitive or high-quality natural plant communities. The subject 36+/- acres has previously contained agricultural row crop and cattle grazing activities and does not contain sensitive or high-quality plant communities. The request does not seek to change the future land use designation of the portion of the property designated Wetlands. The subject request is consistent with Policy 123.2.4.

Policy 123.4.4 restricts the use of protected plant and wildlife species habitat to that which is compatible with the requirements of endangered and threatened species and will provide equivalent mitigation, if necessary, prior to development. A Protected Species Survey, dated February 2023, did not observe any protected species or direct signs of protected species utilization within the subject area or the adjacent Wetlands. If species are documented prior to development, a species management plan will be required in accordance with the Land Development Code. The subject property is located within the USFWS Panther Primary Zone and within the secondary protection zone of a Crested Caracara nest. A Panther Habitat Unit Analysis will be required prior to construction and Recommended Management Practices for Caracaras will be implemented. The request is consistent with Policy 123.4.4.

Policy 126.1.1 provides that "natural water system features which are essential for retention, detention, purification, runoff, recharge and maintenance of stream flows and groundwater levels shall be identified, protected and managed." There are no wetlands, historic flowways or other natural water system features on the 36 acres subject to the proposed Future Land Use Map amendment. Additionally, the MCP submitted with DCI2023-00011 demonstrates that proposed impacts will not be located within wetlands or historical flowways. The proposed amendments are consistent with Policy 126.1.1.

Policy 127.1.1 requires development to prevent significant emissions of air pollution. The proposed development will be required to comply with all required air pollution regulations and will be designed to prevent emission of air pollution and significant odor using bio scrubbers and low-speed aerators.

[1] FFD: Case No.: 21-CA-001993 approved 5,208 dwelling units, residential amenities, and 100,000 square feet of commercial.
[2] Kingston: Case No.: 22-CA-002724 approved 10,000 dwelling units, residential amenities, 700,000 square feet of commercial and 240 hotel rooms.

Based on the analysis above, redesignating the subject property from Density Reduction/Groundwater Resource to Public Facilities is found to be appropriate and consistent with the Lee Plan.

SERVICE AVAILABILITY

The requested amendment will allow for the development of the SEAWRF on the subject property. There are adequate potable water, sanitary sewer, solid waste, police, fire and EMS to accommodate anticipated development on the subject property.

Transportation: The subject property is located on Alico Road and Green Meadow Road approximately 4 miles east of I-75. Alico Road is a 4-lane arterial roadway and Green Meadow Road is scheduled to be upgraded to a 4-lane arterial roadway as part of Phase 1 of the Alico Road Extension. The site will have direct access to an arterial roadway.

Short Range Impacts: Proposed change will not cause any roadway link to fall below the recommended minimum acceptable Level of Service thresholds.

Long Range Impacts: Proposed change will not cause any roadway link to fall below the recommended minimum acceptable Level of Service thresholds.

Mass Transit: The subject property is not within ¼ mile of a fixed route corridor and is further than ¼ mile of the nearest bus stop. The 2020 Transit Development Plan does not identify the need for enhanced or additional transit services in the area.

Utilities: The subject property is within the Lee County Utilities future potable water service areas as identified on Lee Plan Map 4-A. Once operational the facility will provide its own wastewater service.

Solid Waste: The subject property has access to solid waste services. Solid waste collection services will be provided by using Lee County contract haulers, the Lee County Resource Recovery Facility, and the Lee-Hendry Regional Landfill.

Fire: The San Carlos Park Fire Protection District indicated that they are capable of providing fire protection to the subject property.

EMS: The subject property has access to Emergency Medical Services. Lee County Emergency Medical Services indicated that they will be able to serve the property.

Police: The Lee County Sheriff's Office will provide law enforcement services primarily from the South District offices in Bonita Springs. The Sheriff indicated in a letter that development of the subject property will not affect the ability of the Lee County Sheriff's Office to provide core services at this time. The Sheriff's Office requests a Crime Prevention through Environmental Design report at the time of Development Order.

CONCLUSIONS

The proposed amendment will support the Lee Plan's aim to provide sanitary sewer service and wastewater treatment throughout Lee County, maintain minimum levels of service, and protect existing natural resources. The need, identified in the *Corkscrew Overlay Area Wastewater Master Planning Report,* for additional public infrastructure in Southeast Lee County is critical to address emerging

development patterns in the area. The proposed amendment will allow development of the SEAWRF with an initial operating capacity of 6 MGD and the option to expand to 10MGD to address the future demand.

Staff has reviewed the proposed amendments and provides the following conclusions.

- The adjacent parcel to west is in the Public Facilities future land use category.
- The proposed amendment supports Goal 56, Objective 56.1, 56.1.3, and Objective 95.1.3 which aim to provide sanitary sewer service and wastewater treatment at acceptable levels of service throughout Lee County.
- The proposed amendment will not result in significant impacts to present or future surface and groundwater resources as demonstrated through the use of groundwater and surface water modeling, consistent with Goal 33, Goal 63, Objective 60.1 and Policies 2.3.1 and 2.3.2.
- The subject request does not include the areas of the property designed Wetlands and does not contain sensitive or high-quality plant communities or protected species. The request is consistent with Policies 60.4.3, 123.2.3, 126.1.1, and 126.1.4.
- The concurrent rezoning request will provide oportunities to address compatibility with surrounding uses.

For the reasons discussed in this staff report, staff recommends that the Board of County Commissioners ***adopt*** the proposed amendments as provided in Attachment 1.

PART 2

LOCAL PLANNING AGENCY
REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: September 25, 2023

A. LOCAL PLANNING AGENCY REVIEW

The applicant's representatives provided a presentation addressing the requested amendment, subject property, existing and proposed future land use categories, surrounding uses, environmental impacts, and consistency with the Lee Plan.

Members of the LPA asked about plans for disposal of the reclaimed water, location of reclaimed water mains, location of the proposed facility based on flows and demand, possibility of other development on the parcel, daily trip estimates, number of employees, separation from existing residential structures, and odor control enhancements.

Following this, staff made a presentation addressing the requested amendments, subject property, and consistency with the Lee Plan and staff recommendation.

Two members of the public addressed the Local Planning Agency concerning the proposed amendment. The first public comment opposed the proposed amendment based on parcel history, prior zoning actions, topography, and use of the reclaimed water. The second public comment opposed the proposed amendment and questioned the compatibility with nearby mining operations, possible impacts to the water levels in the area, and possible issues related to the use of deep injection wells.

B. LOCAL PLANNING AGENCY RECOMMENDATION

A motion was made to recommend that the Board of County Commissioners (BoCC) ***adopt*** CPA2023-00003. The motion passed 5 to 0.

RAYMOND BLACKSMITH	**ABSENT**
KEITH DEAN	**AYE**
DUSTIN GARDNER	**AYE**
DAWN RUSSELL	**AYE**
DON SCHROTENBOER	**ABSENT**
STAN STOUDER	**AYE**
HENRY ZUBA	**AYE**

C. STAFF RECOMMENDATION

Staff recommends that the BoCC make a formal finding that no significant impacts on present or future water resources will result from changing the Future Land Use Category, as required in Lee Plan Policy 2.3.1, and ***adopt*** the proposed amendment as provided in Attachment 1.

PART 3
BOARD OF COUNTY COMMISIONERS
ADOPTION HEARING

DATE OF PUBLIC HEARING: October 18, 2023

A. BOARD REVIEW:

Staff provided a brief presentation for the proposed amendment which included LPA and staff recommendations and an overview of the proposed amendment, compatibility with the surrounding area, Lee Plan consistency, and availability of public services.

Two members of the public addressed to Board of County Commissioners concerning the proposed amendment. The members of the public opposed the proposed amendment based on parcel history, small scale amendment criteria, airport compatibility, possible impacts to adjacent properties and wildlife impacts.

B. BOARD ACTION:

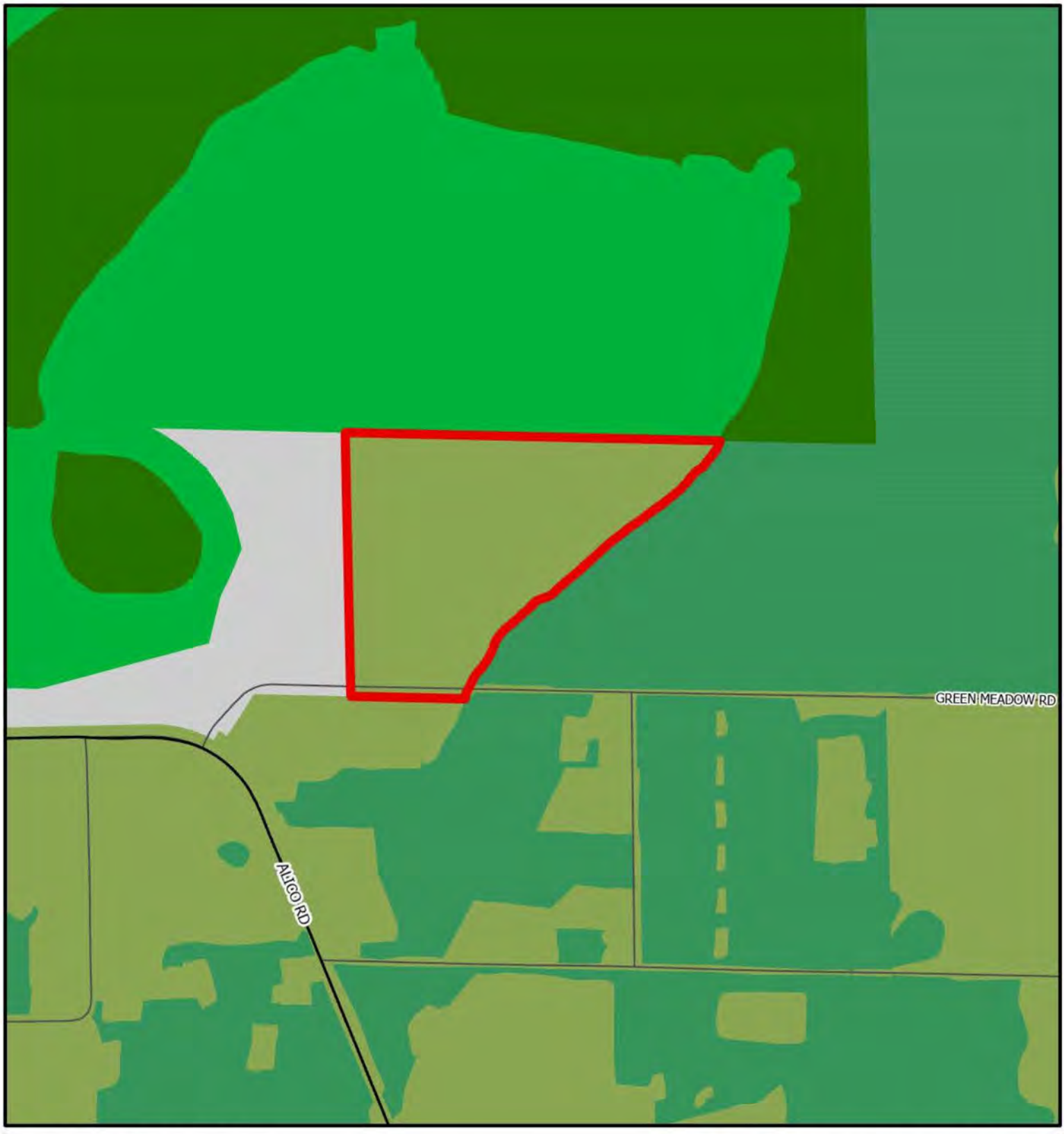
A motion was made to ***adopt*** CPA2023-00003 as recommended by staff and the LPA. The motion passed 3 to 0.

VOTE:

MIKE GREENWELL	**AYE**
BRIAN HAMMAN	**ABSENT**
CECIL PENDERGRASS	**AYE**
KEVIN RUANE	**ABSENT**
RAY SANDELLI	**AYE**

ATTACHMENT 1

- **Proposed Amendments**



CPA2023-00003

Existing Future Land Use

Public Facilities
Density Reduction/Groundwater Resource
Conservation Lands - Upland
Wetlands
Conservation Lands - Wetland
Subject Property

N
W
E
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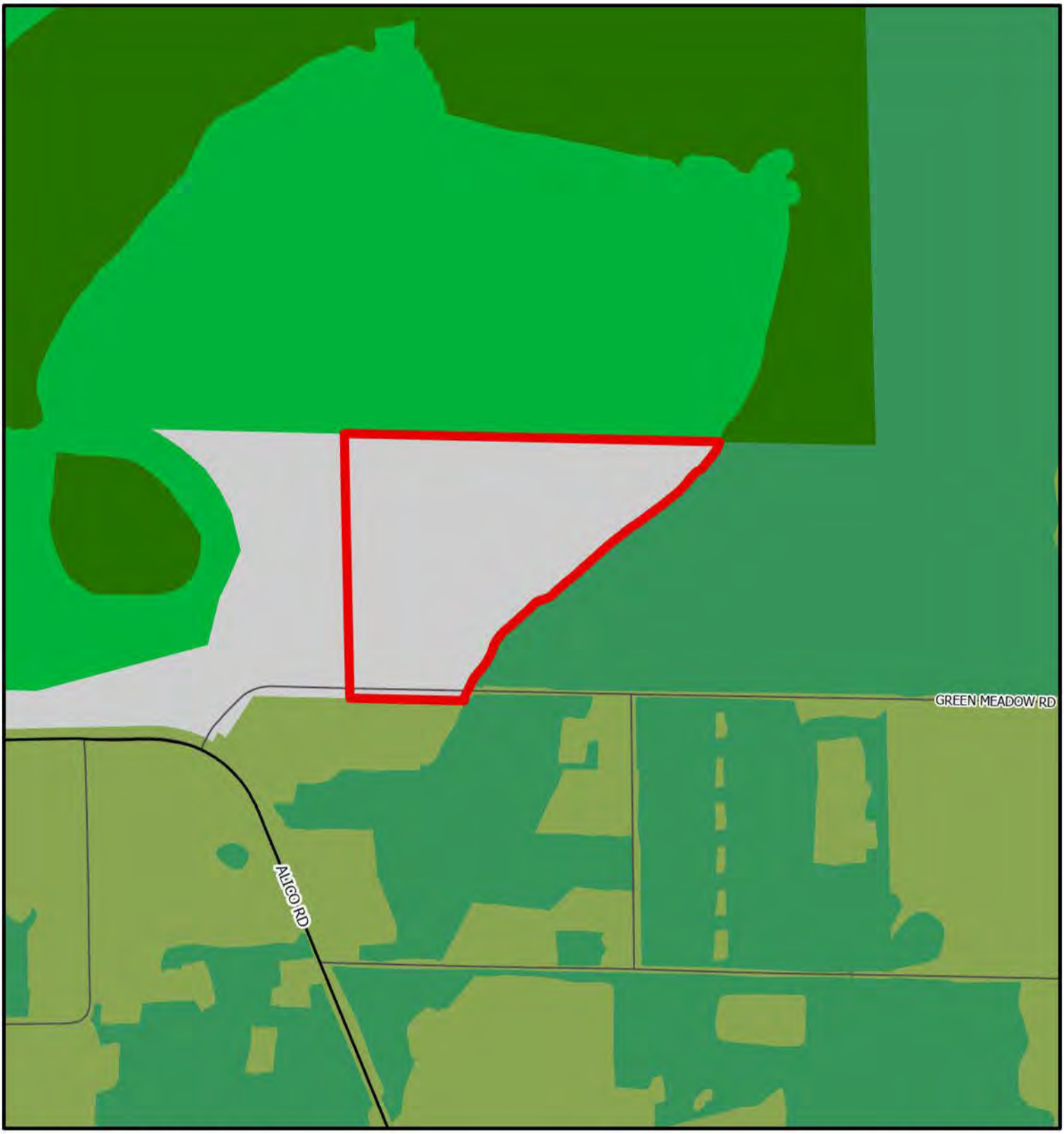
0 1,000
Feet

Lee County
Southwest Florida

Map Generated: September 2023



CPA2023-00003

Proposed Future Land Use

- Public Facilities
- Density Reduction/Groundwater Resource
- Conservation Lands - Upland
- Wetlands
- Conservation Lands - Wetland
- Subject Property

Lee County
Southwest Florida

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Map Generated: September 2023

ATTACHMENT 2

- **Natural Resources Memo**

MEMORANDUM

FROM
PUBLIC WORKS
Natural Resources Division

TO: **Brandon Dunn**
Manager, Planning Section

DATE: **September 06, 2023**

FROM: **Phil Gillogly, P.E.**
Operations Manager, Department of Natural Resources

SUBJECT: CPA2023-00003 Southeast Advanced Water Reclamation Facility (SEAWRF)

Natural Resources staff has reviewed the information provided by the applicant. The subject property is a disturbed site which was previously used for row crops and cattle pasture. The proposed SEAWRF will be constructed on the upland portions of the property and the wetlands to the east will remain undeveloped.

The applicant is requesting an amendment to the Lee Plan that includes removal of the subject property from the DR/GR future land use category. Lee Plan Policy 2.3.1 is directly related to this request and is stated below:

> POLICY 2.3.1: All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Lehigh Acres as described in Policy 54.1.9 and all land in the DR/GR land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change. (Ord. No. 92-47, 94-30, 00-22, 02-02, 14-10, 18-05)

To address these requirements the applicant submitted a Surface Water and Groundwater Impacts/Benefits Analysis prepared by Johnson Engineering dated July 21, 2023. The analysis looked at the existing conditions and uses onsite compared to the proposed use. Currently, the property is permitted to utilize 335 million gallons of water from the water table aquifer from four wells and 0.94 million gallons from the Mid-Hawthorne aquifer. The water reclamation facility will be connected to potable water supply and any irrigation will utilize reclaimed water from the plant. This elimination of groundwater use will have a positive impact on the groundwater resource within the DR/GR.

Additionally, onsite stormwater management facilities will be required to meet the South Florida Water Management (SFWMD) and Florida Department of Environmental Protection (FDEP) environmental resource permit criteria which includes maximum peak discharge rates, water quality treatment, flood protection, evaluation of offsite impacts, and evaluation of wetland impacts. The proposed stormwater management system will store more water onsite than the current state of the property. The modeling also shows no significant change to offsite water levels.

Based on the analysis provided, and the proposed water quality monitoring plan, the Division of Natural Resources staff finds that no significant impacts on present or future water resources will result from the proposed amendment. The Division of Natural Resources staff recommends that the Board of County Commissioners make a formal finding that no significant impacts on present or future water resources will result from changing the Future Land Use Category, as required in Lee Plan Policy 2.3.1.

This memo does not intend to relieve the applicant from complying with any part of the Lee Plan. The applicant may be required to confirm their findings through additional data and a detailed numerical modeling process at a later stage of plan development. Upon receipt of further information during the plan development stage, staff reserves the right to review and disagree with any or all of the water resources analysis. Lee County staff also reserves the right to deny the application for plan amendment or subsequent applications for zoning changes or development if it is found that the project as proposed is not consistent with the Lee Plan.

ATTACHMENT 3

- **Corkscrew Area Wastewater Master Planning Report**

Attachment 4.1

Engineering Report

Corkscrew Overlay Area Wastewater Master Planning

October 2016

Prepared for:

Lee County Utilities
1500 Monroe Street
Fort Myers, FL 33901

Prepared by:

Post Office Box 1550
2122 Johnson Street
Fort Myers, Florida 33902-1550
(239) 334-0046
E B 642

20149877-004 / CN-140236 Contract No. 6890

Executive Summary

Projections indicate that a new southeast Lee County wastewater treatment plant (SEWWTP) will need to be constructed by 2025, assuming the Three Oaks WWTP is not expanded until build-out. **An initial permitted treatment capacity of 2.5 MGD for a future SEWWTP is projected to be sufficient through 2040.** County-owned property at the northeast corner of the Corkscrew Road / Alico Road intersection is recommended to be the location of a future SEWWTP. This location would be shared with the County's Corkscrew WTP / wellfield. Regulatory considerations for proximity between the SEWWTP and Corkscrew WTP will need to be addressed.

Timeframe	Projected Permitted Treatment Capacity for a Future SEWWTP
2020 – 2025	0.5 MGD
2025 – 2030	1.5 MGD
2030 – 2035	2.0 MGD
2035 – 2040	2.5 MGD
Build-Out	4.5 MGD

Two master lift stations can be used to reallocate wastewater flows from a portion of the Three Oaks WWTP service area to a future SEWWTP. Lift Station 7716, located at the Corkscrew Road / Three Oaks Parkway intersection, can convey flow from the southwest portion of the Three Oaks WWTP service area to a future master pump station located at the Pinewoods WTP (PWMPS). The future PWMPS can convey flow from LS-7716 and areas around Corkscrew Road / Ben Hill Griffin Parkway to a future SEWWTP.

Lift Station	Projected Daily Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Peak Hour Wastewater Flow (GPM)
7716	1,100,000	800	2,300
PWMPS[1]	1,800,000	1,200	3,300

[1] Assumes areas to the east will manifold with the force main between the PWMPS and a future SEWWTP.

Projected build-out size requirements for force mains along Corkscrew Road, within the Overlay Area (Overlay Area force main); between the future PWMPS and a future SEWWTP (PWMPS force main); and between LS-7716 and the future PWMPS (LS-7716 force main), are evaluated. Sizing is based on limiting flow velocity to a range between 2.0 and 6.0 feet per second.

Force Main	Projected Size Requirement at Build-Out
Overlay Area Force Main[1,2]	10-inch
PWMPS Force Main	20-inch
LS-7716 Force Main	16-inch

[1] A 14-inch force main be required if extensive development outside of the Overlay Area occurs and / or service is extended to the residential area located near State Road 82.

[2] The 10-inch force main is sized to meet minimum velocity of 2.0 feet per second under average flow conditions. However, considerations for headloss may require the use of a 12-inch force main.

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1.0 Introduction

Lee County Utilities (*LCU*) has contracted with Johnson Engineering to evaluate future development within the Southeast Lee County planning community (*SELCPC*), including an area referred to as the "Environmental Enhancement and Preservation Communities Overlay" (*Overlay Area*). This evaluation also reexamines previous projections[1] prepared for the Three Oaks wastewater treatment plant service area. This evaluation will refer to the Three Oaks WWTP service area and the SELCPC (including the Overlay Area) as the *study area*. Note that the Three Oaks WWTP service area overlaps a portion of the Overlay Area.

Projections based on previous assumptions[1] indicated the Three Oaks WWTP is unlikely to have sufficient capacity to treat all wastewater generated within the existing service area by approximately 2035. Future development in the Overlay Area will increase the projected treatment deficit at the Three Oaks WWTP unless other treatment alternatives are implemented. Johnson Engineering has previously evaluated options to reallocate wastewater from the Three Oaks WWTP to other existing facilities to avoid future capacity exceedance at this facility[2]. Considerations for transmission costs result in the conclusion that this approach is unlikely to be feasible.

This evaluation focuses on conceptual aspects of constructing a new WWTP in southeast Lee County in response to projected capacity exceedance at the Three Oaks WWTP, including:

- Preparing development, population, and wastewater flow projections for the SELCPC.
- Developing recommendations and timeframes for constructing new County-owned wastewater infrastructure to provide or extend wastewater services within the SELCPC.
- Developing capacity estimates and a delineated service area for a new Southeast Lee County Wastewater Treatment Plant (SEWWTP).
- Developing recommendations to revise the existing Three Oaks WWTP service area to account for projected capacity limitations.
- Developing recommendations to revise the existing Gateway WWTP service area to include a portion of the SELCPC.

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1 *Ben Hill Griffin Parkway / Alico Road Wastewater Force Main. Wastewater Flow Projections for the Three Oaks WWTP Service Area.* Prepared by Johnson Engineering for Lee County Utilities (December 2014). CN-12-19.

2 *Three Oaks WWTP Service Area. Options for Future Wastewater Flow Reallocation*. Prepared by Johnson Engineering for Lee County Utilities (July 2015). CN-12-19.

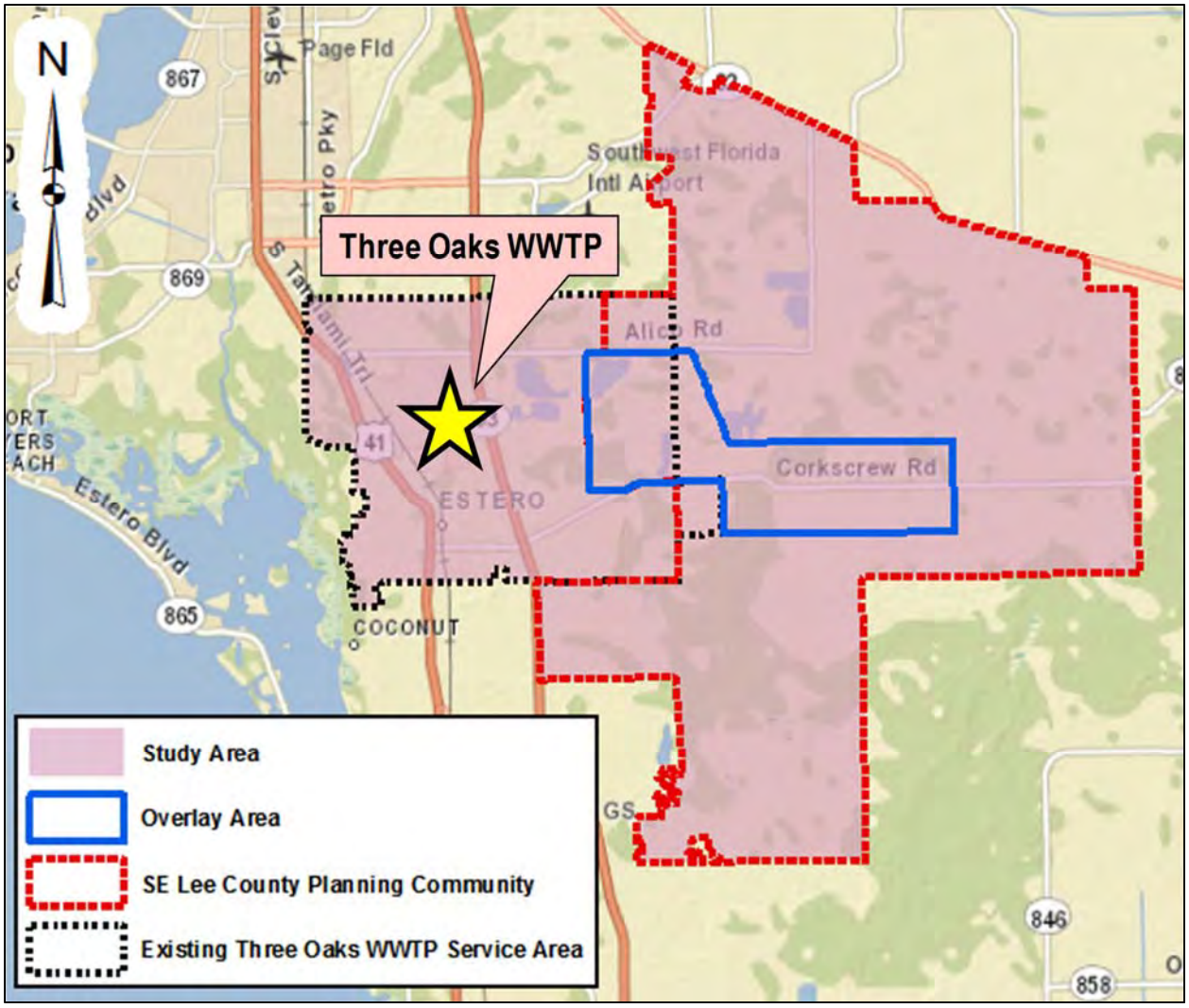

Figure 1: Study Area

LIMITATIONS

The evaluations presented in this report are based on County guidance, interpretations of various County policies, and assumptions regarding, but not limited to, development patterns, population growth, wastewater production, and County wastewater infrastructure that are current as of 2016. Assumptions may be subject to changes in the future.

2.0 Development Projections for the SELCPC

The SELCPC includes approximately 81,000 acres of wholly-contained parcels / tracts:

- *Density Reduction / Groundwater Resources* (DRGR) – approximately 35,900 acres.
  - 1 dwelling unit (DU) per 10 acres by-rights development[3], subject to certain incentives.
- *Wetlands* – approximately 23,000 acres.
  - 1 DU per 20 acres by-rights development[3].
- *Conservation Lands* – approximately 22,500 acres.
  - No allowable development.

In general, development policies within the SELCPC are intended to preserve natural areas by concentrating development into smaller areas, providing mechanisms for transferring development to areas outside of the SELCPC, and providing incentives for development that restores and / or protects environmentally important land.

FINDINGS:

- Approximately 12,100 DUs could be contained within the SELCPC at build-out.

2.1 Considerations

The County has implemented programs to incentivize preservation, protection, and restoration of environmentally sensitive land within the SELCPC. Considerations are made for County programs that enable development rights to be transferred out of the SELCPC and incentivize certain types of development that include environmental enhancements.

2.1.1 Transferred Development Rights (TDRs)

The County has established two programs by which development rights can be relocated from sensitive land to other areas via creation of Transferred Development Rights (TDR) credits:

- Wetlands: 1 TDR[4] credit per 20 acres if the credit is redeemed within the SELCPC; otherwise 1 TDR credit[5] per 5 acres.

[3] *Lee Plan. Lee County – A Vision for 2030*. Table 1(a).
[4] The Wetlands program refers to TDUs, or Transferred Development Units. It is assumed that these equivalent to TDR credits.

- Southeast DR/GR[6,7]: 1 TDR credit per 10 acres plus an available incentive of 2 additional TDR credits per original TDR credit created from DRGR land in certain areas[6] of the County's Priority Restoration Strategy (PRS)[8].

The Lee Plan states that no more than 2,000 DUs may be placed in Mixed Use Communities (MUCs) within the SELCPC via TDR credits[6].

ASSUMPTIONS

- TDR credits created from Wetlands within PRS lands do not qualify for the two additional (incentive) TDR credits. Only land with a DRGR classification qualifies for the incentive.
- Both TDR programs are applicable in the SELCPC. The "Southeast DR/GR area" or "Southeast DR/GR lands" refers only to lands with a DRGR Land Use classification.
- Per County guidance, any DUs transferred into the SELCPC will require TDR credits.
- TDR credits can be redeemed within Environmental Enhancement and Preservation Communities at a rate of 1 DU per TDR credit.

2.1.2 Environmental Enhancement and Preservation Communities (EEPCs)

Environmental Enhancement and Preservation Communities (EEPCs) can be developed within a specified region referred to as the Overlay Area and must meet certain requirements[9]. By-rights residential density within the Overlay Area is as follows:

- PRS Tier 1 land: 1 DU per acre.
- PRS Tier 2 land: 1 DU per 2 acres.
- Other land within the Overlay Area: 1 DU per 3 acres.

ASSUMPTION

- The Overlay Area will not change from the delineated area as of 2016.
- Additional residential density within Overlay Area developments will be obtained through full utilization of the 2,000 TDR credits that are redeemable within the SELCPC.

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5 *Lee County Land Development Code.* Ch. 2, Sec. 2-149 (a).
6 *Lee Plan. Lee County – A Vision for 2030*. Policy 33.3.6. April 2016.
7 Referenced as "Southeast DR/GR Area" or "Southeast DR/GR lands" by the *Lee Plan*.
8 *Lee Plan. Lee County – A Vision for 2030*. Map 1 (Page 4 of 8). April 2012.
9 *Lee Plan. Lee County – A Vision for 2030*. Policy 33.3.4. April 2016.

2.2 Build-Out Development Projections for the SELCPC

Development within the SELCPC is considered for six categories exclusive to this evaluation[10]:

- Non-developable land.
- Land not used for creating TDR credits or future by-rights mixed use development.
- Land used for creating TDR credits.
- Existing or approved residential developments.
- Future communities within the Overlay Area.
- Future by-rights future mixed use development.

2.2.1 Non-Developable Land

Non-developable land includes properties classified as *Conservation*, land with *Resource Protect* (use) descriptions (or similar), and land owned by governmental or regulatory agencies.

FINDINGS:

- Approximately 29,000 acres within the SELCPC appear to be non-developable.

2.2.2 Land Not Used for Creating TDR Credits or Future By-Rights Mixed Use Development

This category generally includes small parcels (25 acres or less) with one or more of the following characteristics:

- Part of the "Existing Acreage Subdivided" category[11].
- Located near the City of Bonita Springs.
- Residential zoning and outside of a residential development.
- Contain an existing building or buildings (DU or otherwise).
- Existing land use that is ineligible for creating TDR credits.

FINDINGS

- This category includes 6,900 acres and approximately 580 existing DUs. Approximately 520 additional DUs could be built in the future.

[10] These categories are not, and do not purport to be, representative of the County's policies for development within the SELCPC.
[11] *Lee Plan. Lee County – A Vision for 2030*. Map 17. December 2015.

2.2.3 Land Used for Creating TDR Credits

Lee County Utilities staff have directed Johnson Engineering to assume "efficient creation of TDR credits". The basis of this direction is to approximate maximum potential development within the SELCPC for the purpose[12] of estimating an upper limit for future wastewater flows.

ASSUMPTIONS

- Tier 1 and Tier 2 PRS lands within the Overlay Area are not used to create TDR credits.
- Tier 1 and Tier 2 PRS lands outside of the Overlay Area are used to create TDR credits.
- All of Tier 3, and portions of Tiers 5, 6, and 7 PRS lands that qualify for additional TDR credits, are used to create TDR credits.
- Vacant parcels "orphaned" in non-developable land are used to create TDR credits.

Table 1: Projected TDR Credit Creation from Lands within the SELCPC

Area	Land Use	Area (acres)	By-Rights TDR Credits	PRS Incentive TDR Credits[6]	Total TDR Credits
Tier 1, 2, 3, & Southern Two Miles of 5, 6, & 7 PRS Lands	DRGR	9,950	995	1,990	2,985
	Wetlands	6,030	302	0	302
	Other[13]	112	0	0	0
Orphaned Parcels	DRGR	130	13	0	13
	Wetlands	119	6	0	6
	Other[13]	2	0	0	0
	Totals	**16,343**	**1,316**	**1,990**	**3,306**

ASSUMPTION

- 2,000 TDR credits are redeemed for future communities within the Overlay Area; the remaining 1,306 are assumed to be redeemed outside of the SELCPC.

FINDINGS

- Approximately 3,300 TDR credits could be created from 16,100 acres of PRS lands and 250 acres of "orphaned" land (see Table 1).

[12] This approach is exclusive to this evaluation and is not representative of the County's development goals for the SELCPC.
[13] Portions of these lands are classified as Conservation Lands, which are assumed to be ineligible for creating TDR credits.

2.2.4 Existing or Approved Residential Developments

Five residential developments located within the SELCPC are existing or have been approved[14].

ASSUMPTION

- The number of DUs for existing / approved residential developments will not change from approved numbers obtained from applications or ordinances as retrieved in June 2016.

Table 2: Current Residential Developments

Name	Status	Area (acres)	Approved DUs
Corkscrew Farms / The Place	Approved	1,361	1,325
Corkscrew Woods / Corkscrew Shores	Existing	722	800
East Corkscrew / The Retreat	Existing	275	25
Ultimate Ski Lake	Existing	167	13
WildBlue	Approved	2,960	1,000
	Totals	5,485	3,163

FINDINGS:

- Existing or approved residential developments include 5,500 acres of land and 3,163 approved DUs (see Table 2).

2.2.5 Future Communities within the Overlay Area

Approximately 2,889 acres within the Overlay Area have been identified as potential sites for future communities. These lands are currently undeveloped and generally consist of large tracts.

ASSUMPTIONS

- Non-subdivided land or land under common ownership that is located within the Overlay Area will be used to develop future communities due to the increased allowable density.
- An additional 2,000 DUs will be transferred into the Overlay Area via TDR credits.

[14] Based on applications and approved ordinances obtained from the Lee County Zoning document search and the *LeeSpins* GIS web service. June 2016. Pending and / or withdrawn applications are excluded.

Table 3: Future Communities within the Overlay Area

PRS Designation	Area (acres)	By-Rights DUs	TDRs	Total DUs
Tier 1	1,238	1,238	2,000	3,893
Tier 2	630	315		
Other within Overlay	1,021	340		

FINDINGS:

- Future communities within the Overlay Area could include approximately 3,900 DUs (see Table 3).

2.2.6 Future By-Rights Mixed Use Development

This category includes remaining lands that are not assigned to other categories. This category generally consists of large parcels, and includes existing industrial planned developments (e.g. mining operations).

Mixed Use Communities (MUCs) are used to concentrate by-rights development of large contiguous tracts into smaller areas[15]. Additional density within a MUC may be obtained at a rate of 1 DU per 5 acres of preserved uplands[16] located on the contiguous tract[15]. Maximum gross density is limited to 5 DUs per acre of land designated as a MUC[15]. These conditions are evaluated to estimate the maximum DUs that could be placed on these lands through MUC development.

ASSUMPTIONS

- Lands in this category will be developed in the future as Mixed Use Communities[15].
- Within contiguous tracts, Mixed Use Communities will not be constructed on Wetlands. Only land classified as DRGR will be developed.
- No TDR credits will be redeemed in future Mixed Use Communities.
- These lands are considered on an aggregate basis. Considerations for individual properties may reduce the quantity of DUs based on the size and nature of the property.

[15] *Lee Plan. Lee County – A Vision for 2030*. Policy 33.3.2. April 2016.
[16] *Uplands* are assumed to correspond to DRGR land.

Table 4: Future By-Rights Mixed Use Development

Land Use	Area (acres)	DUs
DRGR	12,430	1,243
Wetlands	7,379	369
Other[17]	99	0
Preserved Uplands[16,18]	11,642	2,328
Total		3,940

FINDINGS

- As shown in Table 4, an approximate maximum of 3,900 by-rights DUs could be placed on future *MUC-designated areas* within the SELCPC.

2.3 Summary

Based on assumptions presented in Sections 2.2.1 – 2.2.6, approximately 12,100 DUs could be contained within the SELCPC (see Table 5). An overview of assumed development patterns is presented in Figure 2.

Table 5: Development Projections Summary

Category	Area (acres)	DUs
Non-Developable Land	28,939	0
Land Not Used for Creating TDR Credits or Future By-Rights Mixed Use Development	6,881	1,097
Land Used for Creating TDR Credits	16,343	0
Existing or Approved Residential Developments	6,085	3,163
Future Communities within the Overlay Area	2,889	3,893
Future By-Rights Mixed Use Development	19,908	3,940
Totals	81,045	12,093

[17] Portions of these lands are classified as *Airport*, *Conservation Lands*, *Public Facilities*, or *Tradeport*.
[18] 11,642 of Preserved Uplands results in the maximum number of potential DUs.

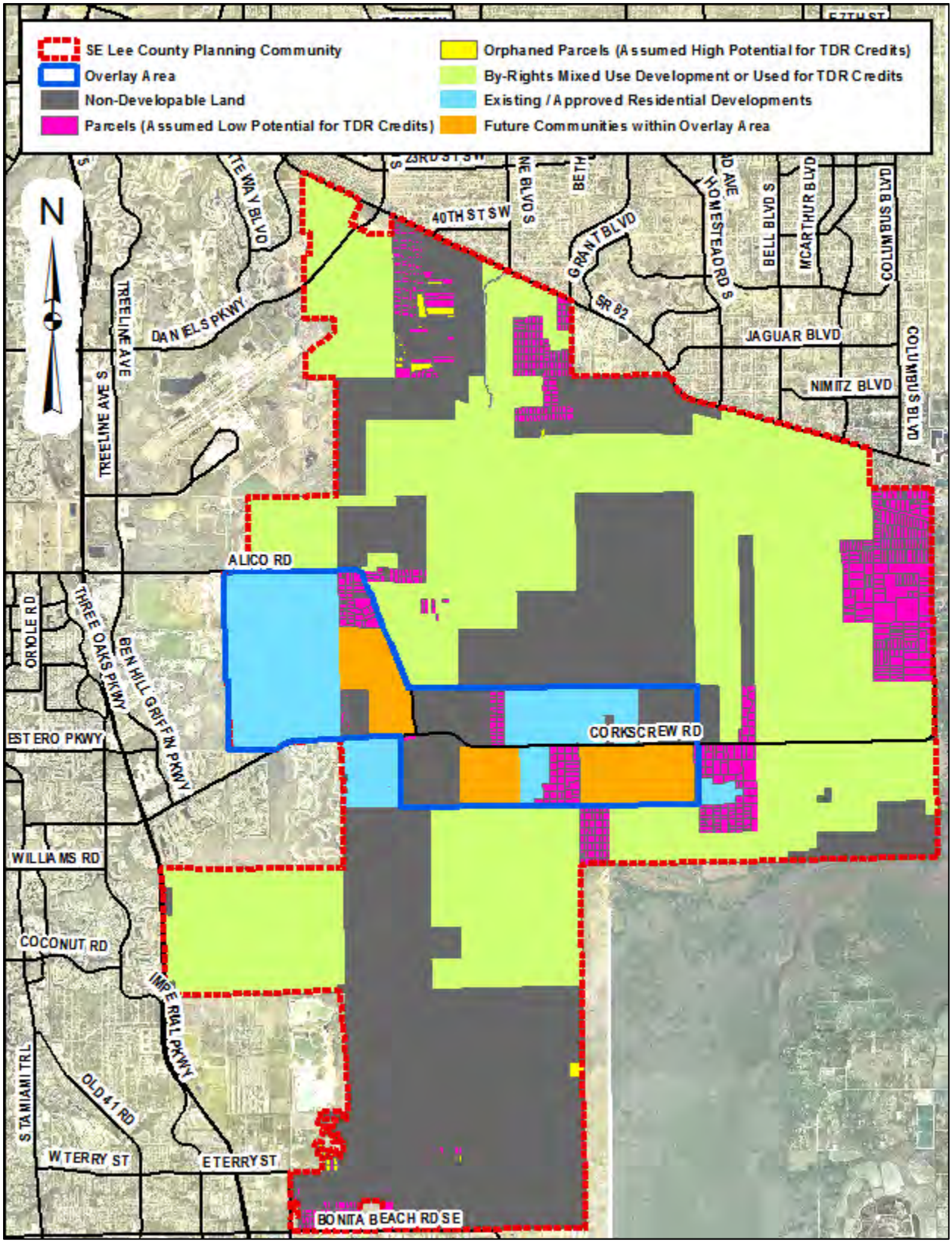

Figure 2: Overview of Projected Development within the Southeast Lee County Planning Community

3.0 Population Projections

Population projections are prepared for the study area, which includes the SELCPC and the existing Three Oaks WWTP service area. The population projections are the basis for evaluating future wastewater treatment needs in the study area.

FINDINGS

- The study area population is projected to increase by approximately 70% between 2015 and 2040 and by approximately 100% between 2015 and build-out.
  - The SELCPC population is projected to increase by approximately 600% between 2015 and 2040 and by approximately 900% between 2015 and build-out.
  - Population within the existing Three Oaks WWTP service area is projected to increase by approximately 50% between 2015 and 2040 and by approximately 80% between 2015 and build-out.

3.1 Approach

Population projections prepared for this evaluation (*updated projections)* are based on an approach used previously to prepare population projections for the Three Oaks WWTP service area[19] (*original projections*) as part of a prior contract with the County. A brief overview of the approach is as follows:

- The study area is divided into sub-areas referred to as "*parcel groups*". The current projections utilize the parcel groups from the 2014 report and three additional parcel groups for the SELCPC.
- The 2015 population for the study area is estimated using the original projections for the Three Oaks WWTP service area and property data for the SELCPC.
- The build-out population for the study area is estimated using:
  - The original projections for the Three Oaks WWTP service area with updates based on information available in 2016.
  - The SELCPC development projections presented in Section 2.0.

[19] *Ben Hill Griffin Parkway / Alico Road Wastewater Force Main. Wastewater Flow Projections for the Three Oaks WWTP Service Area.* Prepared by Johnson Engineering for Lee County Utilities (December 2014). CN-12-19.

Projections are prepared for 2015 through 2040, in five-year intervals, as follows:

- Base population growth (*base growth*) is estimated using a projected growth rate.
- Population growth is allocated to parcel groups using the ratio between remaining DUs in a parcel group and the remaining DUs in the study area, where "remaining DUs" refers to the difference between DUs at build-out and DUs at the end of the previous five-year interval.
- The number of existing DUs in each parcel group is updated to include new DUs attributable to the population growth during the five-year interval using population metrics provided by the County.
- In certain cases, the number of existing DUs for a parcel group at the end of an interval is assigned and the population growth is estimated using the population metrics. These cases result in "excess growth".

3.1.1 Data Sources and Definitions

Population projections prepared for this evaluation utilize the following data sources:

- County-wide population projections prepared by the Bureau of Economic and Business Research[20] (*BEBR*).
- Planning community population metrics[21] provided by the County, which include:
  - Average persons per household.
  - Average occupancy rates[22].

Population projections are prepared on the basis of *total population* and *permanent population*:

- *Total population* refers to the total number of residents in a given area. For a given parcel group, t*otal population* equals the number of existing DUs multiplied by the *average persons per household* for the planning community where it is located.
- *Permanent population* refers to the number of full-time residents in a given area. For a given parcel group, *permanent population* equals the *total population* multiplied by the *average occupancy rate* for the planning community where it is located.

[20] *Projections of Florida Population by County, 2020-2045, with Estimates for 2015*. Bureau of Economic and Business Research. University of Florida, College of Liberal Arts and Science (January 2016). Vol. 49, Bulletin 174.

[21] Provided to Johnson Engineering in 2014 as part of the *Ben Hill – Alico Road Wastewater Force Main* project (CN-12-19).

[22] The "occupancy rate" refers to the portion of the total population that are year-round residents (i.e. not seasonal). This is not to be confused with "vacancy rate", which refers to a proportion of dwelling units that are not occupied, and is not considered.

3.2 Considerations

Considerations are made for the potential of the study area to experience growth rates that are higher than the County-wide average based on the County's observations regarding development in the study area. Considerations are also made for changing population metrics in the SELCPC that may occur due to changing development patterns that deviate from historical conditions.

3.2.1 Base Growth

The Bureau of Economic and Business Research publishes annually-updated population projections for the State of Florida that are prepared on a county-wide basis at five-year intervals. These projections are used to calculate the compound annual growth rates (CAGRs). The CAGRS are used to project population growth by multiplying the population at the start of an interval by the annual growth rate compounded by the length of the interval (in years). In the context of this evaluation, population growth for the study area that is based solely on CAGRs estimated from BEBR population projections is referred to as *base growth*.

ASSUMPTION

- Base population growth rates for the study area are assumed to be equal to the average County-wide growth rates estimated from BEBR population projections (*base growth*).

3.2.2 Excess Growth

In the context of this evaluation, population growth that is in excess of projected base growth is referred to as *excess growth.* County staff have directed Johnson Engineering to assume that certain circumstances result in excess growth within the study area. This direction is considered to be consistent with the BEBR County-wide projections because certain regions of the County may experience growth rates that are higher or lower than the County-wide average growth rate (as estimated from BEBR population projections).

Excess growth occurs when a specified quantity of DUs is assumed to be built during a given interval. For example, a particular development may be assumed to complete "phase 1" construction by the end of a given interval. The estimated number of residents that occupy the DUs built during "phase 1" construction is added to the projected base growth that occurred during the interval. In this case, the CAGR calculated from the net growth (base growth and excess growth) will be higher than the CAGR based on BEBR population projections.

ASSUMPTIONS

- Excess growth through 2015 occurred due to development of *Corkscrew Shores* between 2013 (when the original projections were prepared) and 2015.
- Excess growth is projected to occur between 2016 and 2020 due to:
  - Proposed "phase 1" construction (as proposed in 2016) for the *WildBlue*, *The Place*, and *Centerplace* developments that is assumed to be completed by 2020.
  - Future by-rights mixed use development projected within the SELCPC that is assumed to be 10% complete by 2020.

3.2.3 Population Metrics for the SELCPC

The County has provided Johnson Engineering with existing population metrics[23] for the SELCPC: 3.24 persons per household with an 84% occupancy rate. Considerations are made for changing development patterns within the SELCPC as assumed by this evaluation.

ASSUMPTIONS

- Changing development patterns are assumed to shift demographics of future residents who reside in planned developments within the SELCPC to metrics[23] that resemble the Estero Planning Community: 2.07 persons per household with a 62% occupancy rate[23].
- Population metrics provided for the SELCPC are assumed to remain applicable to residents outside of planned developments.

3.2.4 Updated Population Projections for the Three Oaks WWTP Service Area

Projections prepared for this evaluation include the following updates to the original projections[19] based on information available in 2016:

- Updated estimates for the existing population in 2015 using a growth rate calculated from BEBR estimates for County-wide population in 2013 and 2015.
- Updated population growth rates for 2015 – 2040 with current BEBR County-wide population projections.
- Added 2,252 future DUs to the build-out total for the Three Oaks WWTP service area.

[23] Provided to Johnson Engineering in 2014 as part of the *Ben Hill – Alico Road Wastewater Force Main* project (CN-12-19).

3.3 Summary

As shown in **Table 6** and **Figure 3**, the study area population is projected to increase by approximately 100% between 2015 and build-out.

Table 6: Estimated 2015 Population and Projections for 2020 through Build-Out for the Study Area

Year	Study Area Population	
	Total	Permanent
2015	70,000	48,500
2020	85,500	60,500
2025	94,500	67,000
2030	103,000	73,000
2035	111,500	79,000
2040	118,500	84,000
Build-Out	142,500	99,500

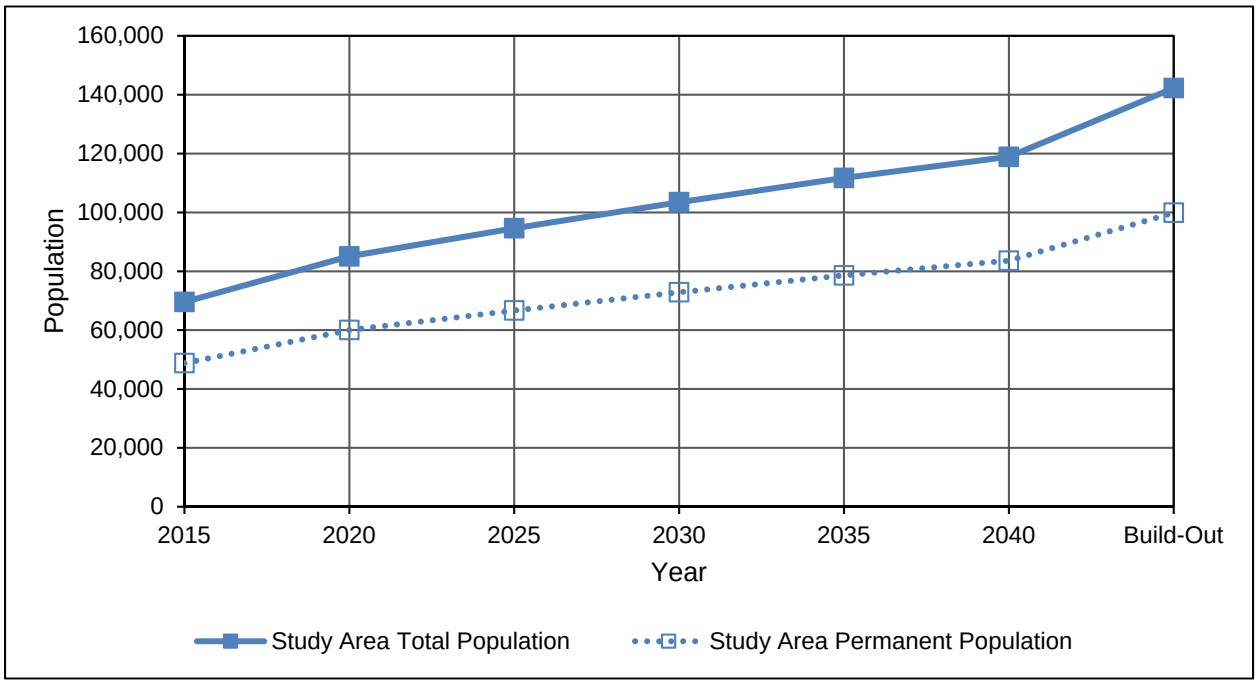

Figure 3: Estimated 2015 Population and Projections for 2020 through Build-Out for the Study Area

Population projections for the existing Three Oaks WWTP service area (including areas that overlap with the SELCPC) and the SELCPC are presented in Table 7 and Figure 4. The population within the existing Three Oaks WWTP service area is projected to increase by approximately 50% between 2015 and 2040 and approximately 80% by build-out. The SELCPC population is projected to increase by approximately 600% between 2015 and 2040 and approximately 900% by build-out.

Table 7: Estimated 2015 Population and Projections for 2020 through Build-Out for the Existing Three Oaks WWTP Service Area and the SELCPC

Year	Three Oaks WWTP Service Area Population		SELCPC Population	
	Total	Permanent	Total	Permanent
2015	68,000	47,000	3,000	2,000
2020	81,000	57,000	6,500	4,500
2025	87,000	62,000	9,500	6,500
2030	93,000	66,000	12,500	8,500
2035	99,000	70,000	15,500	10,500
2040	104,000	74,000	18,000	12,000
Build-Out	120,000	85,000	26,500	17,000

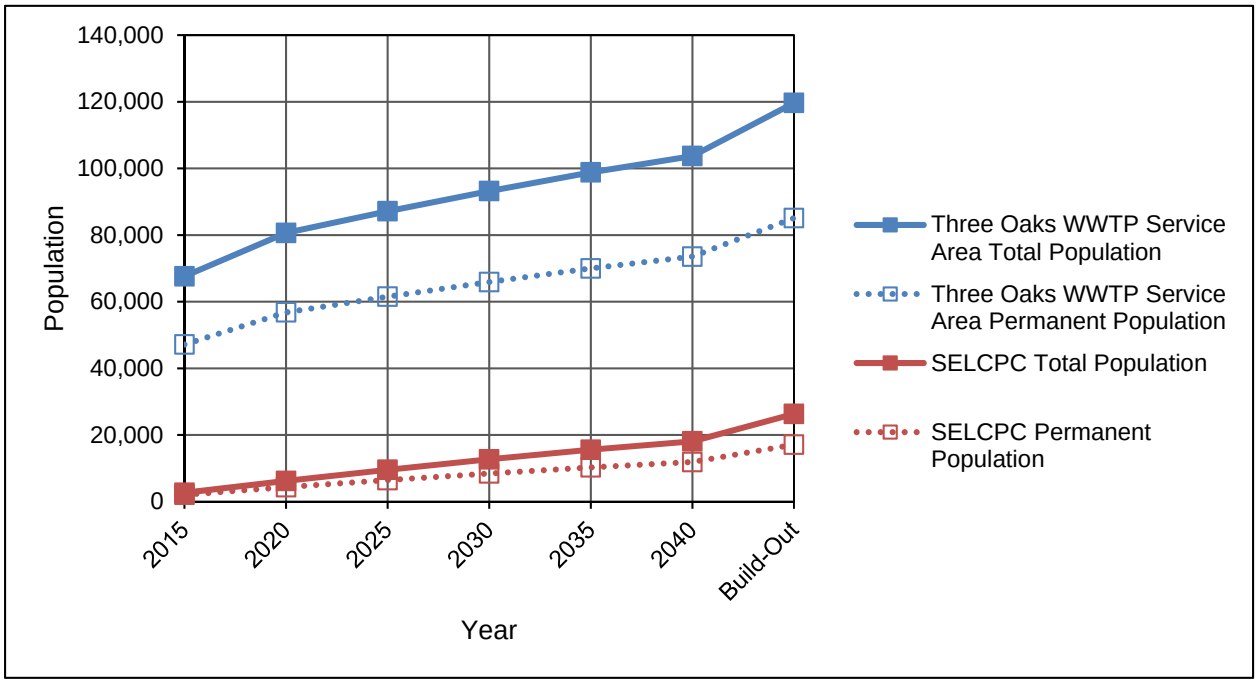

Figure 4: Estimated 2015 Population and Projections for 2020 through Build-Out for the Existing Three Oaks WWTP Service Area and the SELCPC

4.0 Wastewater Flow Projections

Wastewater flow projections are prepared for the study area using the population projections presented in Section 3.0. A brief overview of the findings is presented below.

FINDINGS

- Based on the projected permanent resident population, wastewater flow from the study area is projected to be approximately 8.2 MGD by 2040 and 10.3 MGD at build-out.

4.1 Approach

Wastewater flow projections are prepared using the population figures presented in Table 6 and an average wastewater production rate of 98 gallons per day per capita (GPDC) as indicated by the County's Integrated Water Resources Master Plan[24] (IWRMP).

ASSUMPTIONS

- At build-out, the County's wastewater system will serve all residents within the study area.
- Total wastewater flow generated within the study area, the SELCPC, and the Three Oaks WWTP service area from all sources (residential and non-residential) are accounted for using a per-capita wastewater production rate of 98 GPD per the County's IWRMP[24].

4.1.1 Considerations for Future Wastewater Flow from Forest Utilities WWTP Service Area

The County has instructed Johnson Engineering to include 0.5 MGD from the Forest Utilities WWTP service area in the build-out wastewater flow projections.

ASSUMPTIONS

- Wastewater flow from the Forest Utilities WWTP service area, totaling 0.5 MGD, will be conveyed to the Three Oaks WWTP at build-out.
- No considerations are made for future development within the Forest Utilities WWTP service area.
- No considerations for the total population or the permanent population within the Forest Utilities WWTP service area are made.

[24] *Lee County Utilities Integrated Water Resources Master Plan. Summary Report*. AECOM (December 2010).

4.2 Summary

As shown in Table 8 and Figure 5, wastewater flow from the study area permanent population is projected to be approximately 10.3 MGD at build-out. *Note that the reported values do not account for unserviced areas within the existing Three Oaks WWTP service area.*

Table 8: Wastewater Flow Projections for the Study Area (2020 through Build-Out)

Year	Study Area Wastewater Flow (MGD)	
	Total Population	Permanent Population
2020	8.3	5.9
2025	9.3	6.5
2030	10.1	7.1
2035	11.0	7.7
2040	11.7	8.2
Build-Out	14.4	10.3

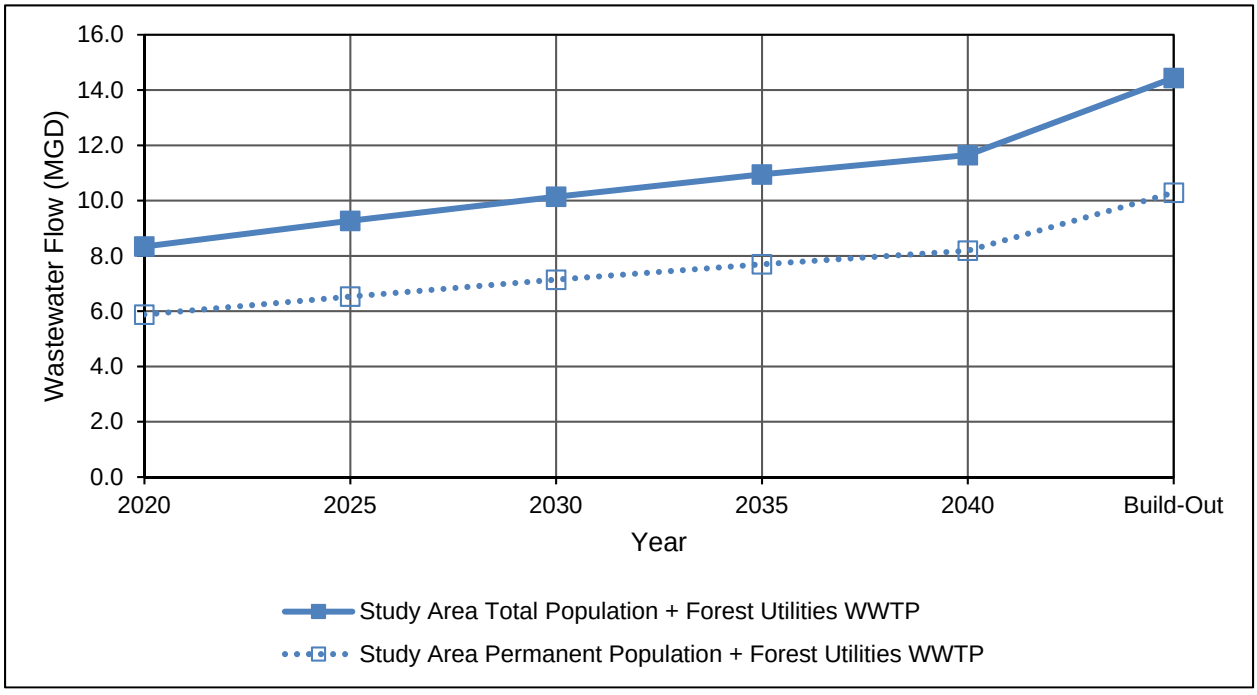

Figure 5: Wastewater Flow Projections for the Study Area (2020 through Build-Out)

Wastewater flow projections for the existing Three Oaks WWTP service area and the SELCPC are presented in Table 9 and Figure 6. Permanent population wastewater flows from the existing Three Oaks WWTP service area and the SELCPC are projected to be approximately 8.8 MGD and 1.7 MGD, respectively, at build-out.

Table 9: Wastewater Flow Projections for the Three Oaks WWTP Service Area and the SELCPC (2020 through Build-Out)

Year	Existing Three Oaks WWTP & Forest Utilities WWTP Service Areas Wastewater Flow (MGD)		SELCPC Wastewater Flow (MGD)	
	Total Population	Permanent Population	Total Population	Permanent Population
2020	7.9	5.6	0.6	0.5
2025	8.5	6.0	1.0	0.7
2030	9.1	6.5	1.3	0.8
2035	9.7	6.9	1.6	1.1
2040	10.2	7.2	1.8	1.2
Build-Out	12.2	8.8	2.6	1.7

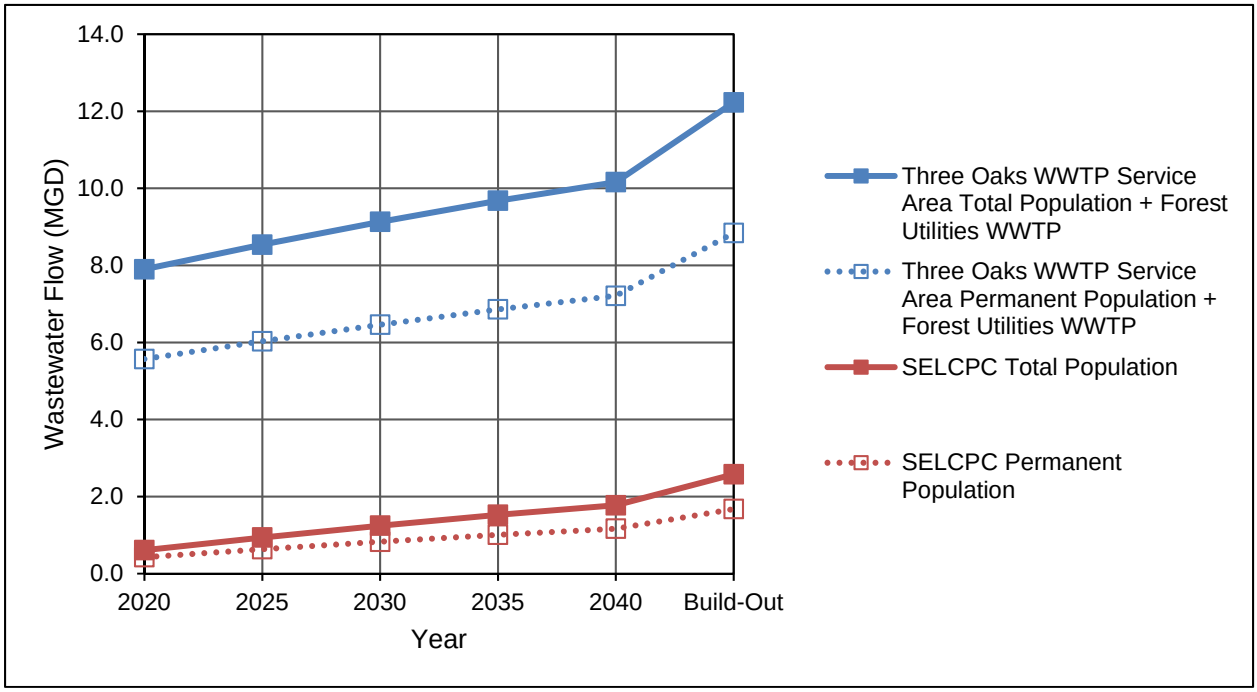

Figure 6: Wastewater Flow Projections for the Three Oaks WWTP Service Area and the SELCPC (2020 through Build-Out)

5.0 Wastewater Treatment Facilities

Developed areas within the study area are generally located within the existing Three Oaks WWTP service area. The Overlay Area is located near / partially within the Three Oaks WWTP service area. Continued development in the area is projected to result in wastewater flows that exceed the treatment capacity of the Three Oaks WWTP. A portion of the SELCPC could be serviced by the Gateway WWTP, but the majority of projected future development within the SELCPC is generally distant from the Gateway WWTP. The distance between developing areas of the SELCPC and the Gateway WWTP is likely to make it infeasible to use this facility as the primary source of wastewater treatment for flows that exceed the capacity of the Three Oaks WWTP.

Based on current development projections for the study area, a new WWTP located in southeast Lee County (Southeast WWTP, or SEWWTP) will be necessary in the future. Analysis of capacity needs and projected wastewater flow allocation among the Three Oaks WWTP, the Gateway WWTP, and a future SEWWTP are presented in this section of the report. Considerations are made for the County's planned expansions at the Three Oaks WWTP and the Gateway WWTP as well as for connecting currently unserviced areas within the Three Oaks WWTP service area.

The County utilizes a "*reliability factor*" of 0.8 when evaluating permitted capacity versus operating capacity. The "*reliable capacity*" of a WWTP is equal to the product of the permitted capacity and the reliability factor. This evaluation considers both reliable and permitted capacities.

ASSUMPTIONS

- A new WWTP in southeast Lee County (SEWWTP) will be constructed to address capacity limitations at the Three Oaks WWTP.
- Projected wastewater flows from the study area will be allocated among the Three Oaks WWTP, Gateway WWTP, and a future SEWWTP.

FINDINGS

- Projected wastewater flow allocations from the study area at build-out are as follows:
  - SEWWTP: 3.5 MGD
  - Three Oaks WWTP: 6.4 MGD
  - Gateway WWTP: 0.4 MGD

5.1 Existing Wastewater Treatment Facilities

The study area is currently served by the Three Oaks WWTP. In addition, a portion of the SELCPC / study area is adjacent to the existing Gateway WWTP service area, but this area is not currently serviced by this facility.

5.1.1 Three Oaks WWTP

The Three Oaks WWTP is located near the Three Oaks Parkway / San Carlos Boulevard intersection. This facility is currently permitted to treat[25] 6.0 MGD (4.8 MGD reliable capacity). The County has indicated that the Three Oaks WWTP could be expanded to 8.0 MGD permitted capacity (6.4 MGD reliable capacity) in the future.

ASSUMPTION

- The Three Oaks WWTP will be expanded to 8.0 MGD permitted treatment capacity at build-out.

5.1.2 Gateway WWTP

The Gateway WWTP is located within the Gateway development in southeast Lee County. The existing permitted treatment capacity is 3.0 MGD, and the County has indicated that it could be expanded to 8.0 MGD capacity in the future with an intermediate expansion to 6.0 MGD. As of the writing of this report, the County anticipates that no plant expansion will occur before Year 2020.

ASSUMPTION

- A portion of the SELCPC located north of Alico Road and extending east to SR-82 will convey flows to the Gateway WWTP in the future (see **Figure 7**).

The portion of the SELCPC that is assumed to be added to the Gateway WWTP service area in the future (as shown in **Figure 7**) includes approximately 40% of the *Land Not Used for Creating TDR Credits or Future By-Rights Mixed Use Development* and 50% of the *Future By-Rights Mixed Use Development* lands described in **Section 2.0**. These quantities are used to prorate projected wastewater flow from the SELCPC to the Gateway WWTP.

[25] *Lee County Concurrency Report 2013*. Table 5. Accessed March 17, 2015. http://www.leegov.com/gov/dept/dcd/Documents/AnnualReports/2013Concurrency.pdf

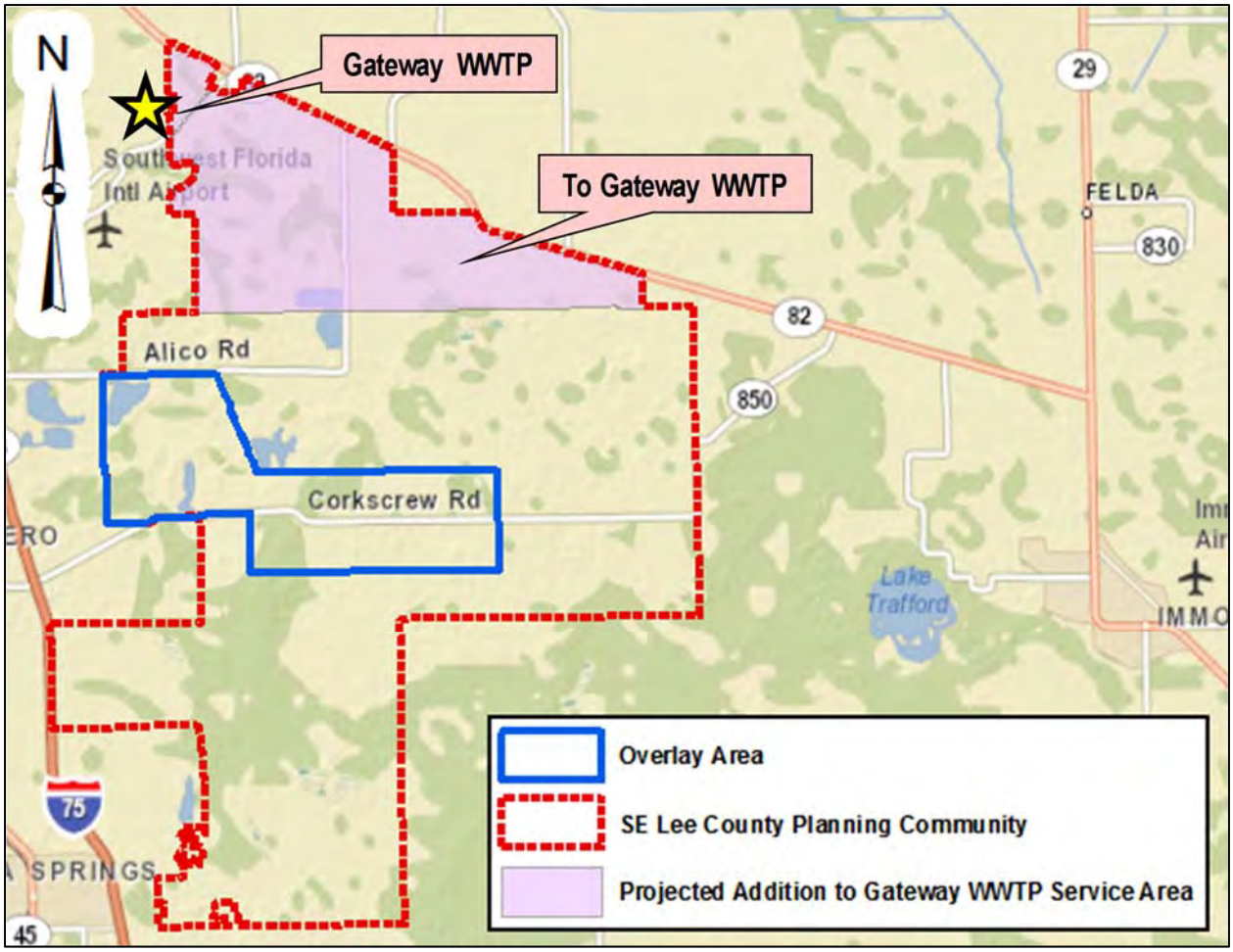

Figure 7: Portion of the Southeast Lee County Planning Community Assumed to Convey Wastewater to the Gateway WWTP in the Future

5.2 Projected Wastewater Flow Allocations

The projected *permanent population* wastewater flows for the study area (see Table 8) are allocated to the Three Oaks WWTP, the Gateway WWTP, and a future SEWWTP using the following assumptions:

ASSUMPTIONS

- Wastewater flows to the Three Oaks WWTP are limited to 4.8 MGD (existing reliable capacity) through 2040 and 6.4 MGD at build-out.
- The Gateway WWTP will have sufficient capacity to treat wastewater flows from a portion of the study area (see Figure 7).
- Wastewater flows from the study area, excluding flows that are conveyed to the Gateway WWTP, that are in excess of the reliable capacity of the Three Oaks WWTP, will be conveyed to the future SEWWTP.
- Wastewater flows from the Forest Utilities WWTP service area will not be conveyed to the Three Oaks WWTP service area until build-out.
- San Carlos Park will connect to the Three Oaks WWTP wastewater system at build-out.
- Residential areas within the SELCPC that are outside of planned developments will connect to the County's wastewater system at build-out.
- Other unserviced areas connect to the County's wastewater system in 2020.
- All new developments within the study area connect to the County's wastewater system.

Projected wastewater flows from serviced and unserviced areas are presented in Table 10. Based on these assumptions, wastewater flows from unserviced areas are projected to range between 1.3 and 1.4 MGD until build-out.

Table 10: Projected Wastewater Flows from Serviced and Unserviced Areas within the Study Area (2020 through Build-Out)

Year	2020	2025	2030	2035	2040	Build-Out
Serviced Area Wastewater Flows (MGD)	4.6	5.2	5.8	6.3	6.8	10.3
Unserviced Area Wastewater Flows (MGD)	1.3	1.3	1.3	1.4	1.4	0.0

Table 11: Projected Study Area Wastewater Flow Allocations to a Future SEWWTP, the Three Oaks WWTP, and the Gateway WWTP (2020 through Build-Out)

Year	2020	2025	2030	2035	2040	Build-Out
Wastewater Flow to a Future SEWWTP (MGD)	0.0	0.4	0.9	1.4	1.8	3.5
Wastewater Flow to the Three Oaks WWTP (MGD)	4.6	4.8	4.8	4.8	4.8	6.4
Wastewater Flow to the Gateway WWTP (MGD)	0.0	0.1	0.1	0.1	0.2	0.4

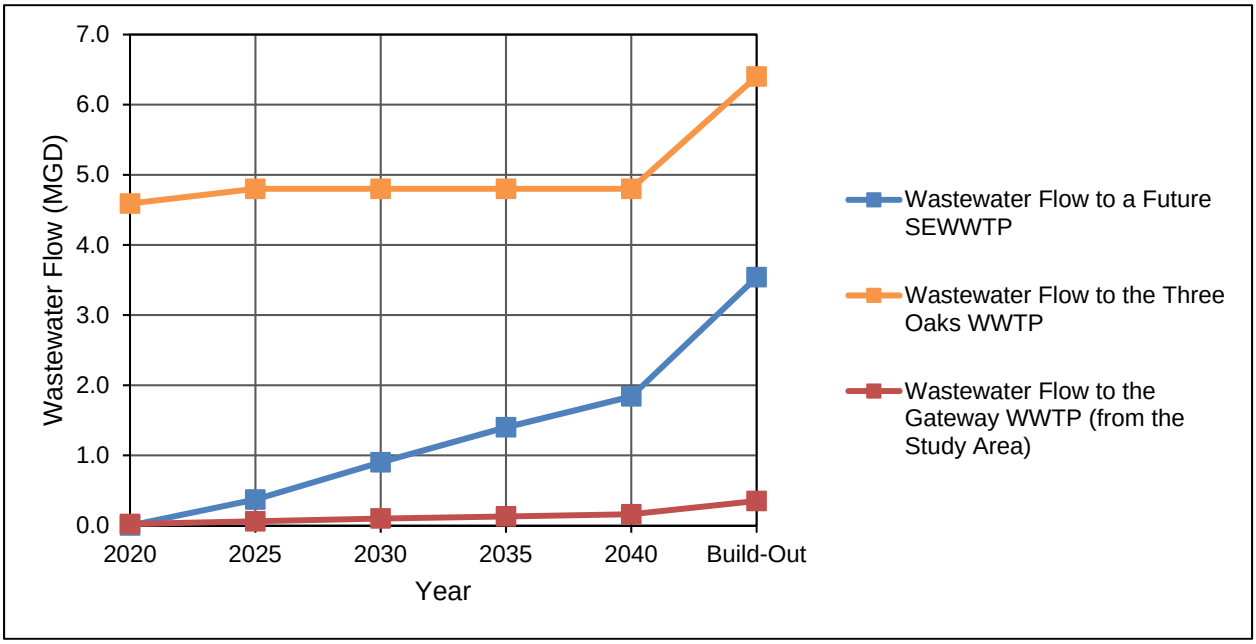

Figure 8: Projected Study Area Wastewater Flow Allocations to a Future SEWWTP, the Three Oaks WWTP, and the Gateway WWTP (2020 through Build-Out)

FINDINGS

- As shown in Table 11 and Figure 8:
  - Projected wastewater flow to the Three Oaks WWTP could exceed the existing reliable treatment capacity of 4.8 MGD before 2025 and the build-out reliable treatment capacity of 6.4 MGD.
  - A future SEWWTP will be needed between 2020 and 2025. Wastewater flow to a future SEWWTP is projected to be 3.5 MGD at build-out.
  - Projected wastewater flow from the study area to the Gateway WWTP is 0.4 MGD at build-out.

5.3 Wastewater Flow Reallocation from the Three Oaks WWTP to a Future Southeast WWTP

At build-out, wastewater flow allocated to a future SEWWTP is projected to be 3.5 MGD:

- 1.1 MGD will originate from outside of the existing Three Oaks WWTP service area.
- 2.4 MGD will originate from within the existing Three Oaks WWTP service area.
  - Approximately 0.1 MGD from a portion of the Overlay Area located inside of the existing Three Oaks WWTP service area.
  - Approximately 2.3 MGD from the existing Three Oaks WWTP service area outside of the Overlay Area.

Parcel group wastewater flow projections are used to identify an area within the existing Three Oaks WWTP service area with aggregate projected wastewater flow of approximately 2.4 MGD at build-out. This area represents the projected portion of the existing Three Oaks WWTP service area that will become part of the SEWWTP service area in the future. As shown in Figure 9, this region is generally located along Corkscrew Road, beginning near US-41 and extending east to Alico Road.

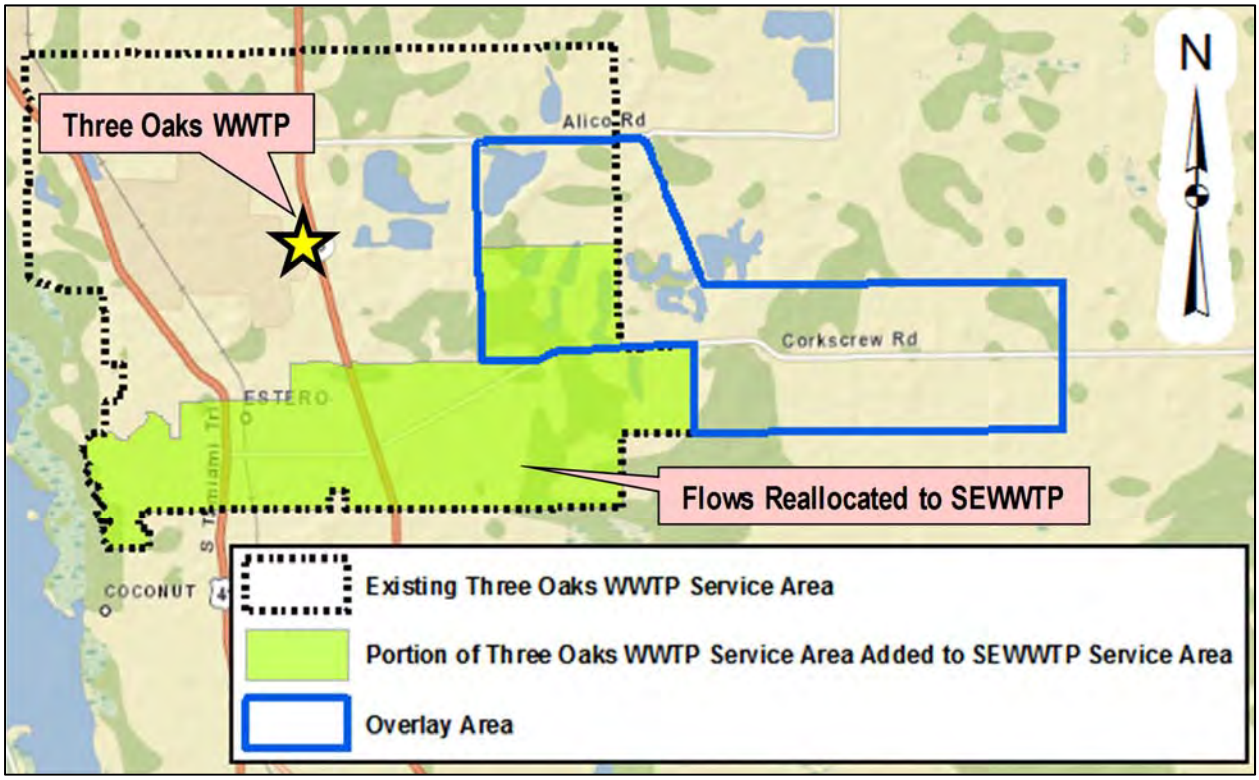

Figure 9: Portion of the Existing Three Oaks WWTP Service Area Assumed to Convey Wastewater to a Future SEWWTP at Build-Out

5.4 Summary

Projected service areas for the Three Oaks WWTP, Gateway WWTP, and a future SEWWTP are presented in Figure 10 and Table 12. Note that projected wastewater flow to the Gateway WWTP does not include flow from the existing service area; only the additional flow from the SELCPC is reported.

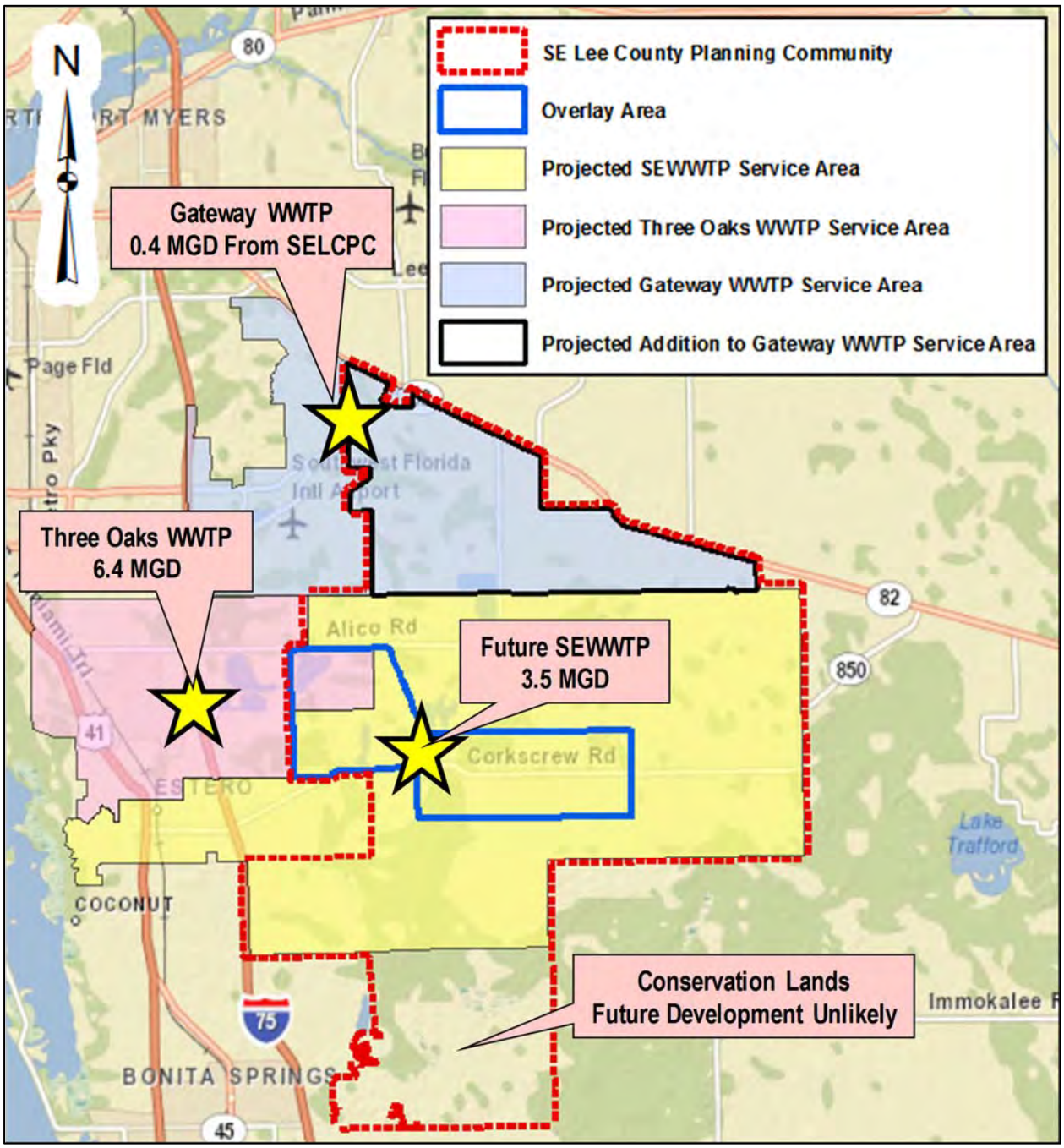

Figure 10: Projected WWTP Service Areas

Table 12: Projected WWTP Service Areas

WWTP Service Area	Area (acres)	Projected Build-Out Permanent Population Wastewater Flow (MGD)
Future SEWWTP	61,000	3.5
Three Oaks WWTP	19,000	6.4
Gateway WWTP Additional Area	16,000	0.4

6.0 Infrastructure Improvements

Infrastructure improvements necessary for build-out operation of a future SEWWTP are evaluated. This evaluation is intended to provide a conceptual basis for planning. Improvements necessary to convey build-out flows from the study area to the Gateway WWTP are not evaluated. *Note that the following sections utilize a peak factors calculated using Ten States Standards to estimate peak hour flows.*

6.1 Future Southeast WWTP (SEWWTP)

As shown in Figure 11, the County has identified two potential locations for a future SEWWTP:

- Location #1: At the northeast corner of the Alico Road / Corkscrew Road intersection, adjacent to the Corkscrew wellfield and water treatment plant (WTP).
- Location #2: On the north side of Corkscrew Road, approximately 3.5 miles east of the Alico Road / Corkscrew Road intersection and near the east boundary of the Overlay Area.

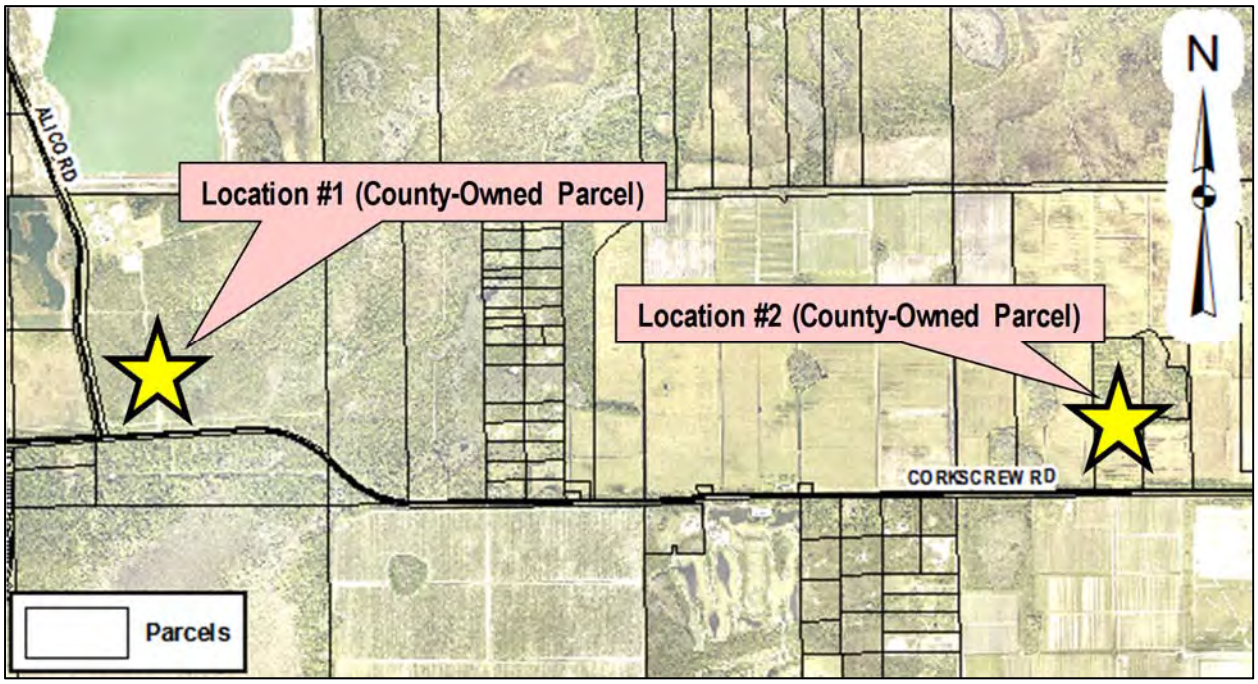

Figure 11: Potential Locations of a Future SEWWTP

6.1.1 Comparison between Potential Locations of a Future SEWWTP

Location #1 is the site of the County's existing Corkscrew WTP and wellfield. *Regulatory considerations for proximity between the two facilities will need to be addressed. This consideration would not apply to Location #2.*

Location #1 appears to provide several advantages relative to Location #2:

- Location #1 can utilize two or more independent force main "legs" to convey flows from east and west of the Alico Road / Corkscrew Road intersection to a future SEWWTP. Location #2 is likely to utilize one force main leg to convey flow to a future SEWWTP.
  - Two independent force main legs for Location #1 may decrease the required sizes of the mains by partitioning flows through an additional main relative to the single force main legs for Location #2.
- Location #1 includes approximately 470 acres and provides a larger area for a future SEWWTP relative to approximately 50 acres available at Location #2.
- Location #1 may be more acceptable to residents relative to Location #2 as it is not enclosed within a residential development.

FINDINGS

- It is recommended that a future SEWWTP be located at the intersection of Corkscrew Road and Alico Road (Location #1).
  - This assumes that regulatory agencies allow for close proximity between a future SEWWTP and the existing Corkscrew WTP / wellfield.
  - *The remainder of this report assumes a future SEWWTP is constructed at Location #1.*

6.1.2 Treatment Capacity

Permitted treatment capacity needs for a future SEWWTP are projected using a reliability factor of 0.8 and the wastewater flow allocations presented in **Table 11**. As shown in **Table 13**, projections indicate that a future SEWWTP would need a permitted treatment capacity of approximately 0.5 MGD by 2025 and approximately 4.5 MGD at build-out. Interim capacity needs are projected to increase by approximately 0.5 to 1.0 MGD per five-year interval between 2025 and 2040, depending on how quickly unserviced areas within the study area are connected to the County's wastewater system, if or when the County expands the Three Oaks WWTP, and realized growth within the study area.

Table 13: Projected Permitted Treatment Capacity Needs for a Future SEWWTP

Timeframe	Projected Permitted Treatment Capacity for a Future SEWWTP†
2020 – 2025	0.5 MGD
2025 – 2030	1.5 MGD
2030 – 2035	2.0 MGD
2035 – 2040	2.5 MGD
Build-Out	4.5 MGD

† Rounded up to the nearest multiple of 0.5 MGD.

FINDINGS

- A future SEWWTP, constructed by 2025 with an initial permitted treatment capacity of 2.5 MGD, is projected to meet treatment needs through approximately 2040.
- A permitted treatment capacity of 5.0 MGD is projected to be sufficient through build-out.

6.2 Master Lift Stations

Two master lift stations, located within the existing Three Oaks WWTP service area but part of the projected service area for a future SEWWTP, will be utilized to convey flows to a future SEWWTP:

- Lift Station 7716 (existing).
- Future master pump station at the Pinewoods water treatment plant (PWMPS).

6.2.1 Future Pinewoods Master Pump Station

As shown in Figure 12, two scenarios are considered for the future PWMPS collection area:

- Scenario #1:
  - The future PWMPS re-pumps wastewater flows originating from areas along Corkscrew Road, east of Alico Road. This area is equivalent to the portion of the existing Three Oaks WWTP service area that will be reallocated to a future SEWWTP.
  - The PWMPS utilizes a dedicated transmission force main to convey flows to a future SEWWTP.
  - Flows from within the collection area are conveyed to the PWMPS via a dedicated *collector* system.

- Scenario #2:
  - The future PWMPS re-pumps wastewater flows originating from areas to the west, along Corkscrew Road, to a future SEWWTP.
  - Lift stations to the east, between the future PWMPS and a future SEWWTP, will manifold with force main downstream from the future PWMPS.

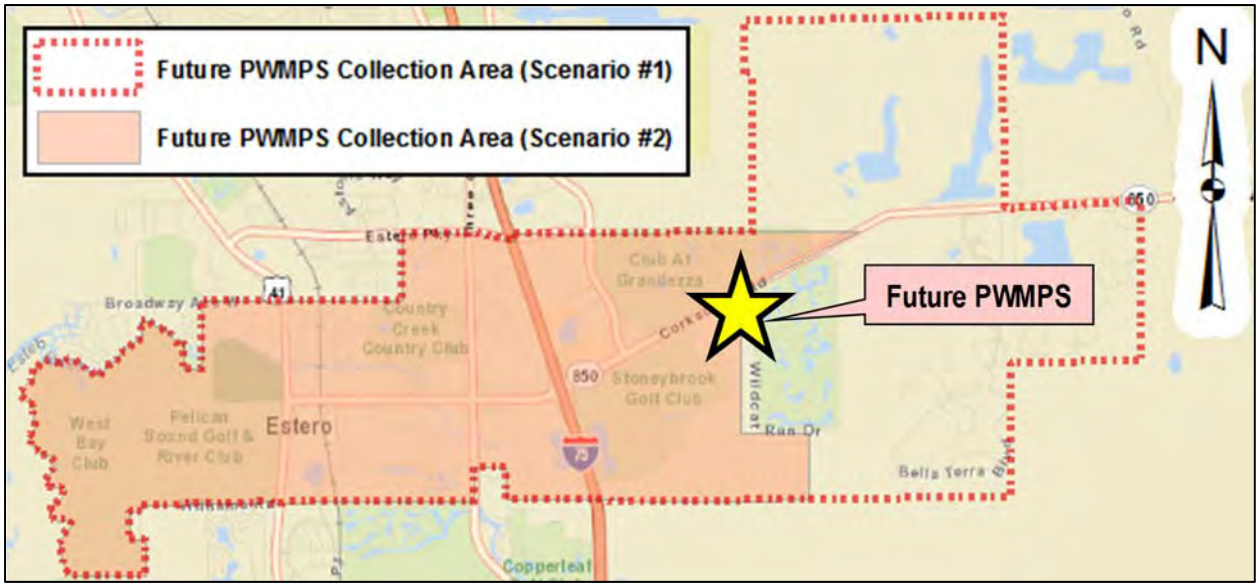

Figure 12: Projected Build-Out Collection Area for the Future Pinewoods Master Pump Station

Table 14: Projected Build-Out Wastewater Flows to the Future Pinewoods Master Pump Station

Scenario	Projected Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Build-Out Peak Factor	Projected Peak Hour Wastewater Flow (GPM)
Scenario #1	2,400,000	1,700	2.6	4,300
Scenario #2	1,800,000	1,200	2.7	3,300

FINDINGS:

- As shown in Table 14, wastewater flows to the future PWMPS are projected to be:
  - Approximately 2.4 MGD at an average rate of 1,700 GPM with a peak hour flow of 4,300 GPM for Scenario #1.
  - Approximately 1.8 MGD at an average rate of 1,200 GPM with a peak hour flow of 3,300 GPM for Scenario #2.
- It is recommended that Scenario #2 be implemented for future PWMPS operations.

6.2.2 Lift Station 7716

Lift Station 7716 is located at the Three Oaks Parkway / Corkscrew Road intersection and is currently used to convey flows from the southwest and a portion of the wastewater flow from east of I-75 to the Three Oaks WWTP.

ASSUMPTION

- Lift Station 7716 will be used to collect and re-pump wastewater flows from areas west of Three Oaks Parkway and south of Estero Parkway as shown in Figure 13.

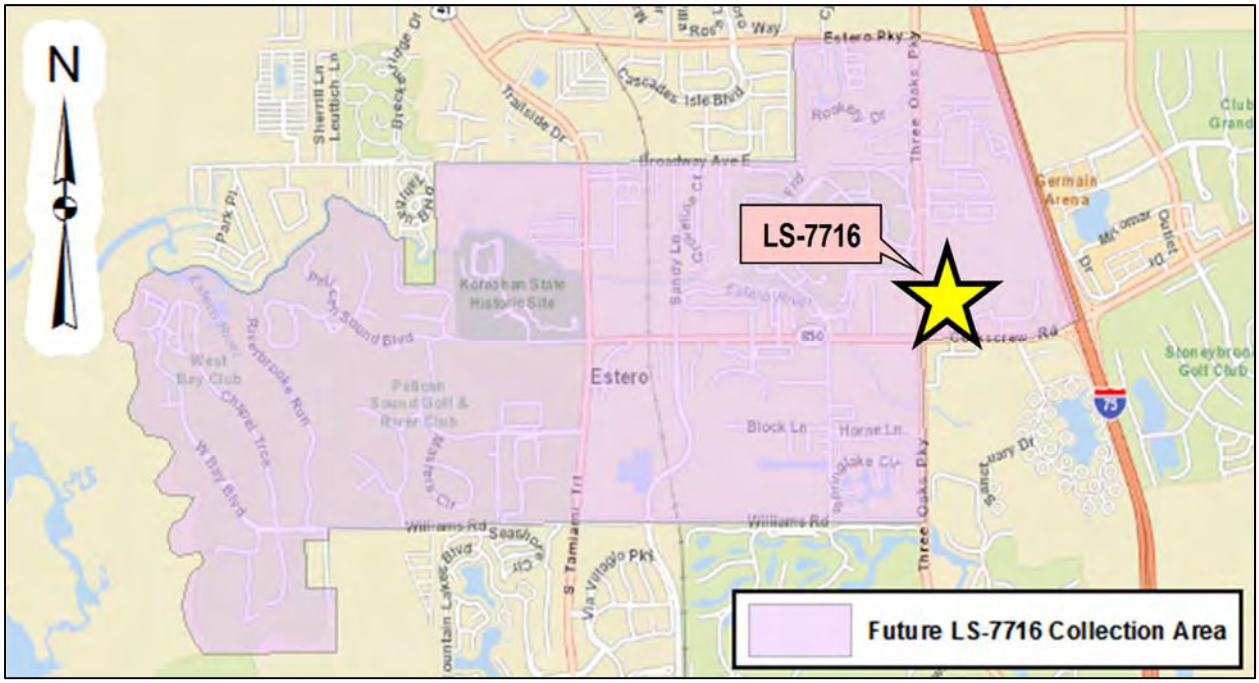

Figure 13: Future Lift Station 7716 Collection Area

Table 15: Projected Wastewater Flows for Lift Station 7716 at Build-Out

Projected Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Build-Out Peak Factor	Projected Peak Hour Wastewater Flow (GPM)
1,100,000	800	2.9	2,300

FINDINGS:

- As shown in Table 15, wastewater flows to LS-7716 are projected to be approximately 1.1 MGD at an average rate of 800 GPM with a peak hour flow of 2,300 GPM.

6.3 Force Mains Sizes at Build-Out

Force main sizing is evaluated on the basis of minimum and maximum flow velocities:

- Minimum flow velocity = 2 feet per second (ft/s) for average flows.
- Maximum flow velocity = 6 ft/s for peak hour flows.

Build-out sizing requirements are evaluated for the force mains presented in Figure 14:

- Overlay Area force main: Between a future SEWWTP and the east end of the Overlay Area.
- PWMPS force main: Between the future PWMPS and a future SEWWTP.
- LS-7716 force main: Between LS-7716 and the future PWMPS.

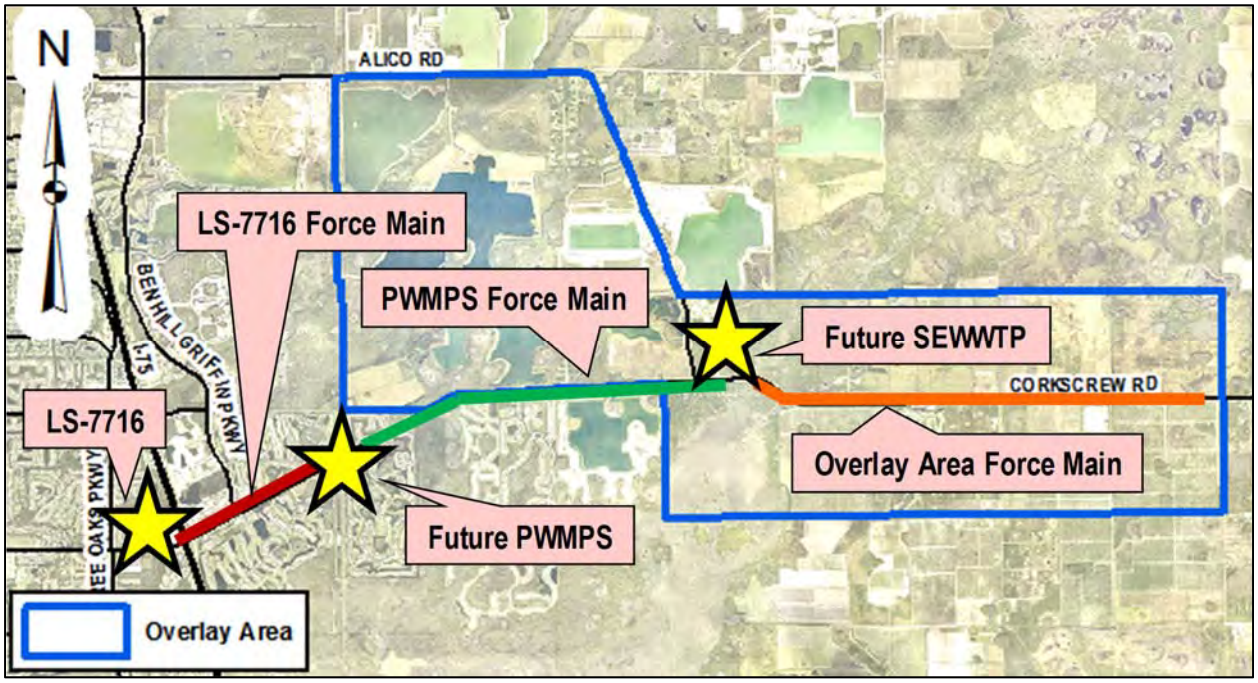

Figure 14: Force Main Segments Evaluated for Build-Out Sizing

6.3.1 Overlay Area Force Main

As shown in Figure 15, two build-out operating scenarios are evaluated for the Overlay Area force main. Projected wastewater flows for the two scenarios are presented in Table 16.

- Scenario #1:
  - Development to the east of the Overlay Area does not occur and the residential areas near State Road 82 are not connected in the future.
- Scenario #2:
  - Additional development occurs outside of the Overlay Area and the residential areas near State Road 82 are connected.

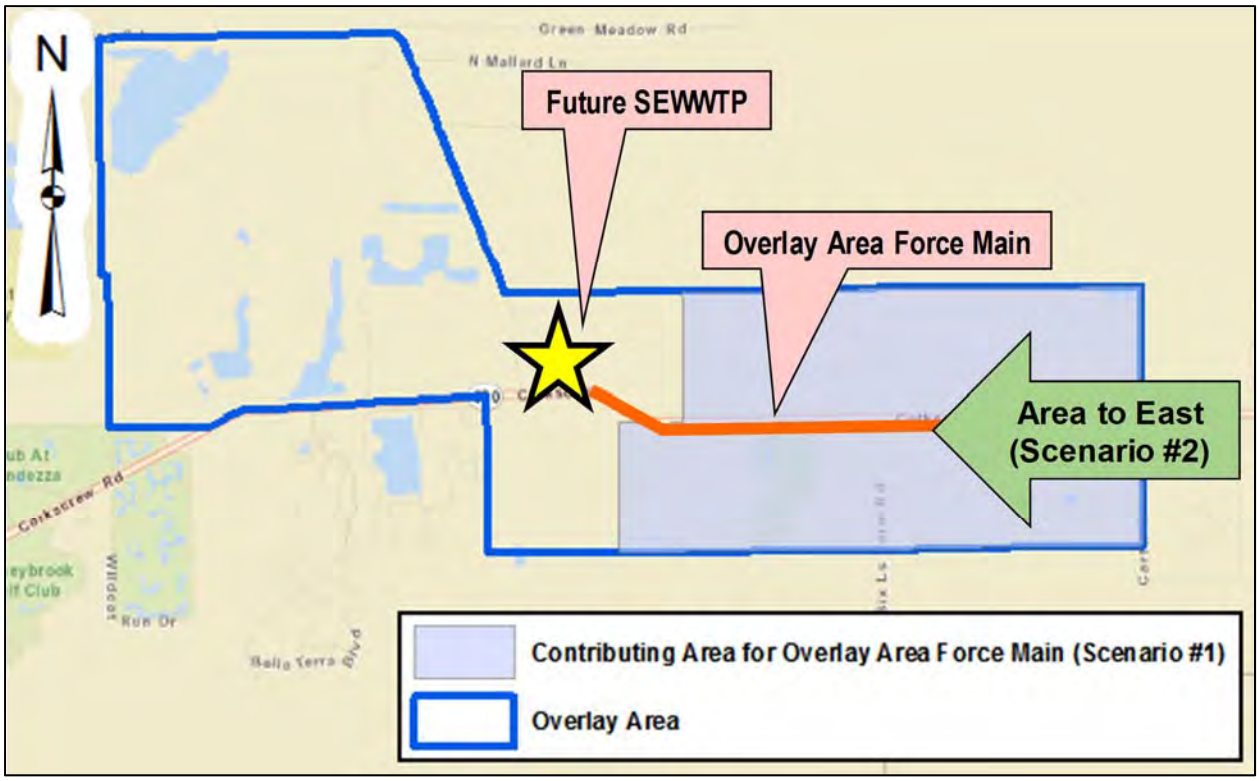

Figure 15: Build-Out Contributing Area for the Overlay Area Force Main

Table 16: Build-Out Wastewater Flows for the Overlay Area Force Main

Scenario	Projected Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Build-Out Peak Factor	Projected Peak Hour Wastewater Flow (GPM)
Scenario #1	630,000	450	3.1	1,400
Scenario #2	1,000,000	700	2.9	2,100

Table 17: Required Build-Out Sizing for the Overlay Area Force Main

Scenario	Force Main Size (inches)	Velocity at Projected Average Hourly Wastewater Flow (ft/s)	Velocity at Projected Peak Hour Wastewater Flow (ft/s)
Scenario #1	10	1.9	5.9
Scenario #2	14	1.5	4.7

FINDINGS:

- As shown in Table 17, build-out sizing for the Overlay Area force main is projected to be:
  - 10-inches for Scenario #1.
  - 14-inches for Scenario #2.
- It is recommended that Scenario #1 be implemented until conditions warrant a larger force main through the Overlay Area, if or when such conditions occur.

6.3.2 Pinewoods Master Pump Station Force Main

Area contributing flow to the PWMPS force main is presented in Figure 16. This area is the portion of the existing Three Oaks WWTP service area reallocated to a future SEWWTP (see Figure 9 in Section 5.3). Projected wastewater flow from the contributing area is presented in Table 18.

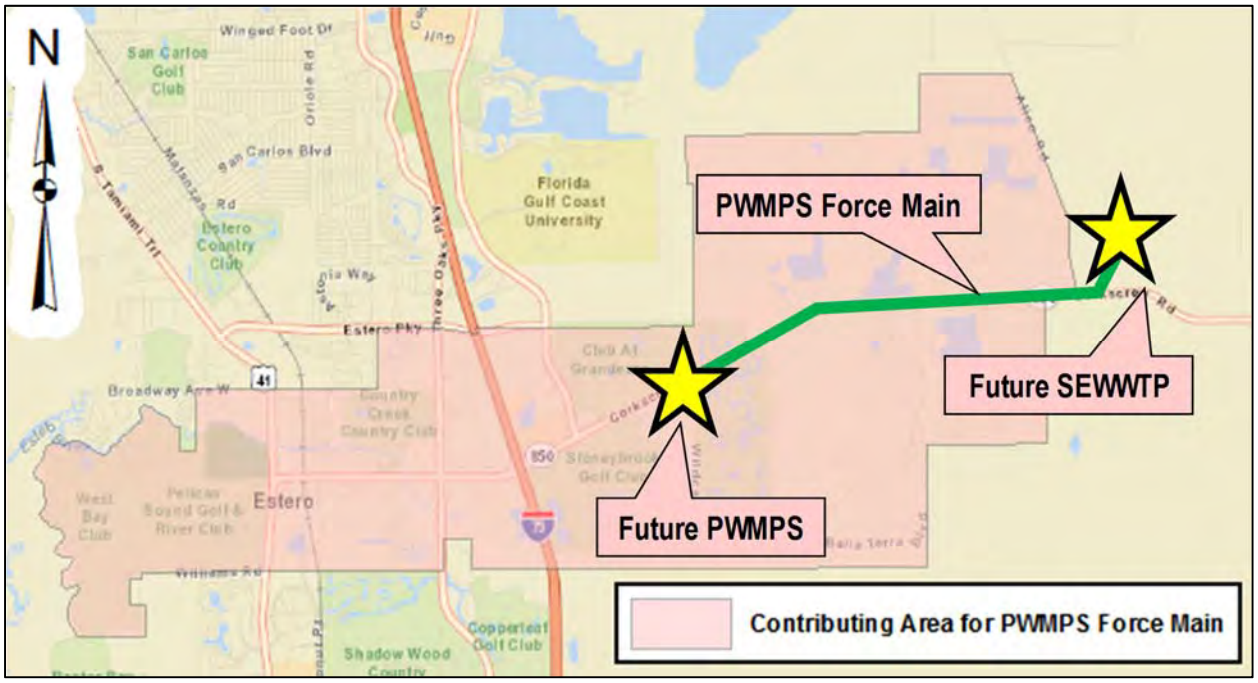

Figure 16: Build-Out Contributing Area for the Pinewoods Master Pump Station Force Main

Table 18: Build-Out Wastewater Flows for the Pinewoods Master Pump Station Force Main

Projected Daily Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Build-Out Peak Factor	Projected Peak Hour Wastewater Flow (GPM)
2,500,000	1,700	2.6	4,400

Table 19: Required Build-Out Sizing for the Pinewoods Master Pump Station Force Main

Force Main Size (inches)	Velocity at Projected Average Hourly Wastewater Flow (ft/s)	Velocity at Projected Peak Hour Wastewater Flow (ft/s)
20	1.8	4.6

FINDINGS:

- As shown in Table 19, build-out sizing for the PWMPS force main is projected to be 20-inches.

6.3.3 Lift Station 7716 Force Main

Area contributing flow to the LS-7716 force main is presented in Figure 17. Lift Station 7716 collects wastewater flows from west of Three Oaks Parkway / south of Estero Parkway. Wastewater flows from LS-7716 and other lift stations to the east are conveyed to the future PWMPS via a manifolded force main. Estimated wastewater flows for the LS-7716 force main at build-out are presented in Table 20.

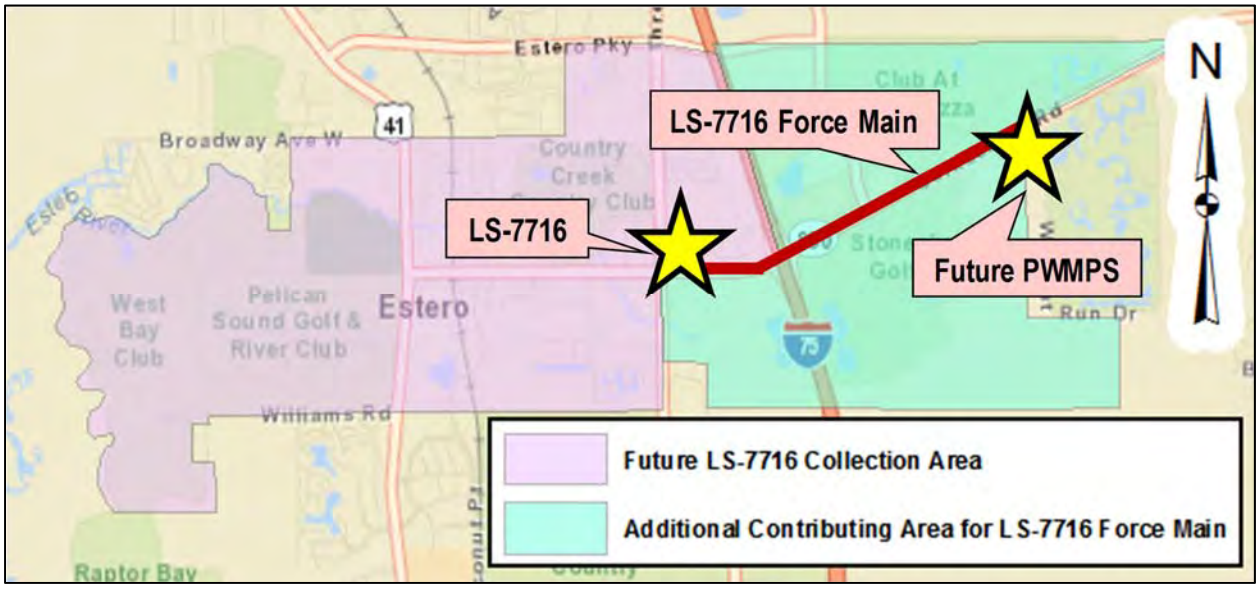

Figure 17: Build-Out Operating Scenarios for the Lift Station 7716 Force Main

Table 20: Build-Out Wastewater Flows for the Lift Station 7716 Force Main

Projected Daily Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Build-Out Peak Factor	Projected Peak Hour Wastewater Flow (GPM)
1,800,000	1,200	2.7	3,300

Table 21: Required Build-Out Sizing for the Lift Station 7716 Force Main

Force Main Size (inches)	Velocity at Projected Average Hourly Wastewater Flow (ft/s)	Velocity at Projected Peak Hour Wastewater Flow (ft/s)
16	2.1	5.7

FINDINGS:

- As shown in Table 21, build-out sizing for the LS-7716 force main is projected to be 16-inches.

6.4 Hydraulic Modeling

A conceptual hydraulic model of projected build-out operations is used to evaluate the Overlay Area force main, the PWMPS and LS-7716 facilities / force mains. Modeled conditions correspond to projected peak hour flows. Modeling is performed using InfoWater 9.0 software.

ASSUMPTIONS

- The Overlay Area force main will only serve developments / residential areas within the Overlay Area (Scenario #1, see Section 6.3.1).
- The future PWMPS will not re-pump flows from the east (Scenario #2, see Section 6.2.1).
- Pipe roughness coefficients (Hazen-Williams *C*-factors) are set to a value of 110.
- Minor losses are not considered.
- Elevations are not considered for any facilities. All elevations are set to a value of zero.
- Modeled wastewater flows equal projected peak hour flow for each contributing area.
- Peak factors are calculated on a per-area basis. Note that in Sections 6.2 and 6.3, peak factors are calculated on an aggregate basis.

Modeling results presented in the following sections only consider frictional headloss and do not include losses due to elevation differences (e.g. at the SEWWTP headworks). Elevation difference between the upstream and downstream ends of the force main will be additive with respect to the projected frictional headloss.

6.4.1 Overlay Area Force Main

An overview of the future Overlay Area hydraulic model is presented in Figure 18. The model includes approximately 3.1 miles of 10-inch force main through the Overlay Area.

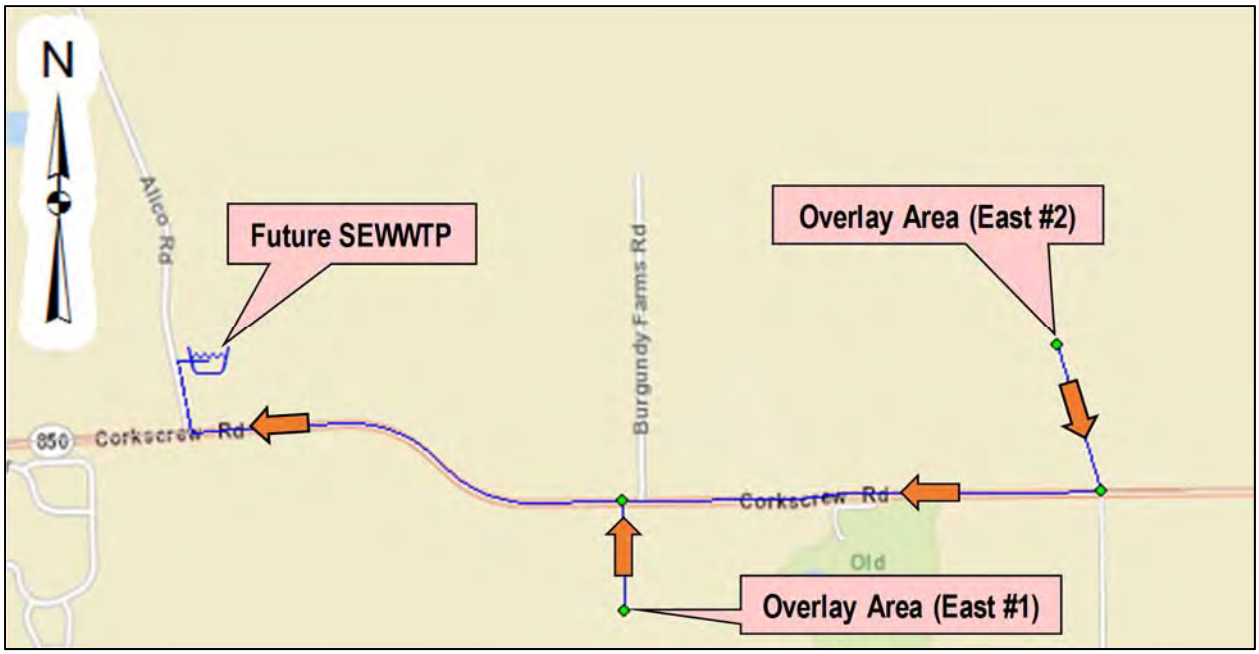

Figure 18: Conceptual Hydraulic Model of the Overlay Area Force Main

FINDINGS:

- Modeling projects that approximately **180 to 200 feet of headloss** will occur between the east end of the Overlay Area force main and a future SEWWTP using a **10-inch force main** between the two facilities.

6.4.2 Future Pinewoods Master Pump Station

An overview of the future PWMPS hydraulic model is presented in Figure 19. The model includes approximately 3.9 miles of 20-inch force main between the future PWMPS and a future SEWWTP.

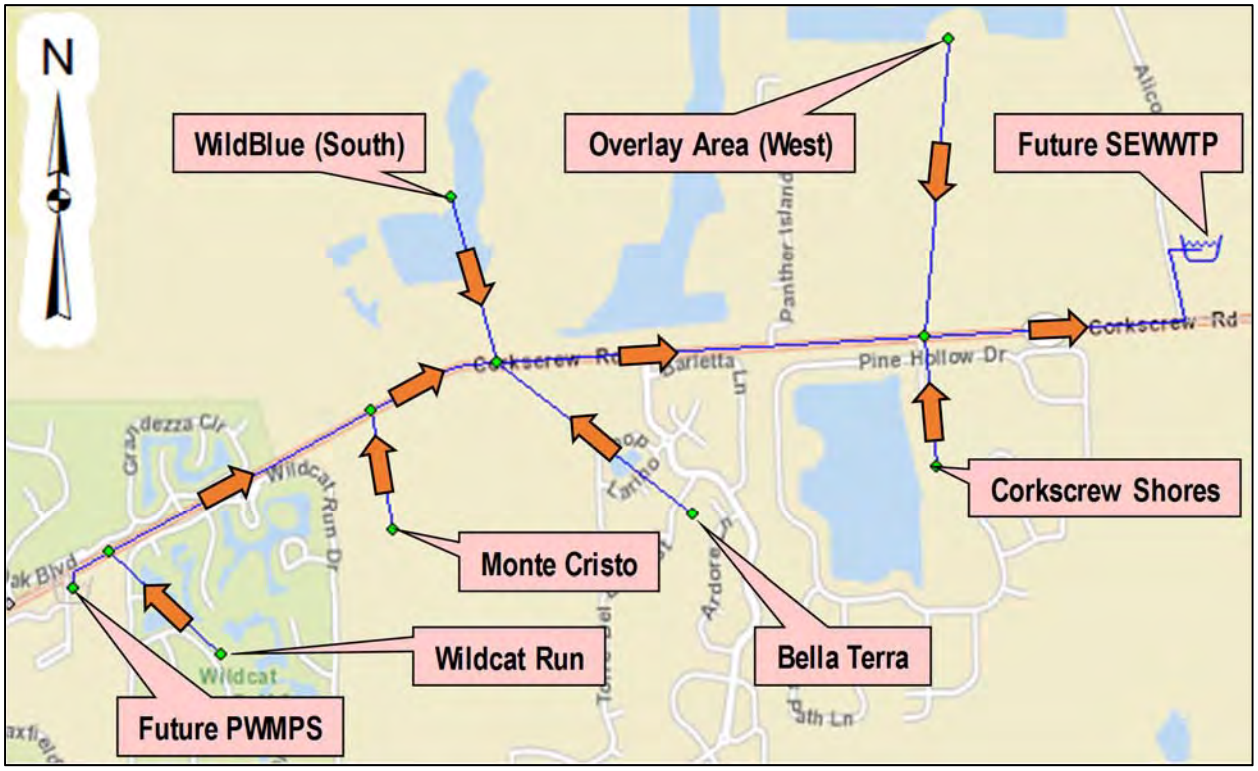

Figure 19: Conceptual Hydraulic Model of the Future Pinewoods Master Pump Station Force Main

FINDINGS:

- Modeling projects that approximately **90 to 110 feet of headloss** will occur between the future PWMPS and a future SEWWTP using a **20-inch force main** between the two facilities.

6.4.3 Lift Station 7716

An overview of the LS-7716 hydraulic model is presented in Figure 20. The model includes approximately 1.9 miles of 16-inch force main between LS-7716 and the future PWMPS.

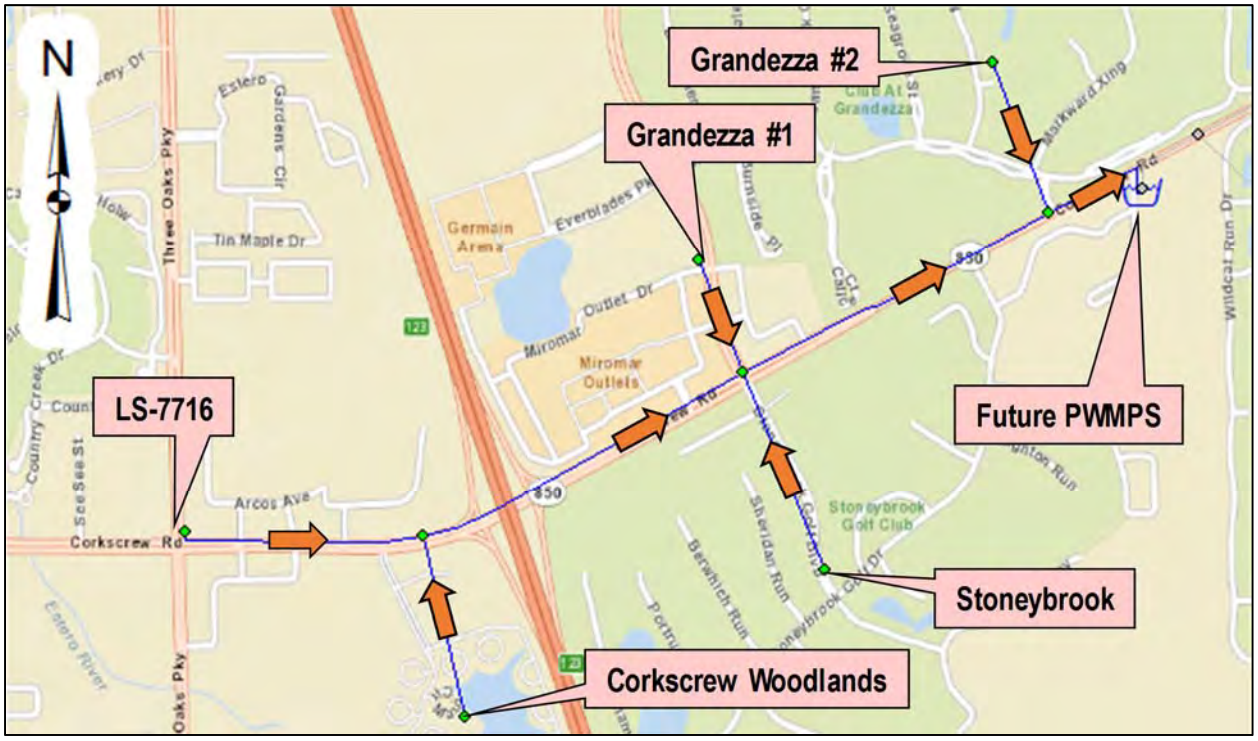

Figure 20: Conceptual Hydraulic Model of the Lift Station 7716 Force Main

FINDINGS:

- Modeling projects that approximately **80 to 100 feet of headloss** will occur between LS-7716 and the future PWMPS using a **16-inch force main** between the two facilities.

6.5 Summary

Projections indicate that a new SEWWTP will need to be constructed by 2025, assuming the Three Oaks WWTP is not expanded until build-out. Projected permitted treatment capacity needs for a future SEWWTP are presented in Table 22. **An initial permitted treatment capacity of 2.5 MGD for a future SEWWTP is projected to be sufficient through 2040.** County-owned property at the northeast corner of the Corkscrew Road / Alico Road intersection is recommended to be the location of a future SEWWTP. This location would be shared with the County's Corkscrew WTP / wellfield. Regulatory considerations for proximity between the SEWWTP and Corkscrew WTP will need to be addressed.

Table 22: Summary of Projected Permitted Treatment Capacity Needs at a Future SEWWTP

Timeframe	Projected Permitted Treatment Capacity for a Future SEWWTP
2020 – 2025	0.5 MGD
2025 – 2030	1.5 MGD
2030 – 2035	2.0 MGD
2035 – 2040	2.5 MGD
Build-Out	4.5 MGD

Two master lift stations can be used to reallocate wastewater flows from a portion of the Three Oaks WWTP service area to a future SEWWTP. Lift Station 7716, located at the Corkscrew Road / Three Oaks Parkway intersection, can convey flow from the southwest portion of the Three Oaks WWTP service area to a future master pump station located at the Pinewoods WTP (PWMPS). The future PWMPS can convey flow from LS-7716 and areas around Corkscrew Road / Ben Hill Griffin Parkway to a future SEWWTP. Projected operating conditions for these facilities are presented in Table 23.

Table 23: Summary of Projected Build-Out Wastewater Flows for Lift Station 7716 and the Future Pinewoods Master Pump Station

Lift Station	Projected Wastewater Flow (GPD)	Projected Average Hourly Wastewater Flow (GPM)	Projected Peak Hour Wastewater Flow (GPM)
7716	1,100,000	800	2,300
PWMPS[1]	1,800,000	1,200	3,300

[1] Assumes areas to the east will manifold with the force main between the PWMPS and a future SEWWTP.

Projected build-out size requirements for a force main along Corkscrew Road, within the Overlay Area (Overlay Area force main); a force main between the future PWMPS and a future SEWWTP (PWMPS force main); and between LS-7716 and the future PWMPS (LS-7716 force main), are summarized in Table 24. Sizing is based on limiting flow velocity to a range between 2.0 and 6.0 feet per second.

Table 24: Summary of Projected Size Requirements at Build-Out for Selected Force Mains

Force Main	Projected Size Requirement at Build-Out
Overlay Area force main[1,2]	10-inch
PWMPS force main	20-inch
LS-7716 force main	16-inch

1 A 14-inch force main be required if extensive development outside of the Overlay Area occurs and / or service is extended to the residential area located near State Road 82.

2 The 10-inch force main is sized to meet minimum velocity requirements. However, considerations for headloss may require the use of a 12-inch force main.

Attachment 4.2

ADDENDUM
To CN-140238 Contract No. 6890
Engineering Report

Corkscrew Overlay Area
Wastewater Master Planning

May 2017

Prepared for:

Lee County Utilities
1500 Monroe Street
Fort Myers, FL 33901

Prepared by:

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2122 Johnson Street
Fort Myers, Florida 33902-1550
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Executive Summary

The addendum follows a previous evaluation† of the need for a new wastewater treatment plant in southeast Lee County (SEWWTP). This addendum evaluates an alternative location‡ (*Location 3*) for the SEWWTP. An alternative service area, which generally consists of the areas along Alico Road, Corkscrew Road, and Ben Hill Griffin Parkway (east of I-75) has been identified. The following table summarizes the findings of this addendum.

Timeframe	Facility	Location / Description		Detail
2020	PWMPS	Constructed		Not used for SEWWTP operations
	Force Main	Corkscrew Road / Overlay Area (*Alico Road to easternmost connection*)		10-inch / 15,000 feet
2025	SEWWTP	Constructed at Location 3		2.0 MGD (*initial capacity*)
	Force Main	Alico Road (*Corkscrew Road to the SEWWTP*)		24-inch / 18,000 feet
2030	PWMPS	Redirected to SEWWTP		1,200 GPM
	Force Main	Corkscrew Road (*WildBlue to Alico Road*)		24-inch / 11,000 feet
2035	SEWWTP	2.0 MGD expansion		4.0 MGD (*interim capacity*)
	Force Main	Alico Road (*Airport Haul Road to the SEWWTP*)	2035 Scenario 1 (*Upsize in 2040*)	6-inch / 12,000 feet
			2035 Scenario 2 (*Not upsized in 2040*)	12-inch / 12,000 feet
2040	Force Main	Alico Road (*Airport Haul Road to the SEWWTP*)	2035 Scenario 1 (*Upsize in 2040*)	12-inch / 12,000 feet
Build-Out	SEWWTP	1.0 MGD expansion		5.0 MGD (*build-out capacity*)
	PWMPS	Expansion		3,900 GPM
	Alico Road MPS	Constructed (*Alico Road / Corkscrew Road*)	Build-Out Scenario 2 (*Alico Road MPS*)	7,000 GPM
	Force Main	Ben Hill Griffin Parkway (*Corkscrew Road to the north*)		16-inch / 2,500 feet
		Corkscrew Road (*Ben Hill Griffin Parkway to the PWMPS*)		16-inch / 5,000 feet
		Corkscrew Road (*PWMPS to WildBlue*)	Build-Out Scenario 1 (*no Alico Road MPS*)	24-inch / 7,500 feet
			Build-Out Scenario 2 (*Alico Road MPS*)	20-inch / 7,500 feet
		Corkscrew Road / Overlay Area (*Alico Road to the east*)		12-inch / 7,500 feet
		Corkscrew Road (*end of Overlay Area force main to east residential areas*)		10-inch / 40,000 feet (*if applicable*)
		Alico Road (*Corkscrew Road to the SEWWTP*)	Build-Out Scenario 1 (*no Alico Road MPS*)	30-inch / 18,000 feet
		Alico Road (*Ben Hill Griffin Parkway to the SEWWTP*)		20-inch / 4,000 feet 24-inch / 18,000 feet

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† *Engineering Report. Corkscrew Overlay Area Wastewater Master Planning. Johnson Engineering. 2016.*
‡ 18990 Green Meadows Road, Fort Myers, FL 33913.

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1.0 Introduction

Lee County Utilities (*LCU*) has contracted with Johnson Engineering to prepare an addendum to the *Corkscrew Overlay Area Wastewater Master Planning* report[1] (*previous report*). The previous report included:

- Population and wastewater flow projections through 2040 and build-out for the Overlay Area, the Southeast Lee County planning community (SELCPC), and the Three Oaks WWTP service area (the combined areas are referred to as the *study area*).
- Preliminary capacity recommendations for a new Southeast Lee County WWTP (*SEWWTP*).
- General overview of two potential locations for the SEWWTP, with a preliminary recommendation to construct the SEWWTP on County-owned property[2] near the Corkscrew wellfield and water treatment plant (*Location 1*, see Figure 1).
- Delineated service areas for the Three Oaks WWTP, SEWWTP, and the Gateway WWTP.
- Preliminary recommendations for large-scale build-out infrastructure (force mains and master lift stations).

This addendum generally relies on the same approach and assumptions used for the previous evaluation, except where noted. The addendum extends the previous evaluation to include:

- Analysis of an alternative location[3] (*Location 3*, see Figure 1) for the SEWWTP.
    - A revised portion of the Three Oaks WWTP service area will be reallocated to the SEWWTP in the future, and different infrastructure improvements will be required, if Location 3 is selected.
- Analysis of interim wastewater reallocation from the Three Oaks WWTP to the SEWWTP.
    - The previous report presented interim flows to the SEWWTP (and Gateway WWTP) in terms of projected treatment capacity exceedance at the Three Oaks WWTP.
    - Interim reallocations from the Three Oaks WWTP to the SEWWTP are affected by considerations for infrastructure and County preferences.

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1 *Engineering Report. Corkscrew Overlay Area Wastewater Master Planning*. Johnson Engineering. 2016.

2 *Location 1* (referred to as *Location 2* by the scope of services) is located at: 16101 Alico Road, Fort Myers, FL 33913. This addendum refers to the property as *Location 1* to maintain consistency with the previous report.

3 *Location 3* (referred to as *Location 1* by the scope of services) is located at: 18990 Green Meadows Road, Fort Myers, FL 33913. The addendum refers to this property as *Location 3* to provide a consistent sequence with properties evaluated by the previous report.

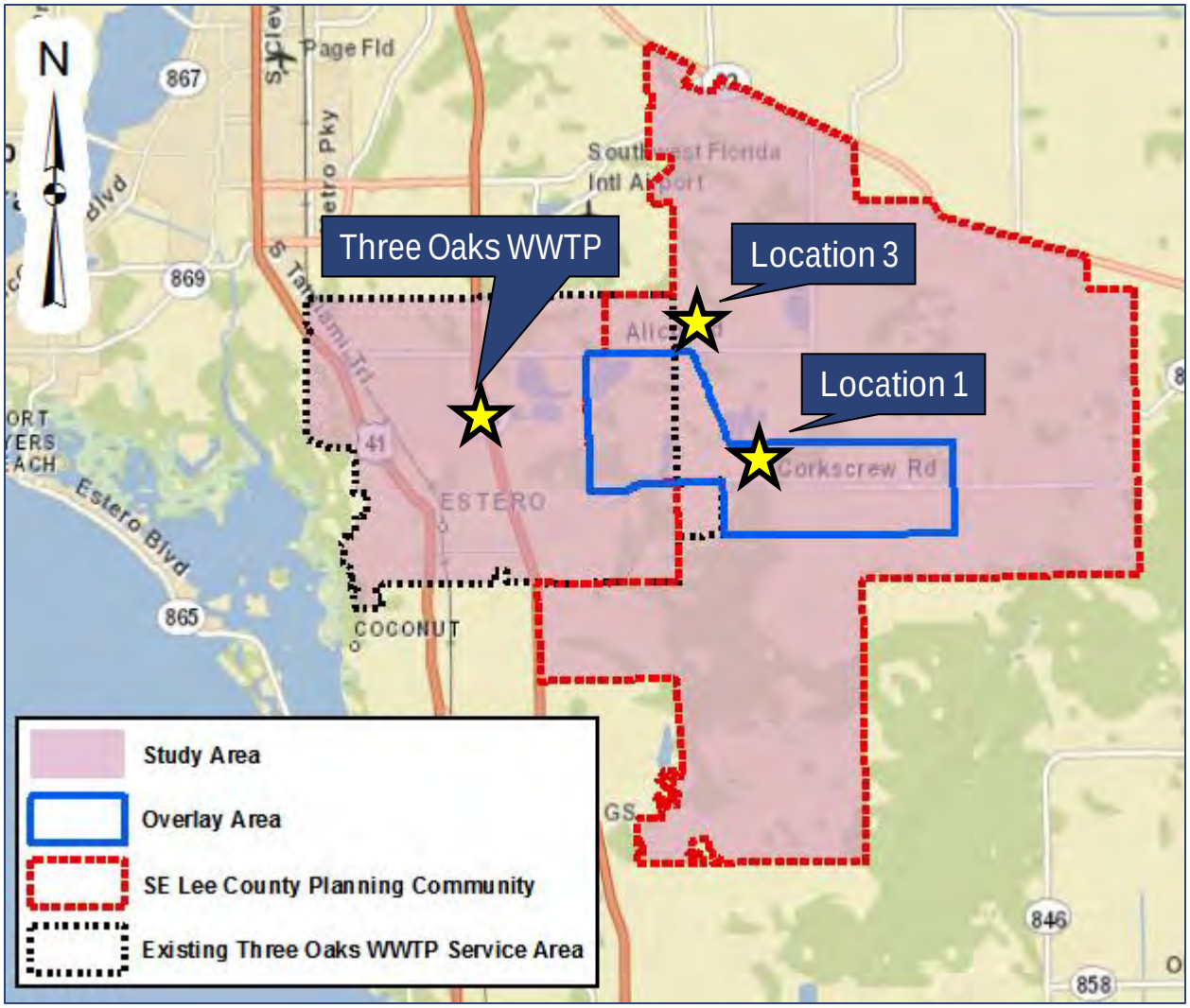

Figure 1: Study Area

LIMITATIONS

The evaluations presented in this addendum are based on County guidance, interpretations of various County policies, and assumptions regarding, but not limited to, development patterns, population growth, wastewater production, and County wastewater infrastructure that were current as of 2016 and used for the previous report[1]. Assumptions may be subject to changes in the future.

2.0 Wastewater Flow Allocations

Projections presented in the previous report indicate that wastewater flows from the study area will exceed the capacity of the Three Oaks WWTP. Due to capacity limitations at the Three Oaks WWTP, a portion of the existing service area will need to be reallocated to the SEWWTP. The previous report also found that flows from the SELCPC will generally need to be allocated to the SEWWTP and the Gateway WWTP.

The previous report evaluated and recommended that the SEWWTP be constructed at **Location 1** and flows from areas along Corkscrew Road (west and east of I-75 and within the existing Three Oaks WWTP service area) be reallocated to the SEWWTP. If **Location 3** is selected, an alternative portion of the Three Oaks WWTP service area could be reallocated to the SEWWTP. This addendum does not change the areas recommended to convey wastewater to the Gateway WWTP as presented in the previous report.

Interim flow allocations to the Three Oaks WWTP, SEWWTP, and Gateway WWTP are (re)evaluated with consideration for utility infrastructure. The previous report assumed that projected flows (from the study area) in excess of the Three Oaks WWTP reliable capacity would be exactly reallocated to the SEWWTP. However, interim allocations to the SEWWTP will be greater than required (with respect to the Three Oaks WWTP capacity) due to infrastructure constraints, but excess can be minimized by implementing reallocations in phases.

FINDINGS

- If the SEWWTP is constructed at **Location 1** (recommended in the previous report), projected wastewater flow allocations for the study area at build-out are as follows:
  - SEWWTP: 3.5 MGD
  - Three Oaks WWTP: 6.4 MGD
  - Gateway WWTP: 0.4 MGD
- If the SEWWTP is constructed at **Location 3**, projected wastewater flow allocations for the study area at build-out are as follows:
  - SEWWTP: 3.8 MGD
  - Three Oaks WWTP: 6.1 MGD
  - Gateway WWTP: 0.4 MGD

2.1.1 Required Reallocation from the Study Area

For simplicity, this evaluation refers to wastewater flow from the entire study area that is not conveyed to the Three Oaks WWTP as *reallocated flows*. The minimum flow that must be reallocated (with respect to the Three Oaks WWTP capacity) is referred to as the *required reallocation* (see Table 1). Note that Table 1 duplicates information presented in the previous report, but is included in this addendum to clarify the definition of required reallocation.

- Required reallocation is the flow that must be reallocated to the SEWWTP to prevent capacity exceedance at the Three Oaks WWTP.
- Required reallocations are not synonymous with required treatment capacity. Actual reallocations will be higher than required reallocations due to constraints on how and from where flows are redirected.

Table 1: Projected Wastewater Flows and Required Reallocations (2020 through Build-Out)

Year	2020	2025	2030	2035	2040	Build-Out
Serviced Portion of the Study Area Flow (MGD)	4.6	5.2	5.8	6.3	6.8	10.3
Three Oaks WWTP Capacity (MGD)	4.8					6.4
Required Reallocation (MGD)	0.0	0.4	1.0	1.5	2.0	3.9

2.1.2 Alternative Reallocation Area

Parcel group wastewater flow projections presented in the previous report are used to identify an alternative *reallocation area* if the SEWWTP is constructed at Location 3 (see Figure 2). The reallocation area includes portion of the existing Three Oaks WWTP service area and the entire SELCPC (note that there is an overlap between the two areas). The reallocation area will be divided between the SEWWTP and the Gateway WWTP service areas. Note that the previous report presented a reallocation area for the case of constructing the SEWWTP at Location 1.

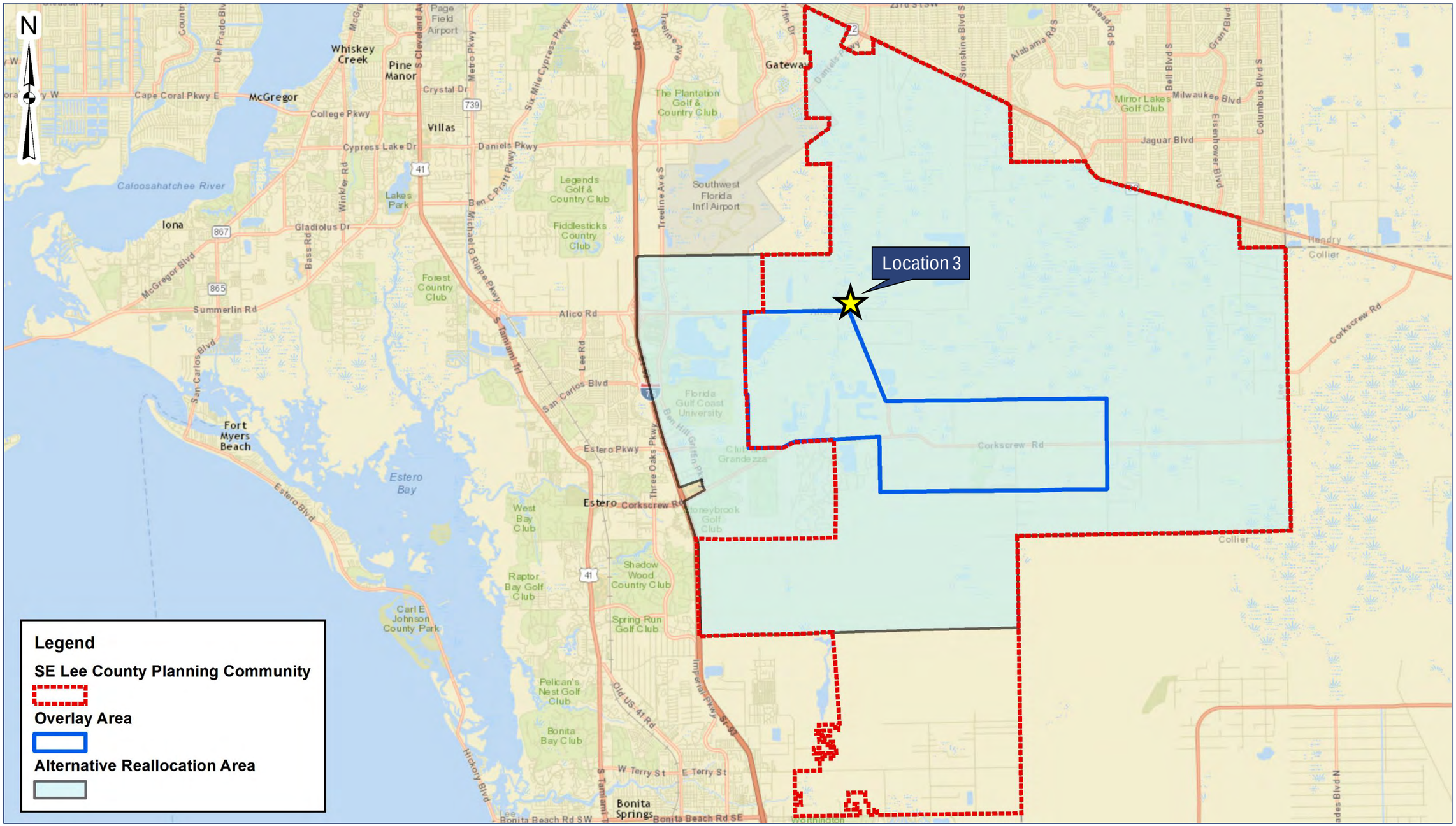

Figure 2: Alternative Reallocation Area for SEWWTP Constructed at Location 3

2.2 Projected Wastewater Flow Allocations with Considerations for Infrastructure

Due to infrastructure constraints, actual reallocations will be greater than the required reallocations. The difference between actual and required reallocation is referred to as the *excess reallocation*. Excess reallocation will require additional treatment capacity at the SEWWTP relative to capacity inferred from required reallocations. Actual and excess reallocations are evaluated for the:

- Reallocation area presented in the previous report, which corresponds to constructing the SEWWTP at Location 1.
- Alternative reallocation area if the SEWWTP is constructed at Location 3 (see Figure 2).

For both reallocation areas, only phased options for implementation are considered. Phased implementations proceed incrementally to minimize interim excess reallocations and are consistent with routing capabilities of force main infrastructure.

2.2.1 Option 1: SEWWTP Constructed at Location 1 [REVISIONS]

The previous report presented interim required reallocations (2020 through 2040) as representative of actual WWTP allocations. Interim reallocations are reexamined with consideration for infrastructure. The reallocations for Location 1 are based on the projected future service areas for the Three Oaks WWTP, Gateway WWTP, and SEWWTP presented in the previous report.

- Option 1 initially redirects flows from areas along Corkscrew Road, east of I-75, to the SEWWTP; areas along Corkscrew Road, west of I-75, are not redirected until 2035.
- Option 1 includes four phases: 2025, 2030, 2035, and build-out (see Figure 4).

Projected reallocations for Option 1 are presented in Table 2 and Figure 3. Some excess reallocation is projected for Option 1 through 2040. At build-out, Option 1 is projected to have negligible excess reallocation.

Table 2: Flow Reallocations for Option 1 for SEWWTP at Location 1 (2020 through Build-Out)

Year	2020	2025	2030	2035	2040	Build-Out
Total Reallocation (MGD)	0.0	0.7	1.3	2.4	2.6	3.9
Excess Reallocation (MGD)	0.0	0.3	0.3	0.8	0.6	0.0

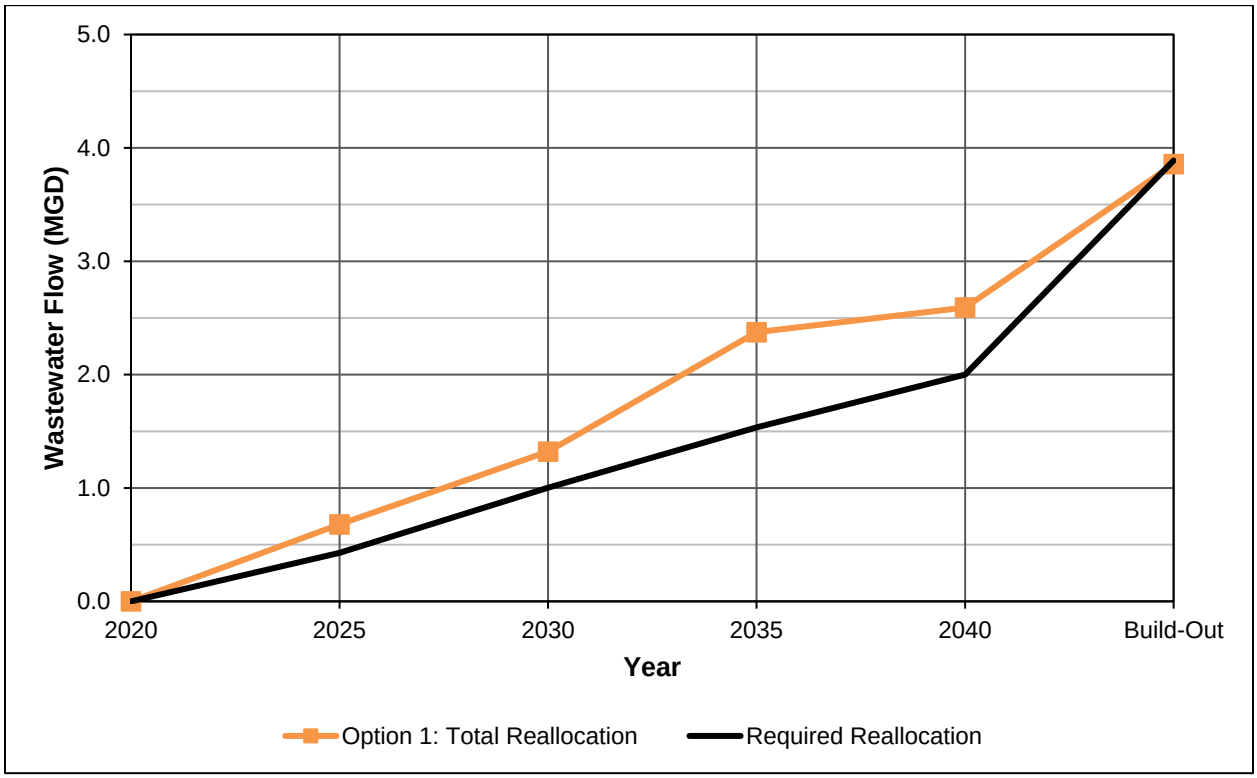

Figure 3: Flow Reallocations for Option 1 for SEWWTP at Location 1 (2020 through Build-Out)

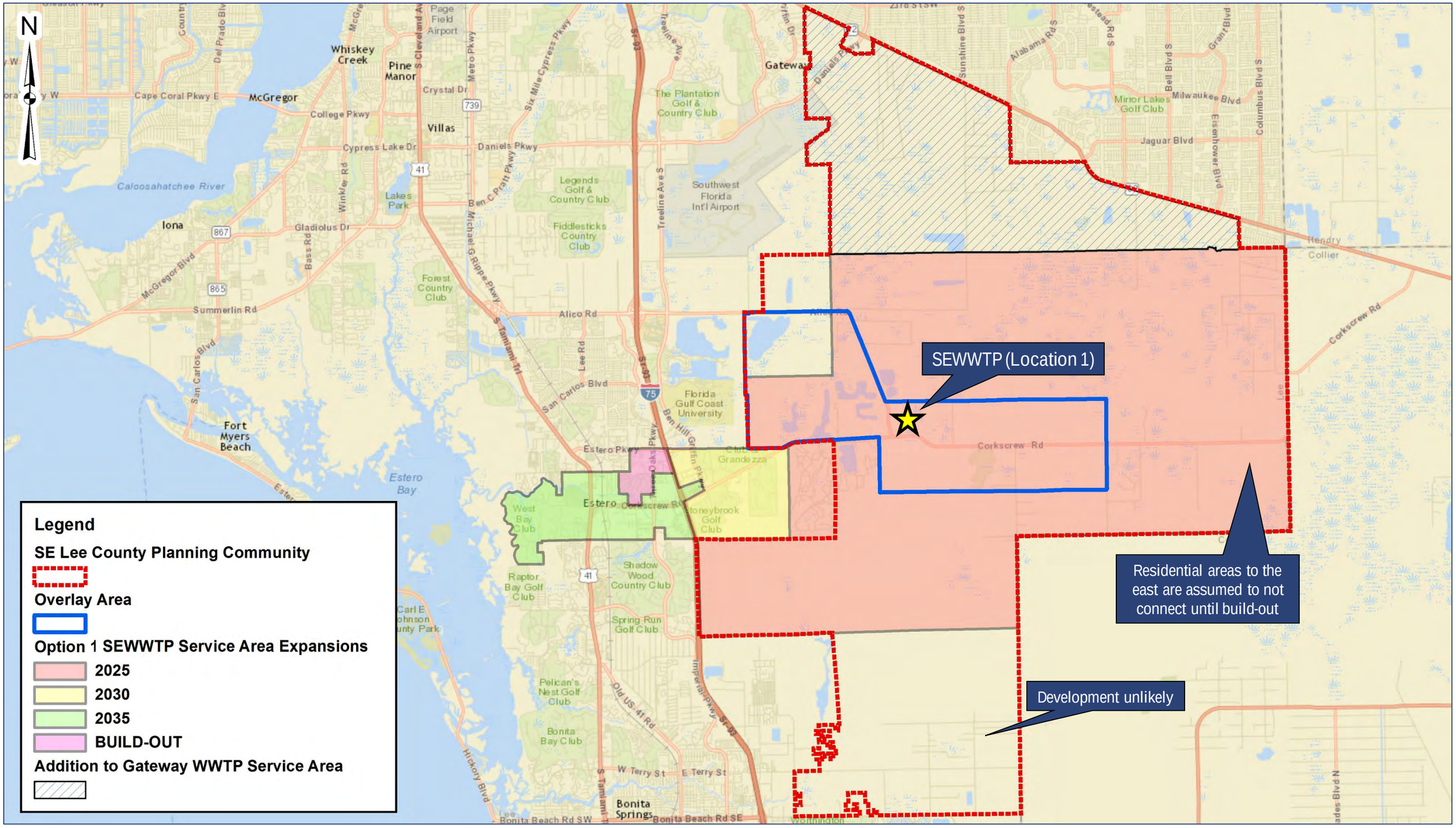

Figure 4: SEWWTP and Gateway WWTP Service Area Expansions for Option 1 (2025 through Build-Out)

2.2.2 Option 3: SEWWTP Constructed at Location 3

Interim reallocations are evaluated for the case of constructing the SEWWTP at Location 3. Flows are redirected from the alternative reallocation area presented in Figure 2.

- Option 3 initially redirects areas along Corkscrew Road and Alico Road to the SEWWTP; areas along Ben Hill Griffin Parkway are not redirected until build-out.
- Option 3 includes five phases: 2025, 2030, 2035, 2040, and build-out (see Figure 6).

Projected reallocations for Option 3 are presented in Table 3 and Figure 5. Option 3 has minimal excess reallocation prior to build-out. An excess reallocation of 0.2 MGD is projected at build-out.

Table 3: Flow Reallocations for Option 3 for SEWWTP at Location 3 (2020 through Build-Out)

Year	2020	2025	2030	2035	2040	Build-Out
Total Reallocation (MGD)	0.0	0.7	1.3	1.6	2.2	4.1
Excess Reallocation (MGD)	0.0	0.3	0.3	0.0	0.2	0.2

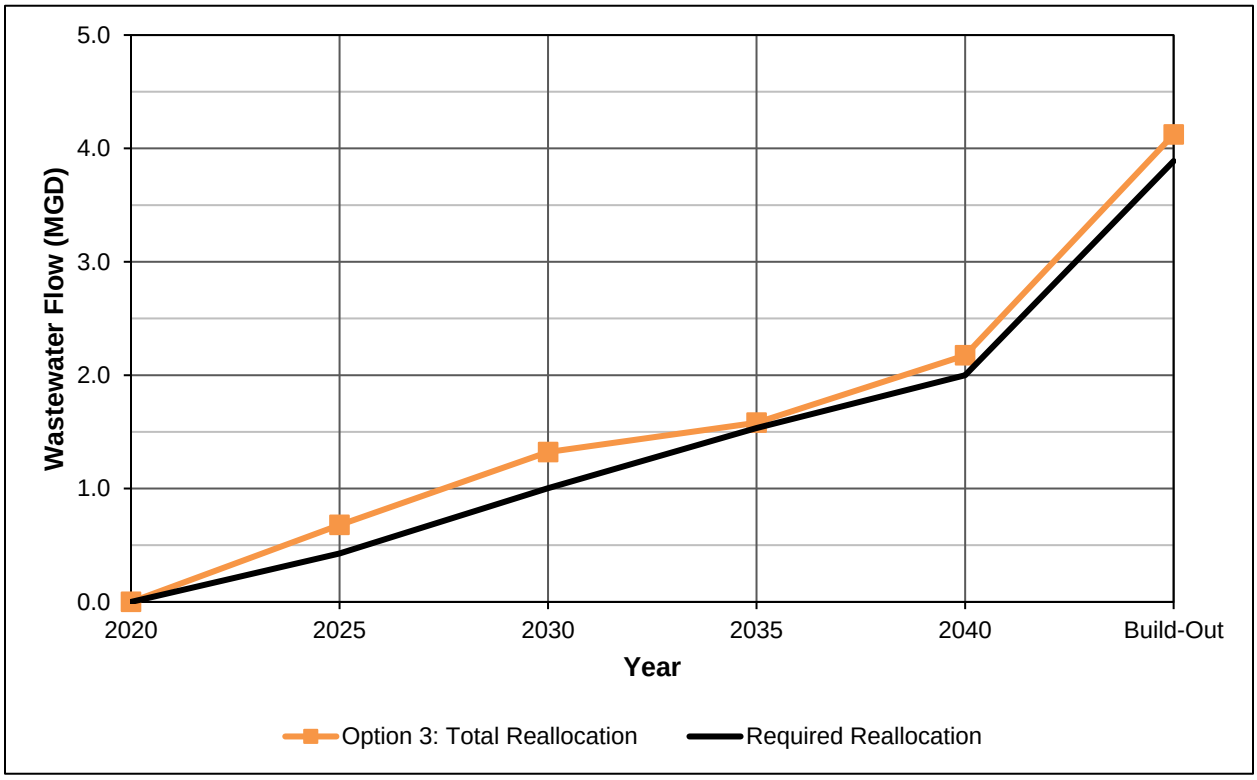

Figure 5: Flow Reallocations for Option 3 for SEWWTP at Location 3 (2020 through Build-Out)

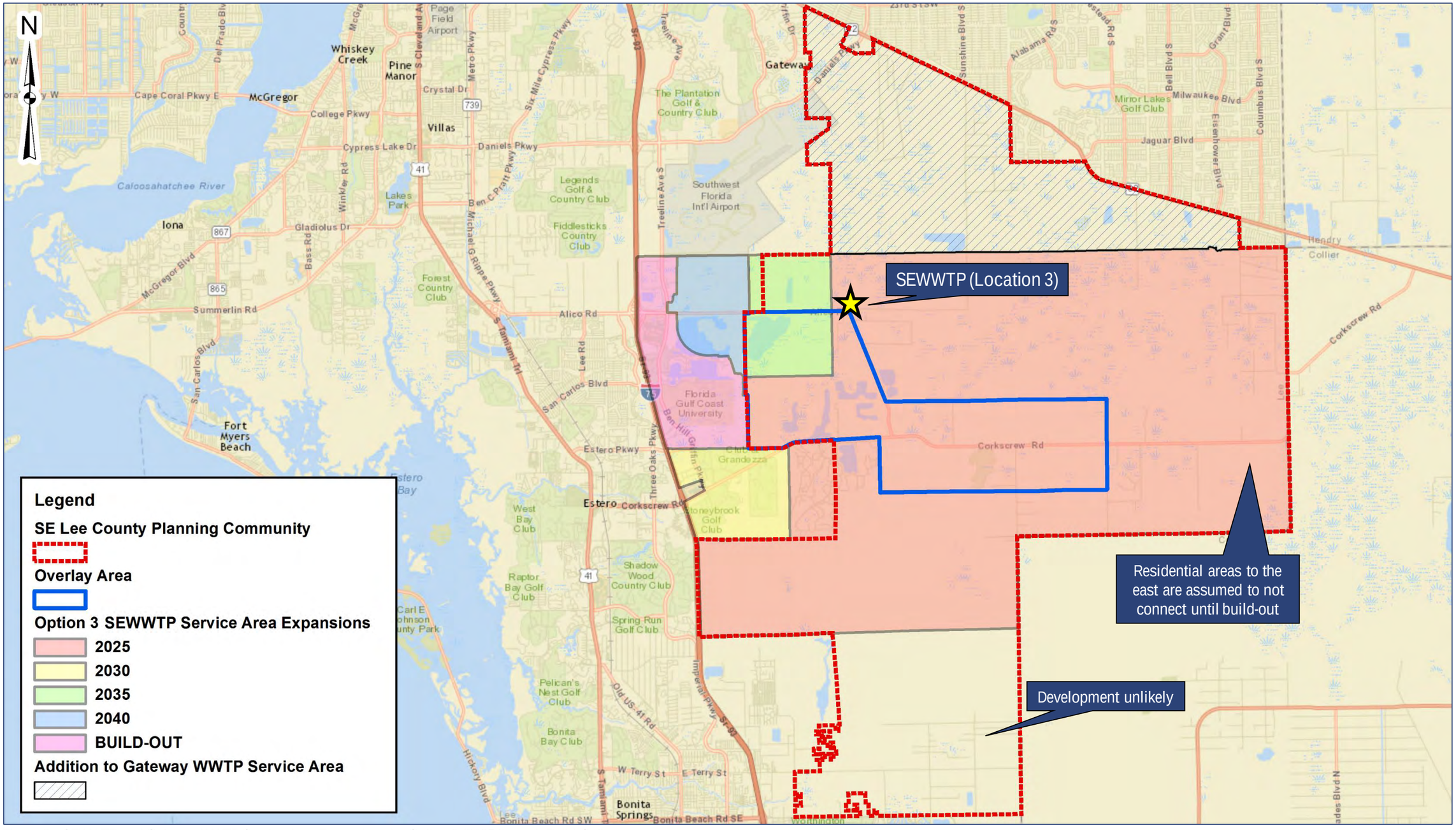

Figure 6: SEWWTP and Gateway WWTP Service Area Expansions for Option 3 (2025 through Build-Out)

2.3 Summary

Projected wastewater flows to the SEWWTP, Three Oaks WWTP, and Gateway WWTP for **Option 1** (see **Section 2.2.1**) and **Option 3** (see **Section 2.2.2**) are presented in **Figure 7**. Note that projected wastewater flows to the Gateway WWTP are consistent among all options, and all options limit flows to the Three Oaks WWTP to the projected treatment capacity.

- **Option 3** is projected to have *reduced interim treatment capacity requirements* at the SEWWTP relative to **Option 1**. In the interim, the alternative reallocation area identified for **Option 3** more efficiently utilizes existing treatment capacity at Three Oaks relative to the reallocation area identified for **Option 1**.
- **Option 3** is projected to require *increased build-out treatment capacity* at the SEWWTP relative to **Option 1**, although the difference may be negligible in practice.

Figure 7: Projected Wastewater Allocations for the SEWWTP, Three Oaks WWTP, and Gateway WWTP (2020 through Build-Out)

3.0 Infrastructure Improvements

Treatment capacity requirements for the SEWWTP are evaluated for **Option 1** and **Option 3** using projected interim wastewater flows that consider infrastructure constraints. *Collection system infrastructure*[4] is evaluated for **Option 3** for 2025 through 2040 and build-out. This evaluation is intended to provide a conceptual basis for planning and is subject to change.

3.1 Permitted Treatment Capacity for the SEWWTP

Permitted treatment capacity for the SEWWTP are projected using a reliability factor[5] of 0.8 and the wastewater flow projections for **Option 1** and **Option 3** (see **Table 4**). Interim capacity recommendations for **Option 1** supersede recommendations provided in the previous report[6].

- **Option 3** is projected to require *lower interim treatment capacity* relative to **Option 1**.
- **Option 1** is projected to require *lower build-out treatment capacity* relative to **Option 3**.

Actual permitted treatment capacity needs will depend on how quickly unserviced areas within the study area are connected to the County's wastewater system, if or when the County expands the Three Oaks WWTP, and realized growth within the study area.

Table 4: Projected Permitted Treatment Capacity Needs for a Future SEWWTP (2020 through Build-Out)

Timeframe	Permitted Treatment Capacity Projections for SEWWTP†	
	Option 1 (Constructed at Location 1)	Option 3 (Constructed at Location 3)
2020 – 2025	1.0 MGD	1.0 MGD
2025 – 2030	2.0 MGD	2.0 MGD
2030 – 2035	3.0 MGD	2.0 MGD
2035 – 2040	3.5 MGD	3.0 MGD
Build-Out	4.5 MGD	5.0 MGD

† Rounded up to the nearest multiple of 0.5 MGD.

4 Trunkline (major) force mains and master pump stations.
5 For reliability, the County specifies that projected wastewater flows must not exceed 80% of the permitted treatment capacity.
6 Infrastructure constraints were not considered by the previous report for interim treatment capacity projections.

FINDINGS

- Permitted treatment capacity for Option 1 [REVISED]:
  - 3.5 MGD is projected to meet treatment needs through approximately 2040.
  - 4.5 MGD is projected to be sufficient through build-out.
- Permitted treatment capacity for Option 3:
  - 3.0 MGD is projected to meet treatment needs through approximately 2040.
  - 5.0 MGD is projected to be sufficient through build-out.

3.2 Wastewater Flows for Option 3 Collection System Evaluation

For sizing force mains and / or master lift stations, wastewater flows are projected using LCU design specifications. This is different than the approach used to project flows from the study area to the WWTPs which are based on the County's Integrated Water Resources Master Plan (IWRMP).

- The IWRMP approach is used to estimate the *annual-average daily flow* (AADF) to a WWTP using the permanent population within the service area.
  - All sources of wastewater (residential, commercial, industrial, etc.) are "attributed" to the permanent population within the service area for the IWRMP per-capita flow of 98 gallons per day (GPD).
  - The IWRMP approach is applicable at the *WWTP service area scale*.
- LCU design specifications consider individual sources of wastewater.
  - Flows are calculated using specified values for each type of source.
  - This approach is applicable at sub-service-area scales for force main and lift station design.

As part of the previous report, as well as prior work for the County[7], Johnson Engineering evaluated commercial, industrial, school, hotel, and stadium development within the study area. These projections are updated to include projected residential development within the Overlay Area and the SELCPC. The approach previously used for sizing the Ben Hill Griffin Parkway / Alico Road force mains[7] is utilized by this evaluation.

[7] *Ben Hill Griffin Parkway & Alico Road Wastewater Force Main Sizing Analysis*. Prepared by Johnson Engineering for Lee County Utilities (February 2015). CN-12-19.

ASSUMPTIONS

- No additional future commercial / industrial development beyond current approvals.
- Commercial and industrial facilities are assumed to generate wastewater at a rate that is equivalent to that of an *office building* (0.15 GPD per square foot).
- Dorms at Florida Gulf Coast University are assumed to generate wastewater at a rate comparable to a *multi-family residential unit* (200 GPD per unit)[8]. Based on per-capita wastewater generation of 100 GPD, a dorm room is assumed to be equivalent to two residents. *At build-out, FGCU is projected to have 6,300 dorms[7], which is assumed to be equivalent to 12,600 residents for evaluating collection system infrastructure*.
- 60% of the calculated peak-hour wastewater flow for an area is representative of actual peak-hour wastewater flows (assumes all lift stations are not simultaneously active).

The study area is divided into "*parcel groups*" to allow wastewater flows to be estimated at higher resolution (e.g. for individual developments). Parcel groups are identical to those previously used but include three additional parcel groups that correspond to the Overlay Area, future mixed use development, and residential areas outside of developments within the SELCPC (see **Figure 8**). *The new parcel groups have geographic overlap and are intended to represent the various types of future development projected for the SELCPC / Overlay Area*. For each parcel group:

- *Development* (by type) is projected (see **Tables 6 – 10**).
    - For residential development, population is used in lieu of distinguishing between single- or multi-family units. Population is projected using the total number of residential units and planning community average persons per household figures[9] which do not explicitly consider differences between single- or multi-family units.
- *Wastewater flows* are calculated using the specifications provided in **Table 5**.
- *Equivalent population* is calculated using total wastewater flow from all sources and a per-capita wastewater production rate of 100 GPD (see **Tables 11 – 15**).
- *Ten States Standards peak factors* are calculated using equivalent population (see **Tables 11 – 15**).
- *Peak-hour flow rates* are calculated and multiplied by 60% (see **Tables 11 – 15**).

[8] *Lee County Utilities Design Manual.*
[9] Provided to Johnson Engineering by Lee County as part of the *Ben Hill – Alico Road Wastewater Force Main* project (CN-12-19)

Table 5: Design Specifications used for Wastewater Flow Estimation

Source Type	Wastewater Flow Specification
Population[10]	100 GPD per capita
Commercial[11], Industrial[11], and School Facilities[11,12]	0.15 GPD per square foot
Hotels[11]	100 GPD per room
Stadiums[11]	4 GPD per seat

Table 6: Projected Development Quantities for Option 3 in 2025

Parcel Group	Residents	Commercial (ft^2)	Industrial (ft^2)	Schools (ft^2)	Stadium (seats)	Hotels (rooms)
16	1,098	1,264	0	0	0	0
50	1,018	0	0	0	0	0
51	4,599	18,884	0	0	0	0
71	2,966	0	0	0	0	0
73	1,021	0	0	0	0	0

Table 7: Projected Development Quantities for Option 3 in 2030

Parcel Group	Residents	Commercial (ft^2)	Industrial (ft^2)	Schools (ft^2)	Stadium (seats)	Hotels (rooms)
16	1,279	1,685	0	0	0	0
49	3,335	784,050	0	0	7,950	0
50	1,137	0	0	0	0	0
51	4,687	20,419	0	0	0	0
52	729	0	0	0	0	0
53	1,123	28,684	0	0	0	0
55	2,476	303,452	0	77,184	0	0
71	4,441	0	0	0	0	0
73	1,591	0	0	0	0	0

[10] *Lee County Utilities Design Manual.*
[11] *Florida Administrative Code (FAC) 64E-6, Table 1.*
[12] (1 student / 40 net square feet) × (0.6 net square feet / gross square foot) × (10 GPD / student) = 0.15 GPD per square foot. Figures for students per area, net area per gross square foot, and GPD per student obtained from *FAC 64E-6* and *FAC 6A-2.0010*.

Table 8: Projected Development Quantities for Option 3 in 2035

Parcel Group	Residents	Commercial (ft^2)	Industrial (ft^2)	Schools (ft^2)	Stadium (seats)	Hotels (rooms)
14	0	12,639	36,756	0	0	0
15	231	0	0	0	0	0
16	1,447	2,106	0	0	0	0
49	3,628	787,084	0	0	7,950	0
50	1,247	0	0	0	0	0
51	4,769	21,954	0	0	0	0
52	892	0	0	0	0	0
53	1,170	28,684	0	0	0	0
55	2,515	308,917	0	77,184	0	120
71	5,805	0	0	0	0	0

Table 9: Projected Development Quantities for Option 3 in 2040

Parcel Group	Residents	Commercial (ft^2)	Industrial (ft^2)	Schools (ft^2)	Stadium (seats)	Hotels (rooms)
12	0	101,020	260,199	0	0	349
13	0	0	86,147	0	0	0
14	0	15,167	44,107	0	0	0
15	268	0	0	0	0	0
16	1,594	2,528	0	0	0	0
17	5,028	40,824	0	0	0	250
49	3,884	790,119	0	0	7,950	0
50	1,343	0	0	0	0	0
51	4,840	23,489	0	0	0	0
52	1,035	0	0	0	0	0
53	1,211	28,684	0	0	0	0
55	2,549	314,383	0	77,184	0	120
71	6,999	0	0	0	0	0
73	2,579	0	0	0	0	0

Table 10: Projected Development Quantities for Option 3 at Build-Out

Parcel Group	Residents	Commercial (ft^2)	Industrial (ft^2)	Schools (ft^2)	Stadium (seats)	Hotels (rooms)
10	0	838,183	1,490,250	0	0	472
11	0	513,000	450,000	0	0	265
12	0	1,598,561	5,663,265	0	0	349
13	0	0	1,875,000	0	0	0
14	0	240,000	960,000	0	0	0
15	389	0	0	0	0	0
16	2,070	40,000	0	0	0	0
17	6,318	646,000	0	0	0	250
18	10,969	628,602	40,000	0	0	450
19	12,600	70,582	0	3,904,158	7,600	0
20	0	280,500	0	0	0	120
21	1,662	1,850,283	0	0	0	250
49	4,718	1,060,000	0	0	7,950	0
50	1,656	0	0	0	0	0
51	5,072	160,000	0	0	0	0
52	1,499	0	0	0	0	0
53	1,346	28,684	0	0	0	0
55	2,660	800,491	0	77,184	0	120
71	10,880	0	0	0	0	0
72	2,275	0	0	0	0	0
73	4,078	0	0	0	0	0

Table 11: Peak-Hour Wastewater Flow Calculations for Option 3 in 2025 (Design Specifications)

Parcel Group	Equivalent Population	Peak Factor	Avg. Flow (GPM)	Peak-Hour Flow (GPM)	60% Peak-Hour Flow (GPM)
16	1,100	3.77	76	288	173
50	1,018	3.79	71	268	161
51	4,628	3.28	321	1,053	632
71	2,966	3.45	206	710	426
73	1,021	3.79	71	269	161

Table 12: Peak-Hour Wastewater Flow Calculations for Option 3 in 2030 (Design Specifications)

Parcel Group	Equivalent Population	Peak Factor	Avg. Flow (GPM)	Peak-Hour Flow (GPM)	60% Peak-Hour Flow (GPM)
16	1,282	3.73	89	332	199
49	4,830	3.26	335	1,093	656
50	1,137	3.76	79	297	178
51	4,718	3.27	328	1,071	642
52	729	3.88	51	197	118
53	1,167	3.76	81	304	182
55	3,047	3.44	212	727	436
71	4,441	3.29	308	1,015	609
73	1,591	3.66	110	404	243

Table 13: Peak-Hour Wastewater Flow Calculations for Option 3 in 2035 (Design Specifications)

Parcel Group	Equivalent Population	Peak Factor	Avg. Flow (GPM)	Peak-Hour Flow (GPM)	60% Peak-Hour Flow (GPM)
14	75	4.28	5	22	13
15	231	4.12	16	66	40
16	1,451	3.69	101	372	223
49	5,127	3.23	356	1,152	691
50	1,247	3.74	87	324	194
51	4,802	3.26	333	1,088	653
52	892	3.83	62	237	142
53	1,214	3.74	84	315	189
55	3,215	3.42	223	763	458
71	5,805	3.18	403	1,284	770
73	2,118	3.57	147	524	315

Table 14: Peak-Hour Wastewater Flow Calculations for Option 3 in 2040 (Design Specifications)

Parcel Group	Equivalent Population	Peak Factor	Avg. Flow (GPM)	Peak-Hour Flow (GPM)	60% Peak-Hour Flow (GPM)
12	891	3.83	62	237	142
13	130	4.21	9	38	23
14	89	4.26	6	26	16
15	268	4.10	19	76	46
16	1,598	3.66	111	406	244
17	5,340	3.22	371	1,193	716
49	5,388	3.21	374	1,203	722
50	1,343	3.71	93	346	208
51	4,876	3.26	339	1,102	661
52	1,035	3.79	72	272	163
53	1,255	3.73	87	325	195
55	3,257	3.41	226	772	463
71	6,999	3.11	486	1,510	906
73	2,579	3.50	179	626	376

Table 15: Peak-Hour Wastewater Flow Calculations for Option 3 at Build-Out (Design Specifications)

Parcel Group	Equivalent Population	Peak Factor	Avg. Flow (GPM)	Peak-Hour Flow (GPM)	60% Peak-Hour Flow (GPM)
10	3,965	3.34	275	919	551
11	1,710	3.64	119	432	259
12	11,242	2.90	781	2,267	1,360
13	2,813	3.47	195	677	406
14	1,800	3.62	125	453	272
15	389	4.03	27	109	65
16	2,130	3.56	148	527	316
17	7,537	3.08	523	1,610	966
18	12,422	2.86	863	2,468	1,481
19	18,867	2.68	1310	3,508	2,105
20	541	3.96	38	149	89
21	4,688	3.27	326	1,065	639
49	6,626	3.13	460	1,440	864
50	1,656	3.65	115	420	252
51	5,312	3.22	369	1,188	713
52	1,499	3.68	104	383	230
53	1,390	3.70	96	357	214
55	4,097	3.32	284	946	567
71	10,880	2.92	756	2,205	1,323
72	2,275	3.54	158	559	336
73	4,078	3.33	283	942	565

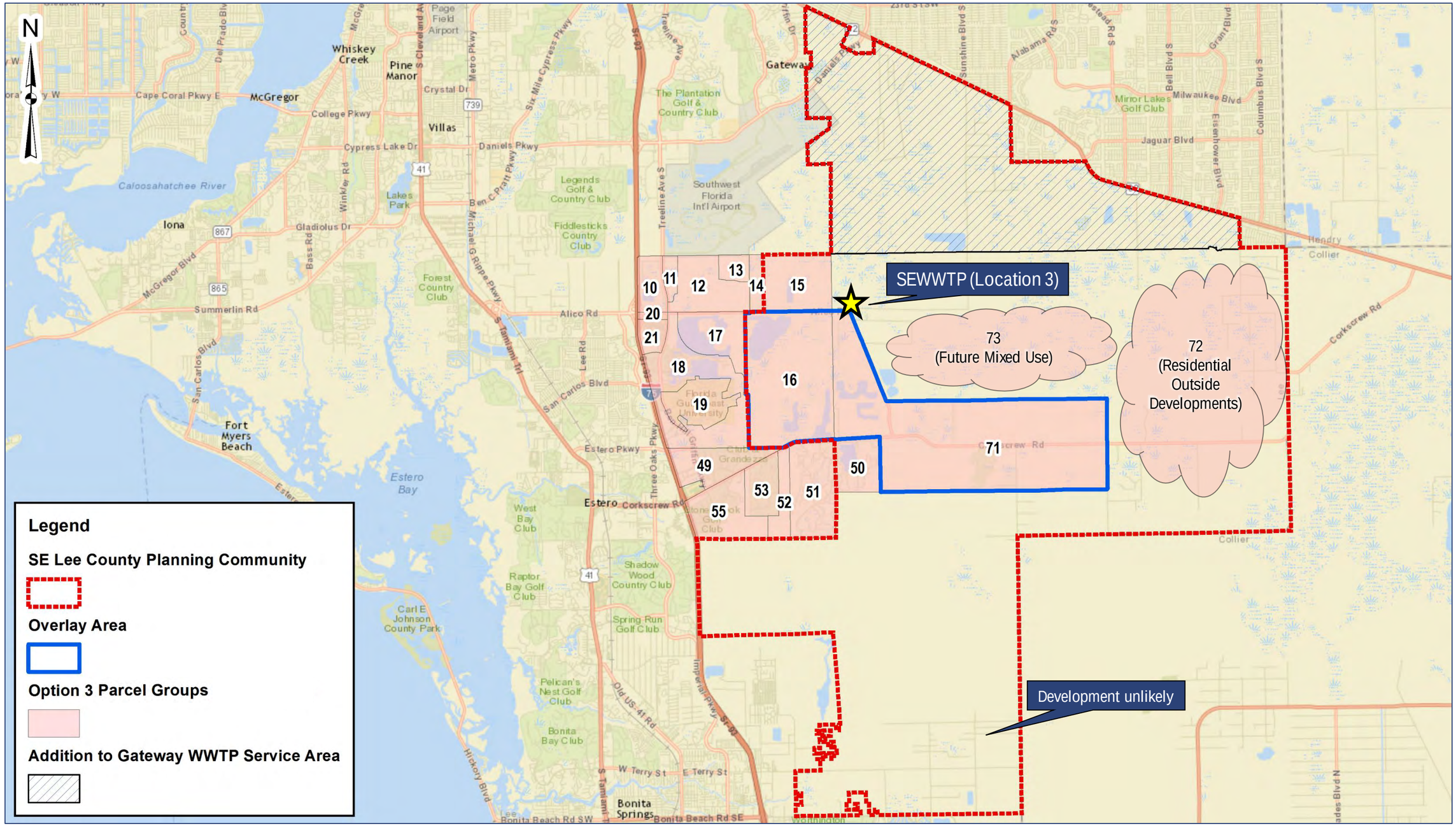

Figure 8: Option 3 Parcel Groups

3.3 Hydraulic Modeling for Option 3 Collection System Infrastructure

Hydraulic modeling is performed to provide planning-level recommendations for future infrastructure. Modeling is performed for Option 3 conditions in 2025 through 2040 and at build-out. Modeling is performed using InfoWater 9.0 software.

ASSUMPTIONS

- Infrastructure:
  - The future Pinewoods MPS will be constructed by 2020.
  - Flow velocities should generally be less than 6 feet per second during peak-hour conditions.
- Modeling:
  - Residential areas within the SELCPC that are outside of developments will connect at build-out.
  - Small lift stations and internal site-specific infrastructure are not modeled. Only master lift stations, trunkline force mains, and the SEWWTP are modeled.
  - Site connections to the trunkline force mains are approximated for existing developments and assumed for future developments.
  - Roughness coefficients (Hazen-Williams *C*-factors) for new pipes are set to a value of 110. The model utilizes a calibrated model previously prepared by Johnson Engineering[13] for existing mains.
  - Minor losses are negligible and are not considered.
  - Elevations are not considered for any facilities. All elevations are set to a default value of zero. Differences between actual elevations may increase or decrease projected headlosses as presented by this addendum. Differences between junction heads as reported by this technical memorandum are equivalent to frictional headlosses between points.

[13] *Ben Hill – Alico Road Wastewater Force Main*. CN-12-19.

3.3.1 Year 2025

Year 2025 is the estimated timeframe for initial operation of the SEWWTP. Modeling results are presented in Figure 9. Modeling indicates that the existing force mains on Corkscrew Road are adequately sized for projected flows. Flow velocity through the Alico Road 24-inch force main is projected to be less than 2 feet per second.

ASSUMPTIONS

- Per County guidance and modeling results for future timeframes, approximately 18,000 feet of 24-inch force main is assumed to be constructed along Alico Road from Corkscrew Road to the SEWWTP.
- The Overlay Area (including WildBlue and Corkscrew Shores) and Bella Terra / The Preserve at Corkscrew are assumed to be directed to the SEWWTP.
- All flows from WildBlue are directed to the Corkscrew Road force main[14].
- Areas to the west of Bella Terra continue to be directed to the Three Oaks WWTP.
- The County has indicated that the Pinewoods master pump station (PWMPS) is likely to be constructed around 2020. However, the proposed operations do not utilize the PWMPS to direct flows to the SEWWTP until 2030. The PWMPS is not included in the 2025 simulation.

FINDINGS

- Existing force mains along Corkscrew Road (12-inch force main west of Alico Road and 10-inch force main east of Alico Road) are adequately sized for projected flows in Year 2025.

[14] A "north connection' to the Alico Road force main is assumed to be made at a later timeframe.

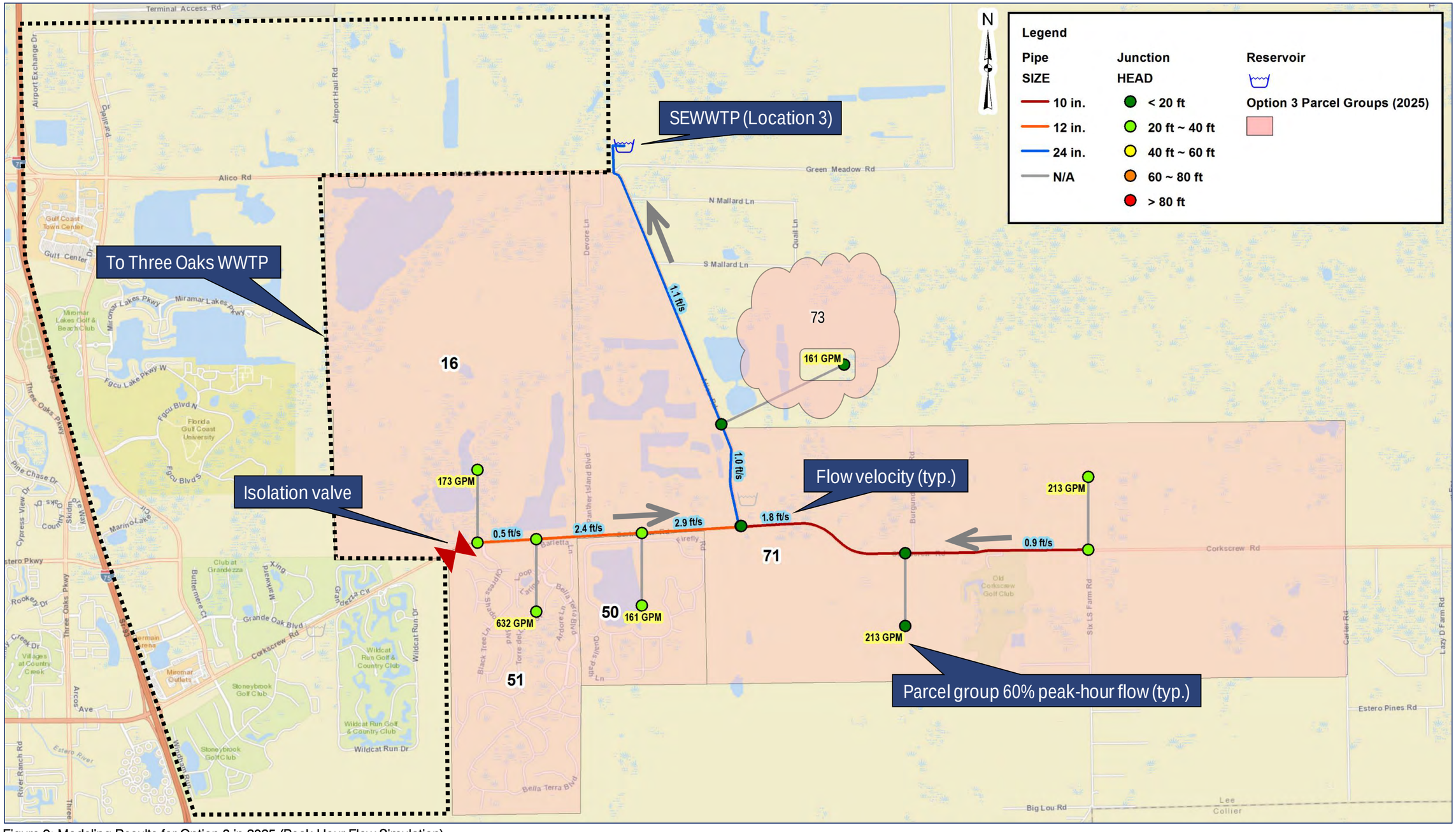

Figure 9: Modeling Results for Option 3 in 2025 (Peak-Hour Flow Simulation)

3.3.2 Year 2030

Additional areas along Corkscrew Road will be redirected to the SEWWTP in 2030. Modeling results are presented in **Figure 10**. Modeling indicates that the existing 12-inch force main along Corkscrew Road, between WildBlue and Alico Road, will need to be upsized to 24 inches. If this portion of force main is not upsized, frictional headloss[15] between the PWMPS and the SEWWTP is projected to be greater than 200 feet. Peak-hour flow from the PWMPS is projected to be approximately 1,100 GPM in 2030.

ASSUMPTIONS

- Stoneybrook, Grandezza, and Wildcat Run are assumed to be directed to the SEWWTP in 2030.
- The Pinewoods master pump station (PWMPS) is used to re-pump flows from the west to the SEWWTP.

FINDINGS

- The existing force main along Corkscrew Road between WildBlue and Alico Road will need to be upsized to a 24-inch main (approximately 11,000 feet). The upsized main could be extended west to the PWMPS, but it is noted that the existing 12-inch force main west of WildBlue is projected to be adequately sized through 2040.
    - A parallel 20-inch force main could be considered as an alternative to upsizing the 12-inch force main to 24 inches. Parallel 12-inch and 20-inch mains would provide approximately 95% of the capacity of a single 24-inch main.
- Peak-hour flow from the PWMPS is projected to be 1,100 GPM. Frictional headloss between the PWMPS and the SEWWTP is projected to be 90 to 110 feet during peak-hour conditions.

[15] **As modeled, system heads are based only on overcoming pipe friction losses due to flow**. Actual system heads may be higher or lower, depending on elevation differences between upstream and downstream points.

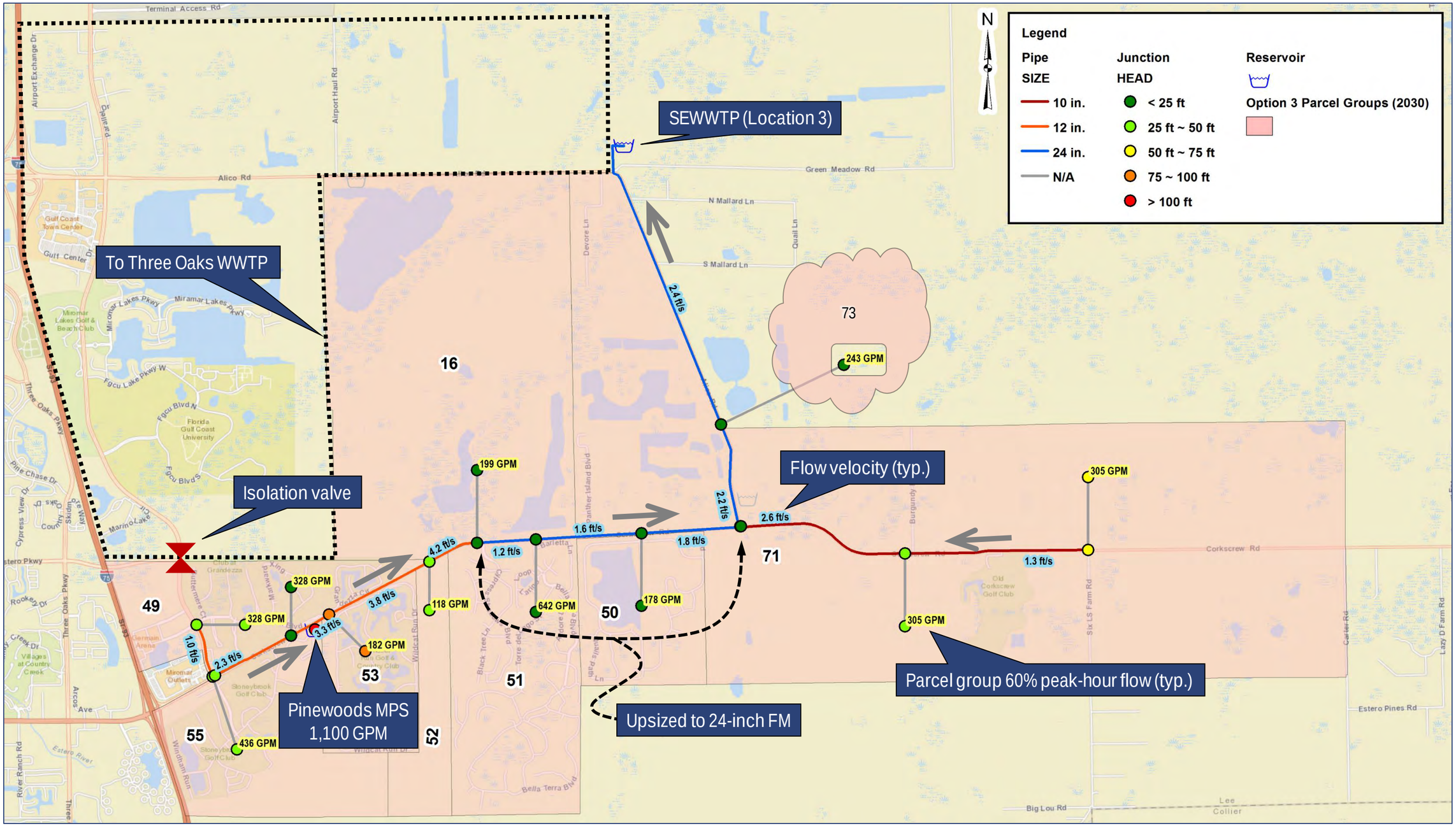

Figure 10: Modeling Results for Option 3 in 2030 (Peak-Hour Flow Simulation)

3.3.3 Year 2035

Areas along Alico Road located east of Centerplace will be redirected to the SEWWTP in 2035. Modeling results are presented in Figure 11. A new force main will need to be constructed along Alico Road between Airport Haul Road and the SEWWTP. Modeling indicates that this main could be sized at 6 inches for projected 2035 flows. Peak-hour flow from the PWMPS is projected to be approximately 1,200 GPM in 2035.

ASSUMPTIONS

- Flows from WildBlue are split between the Corkscrew Road connection and a new connection on Alico Road.

FINDINGS

- Approximately 12,000 feet of new force main will need to be constructed along Alico Road between Airport Haul Road and the SEWWTP by Year 2035 (see Figure 11).
    - The minimum recommended size for this main is projected to be 6 inches. However, a 12-inch main could be constructed to eliminate the need for upsizing prior to build-out.
- Peak-hour flow from the PWMPS is projected to be 1,200 GPM. Frictional headloss between the PWMPS and the SEWWTP is projected to be 100 to 120 feet during peak-hour conditions.

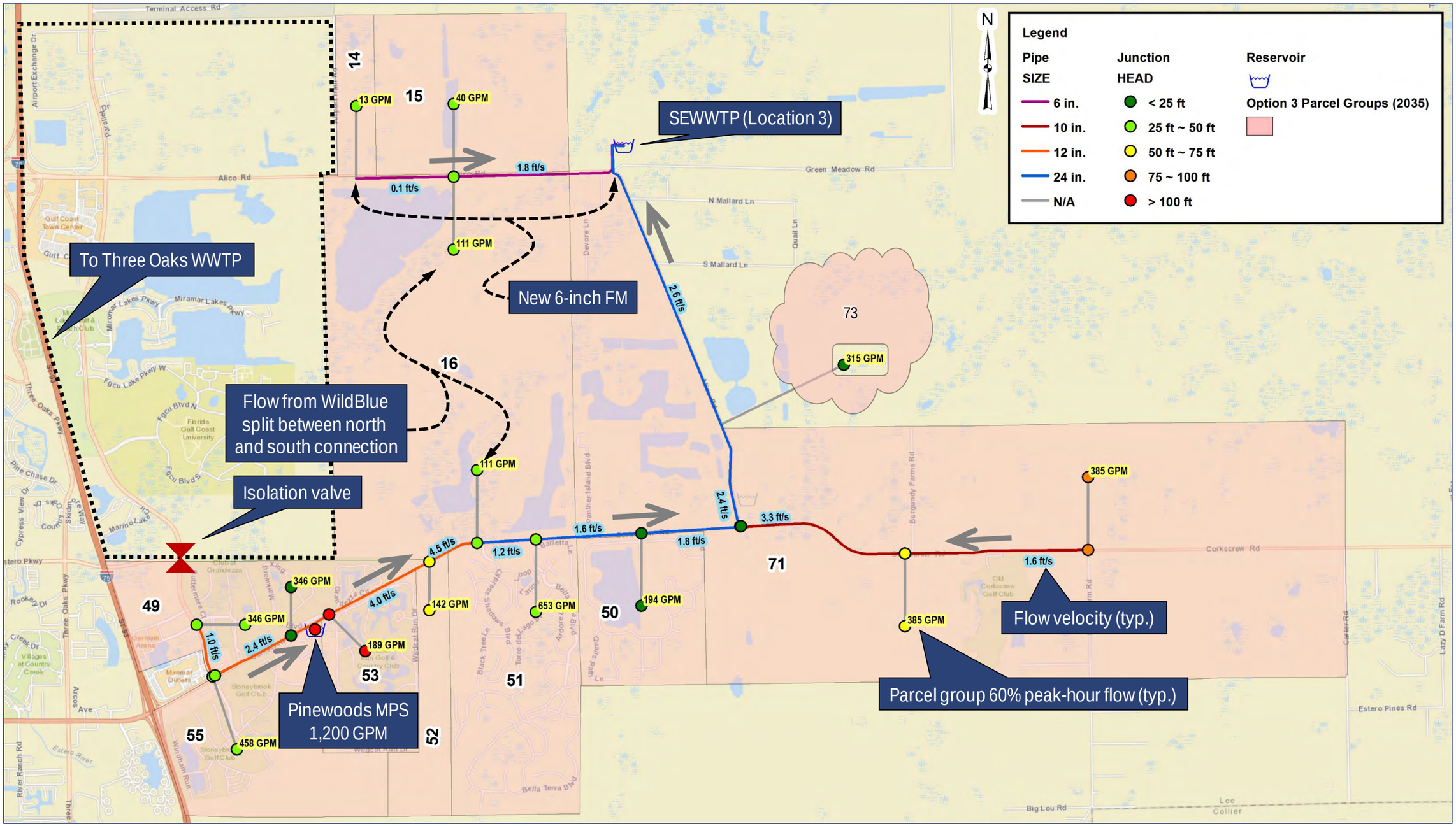

Figure 11: Modeling Results for Option 3 in 2035 (Peak-Hour Flow Simulation)

3.3.4 Year 2040

Areas along Alico Road located east of Ben Hill Griffin Parkway will be redirected to the SEWWTP in 2040. Modeling results are presented in Figure 12. The force main along Alico Road between Airport Haul Road and the SEWWTP will need to be upsized to 12 inches if an interim 6-inch force main is constructed in 2035. Peak-hour flow from the PWMPS is projected to be approximately 1,200 GPM in 2040.

FINDINGS

- Approximately 12,000 feet of replacement 12-inch force main will need to be constructed along Alico Road between Airport Haul Road and the SEWWTP if an interim 6-inch force main is constructed in Year 2035 (see Figure 12).
- Peak-hour flow from the PWMPS is projected to be 1,200 GPM. Frictional headloss between the PWMPS and the SEWWTP is projected to be 110 to 130 feet during peak-hour conditions.

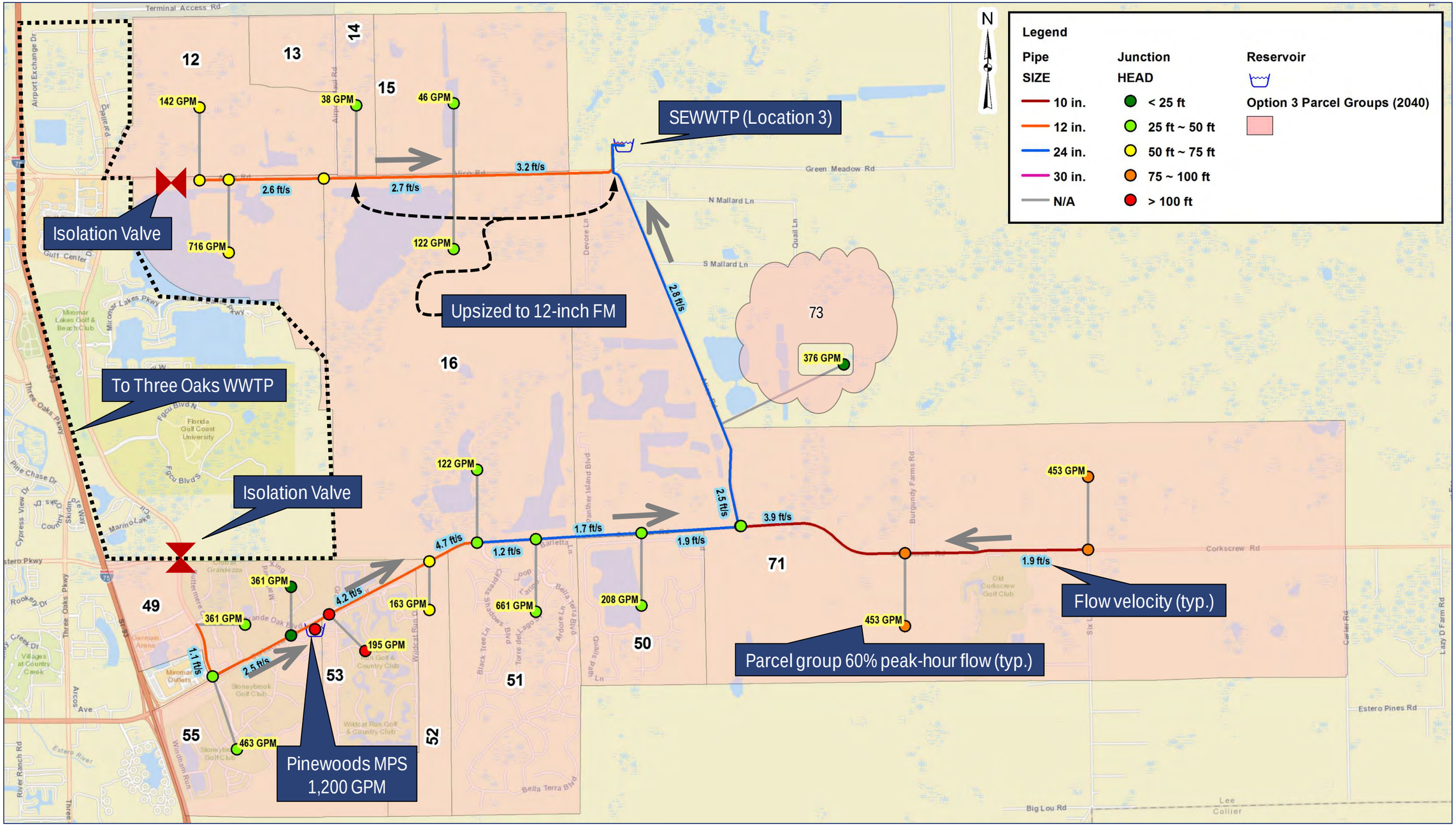

Figure 12: Modeling Results for Option 3 in 2040 (Peak-Hour Flow Simulation)

3.3.5 Build-Out

Projected build-out conditions are modeled to identify potential infrastructure improvements that may be needed beyond Year 2040. Note that significant uncertainty is associated with projecting build-out infrastructure needs due to the extended horizon for build-out. Two build-out infrastructure scenarios are considered:

- Scenario 1: The 24-inch force main along Alico Road between Corkscrew Road and the SEWWTP is upsized to 30 inches (see Figure 13).
- Scenario 2: A new master pump station is constructed at the Alico Road / Corkscrew Road intersection (*Alico Road MPS*; see Figure 14).

ASSUMPTIONS

- All future by-rights mixed use development within the projected SEWWTP service area will connect to the trunkline force main system north of the Alico Road / Corkscrew Road intersection.
- All TDRs will be used for future communities within the Overlay Area that are east of Alico Road. West of Alico Road, by-rights development will occur.
- Existing platted residential areas that are not part of a development will be connected to the LCU wastewater system.

Modeling indicates that both build-out scenarios will require upsized force mains along Alico Road, Corkscrew Road, and a limited portion of Ben Hill Griffin Parkway (BHG). The force main between the PWMPS and the 24-inch force main downstream from WildBlue will need to be upsized to 24 inches if the Alico Road force main is not upsized or the Alico Road MPS is not constructed (Scenario 1). For Scenario 2, this force main could be upsized to 20 inches because the PWMPS will not be used to pump flow directly to the SEWWTP.

Peak-hour flow from the PWMPS is projected to be 3,900 GPM at build-out for both scenarios. Flow to the PWMPS depends on system hydraulics – flow from areas along BHG will be split between the north and the south based on system heads unless a valve is used to isolate a PWMPS service area. For Scenario 2, peak-hour flow from the Alico Road MPS is projected to 7,000 GPM.

FINDINGS

- Ben Hill Griffin Parkway force main upgrades (both scenarios):
  - 2,500 feet of 16-inch force main running north from Corkscrew Road.
- Corkscrew Road force main upgrades (both scenarios):
  - 5,000 feet of 16-inch force main from Ben Hill Griffin Parkway to the PWMPS.
  - 7,500 feet of 12-inch force main running east from Alico Road.
  - Up to 40,000 feet of 10-inch force main will need to be extended east from the end of the Overlay Area force main to connect residential areas at the east end of Corkscrew Road (if applicable)[16].
- Corkscrew Road force main upgrades (Scenario 1):
  - 7,500 feet of 24-inch force main from the PWMPS to WildBlue.
- Corkscrew Road force main upgrades (Scenario 2):
  - 7,500 feet of 20-inch force main from the PWMPS to WildBlue.
- Alico Road force main upgrades (both scenarios):
  - 4,000 feet of 20-inch force main and 18,000 feet of 24-inch force main; from BHG to the SEWWTP.
- Alico Road force main upgrades (Scenario 1):
  - 18,000 feet of 30-inch force main along from Corkscrew Road to the SEWWTP.
- Peak-hour flow from the PWMPS is projected to be approximately 3,900 GPM at build-out (both scenarios).
  - Frictional headloss between the PWMPS and the SEWWTP is projected to be 70 to 90 feet during peak-hour conditions (Scenario 1).
  - Frictional headloss between the PWMPS and the Alico Road MPS is projected to be 50 to 70 feet during peak-hour conditions (Scenario 2).
- Peak-hour flow from the Alico Road MPS is projected to be approximately 7,000 GPM at build-out (Scenario 2).
  - Frictional headloss between the Alico Road MPS and the SEWWTP is projected to be 80 to 100 feet during peak-hour conditions.

[16] Connecting areas at the east end of Corkscrew Road will require additional force main. The modeled configuration is equivalent to a master pump station located at the east end of the Overlay Area that collects and re-pumps flows (from the east) to Alico Road.

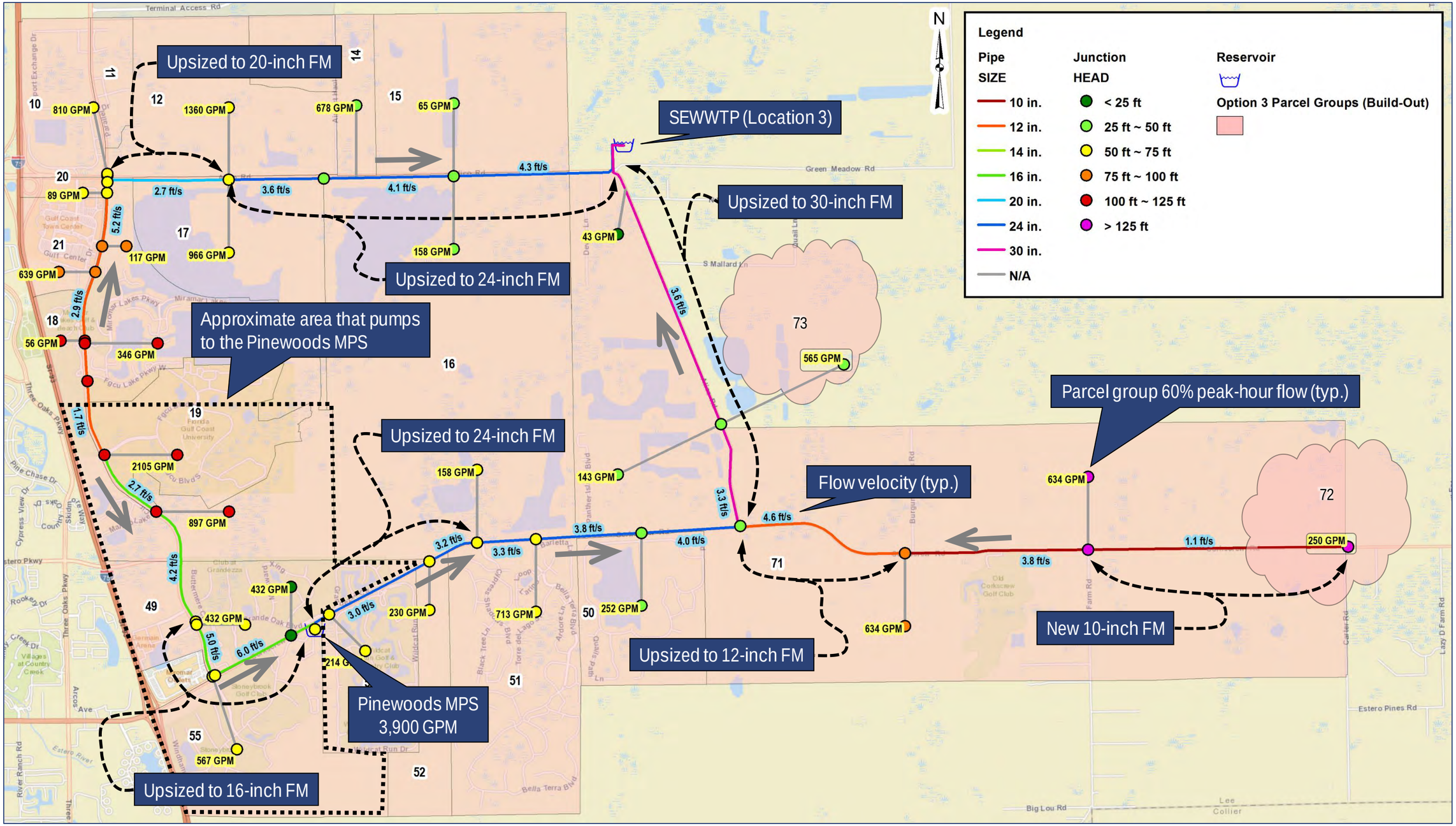

Figure 13: Modeling Results for Option 3 at Build-Out – Scenario 1 (Peak-Hour Flow Simulation)

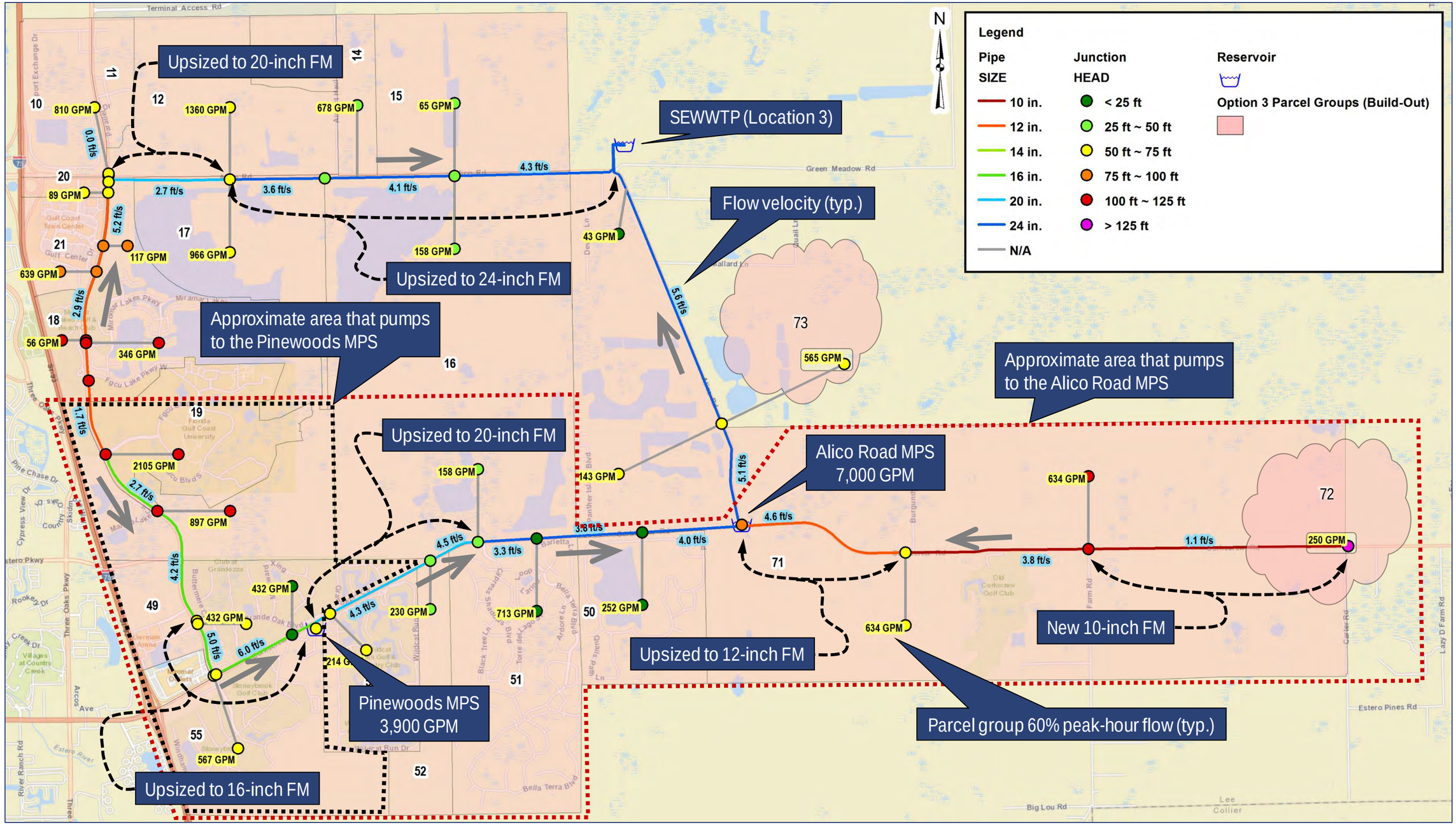

Figure 14: Modeling Results for Option 3 at Build-Out – Scenario 2 (Peak-Hour Flow Simulation)

3.4 Summary

Through 2040, projections indicate that a permitted treatment capacity of 3.5 MGD at the SEWWTP will be required for **Option 1** and 3.0 MGD will be required for **Option 3**. Actual capacity needs may be higher or lower, depending on the rate and quantity of development within the study area.

- Permitted treatment capacity for the SEWWTP is reanalyzed for the original reallocation area (**Option 1**) in the context of a phased implementation and infrastructure routing limitations. Compared to the previous evaluation, interim treatment capacity needs are projected to be 0.5 to 1.0 MGD higher.
- For **Option 3**, required interim capacities are generally 0.5 MGD lower relative to **Option 1**, but build-out capacity is projected to be 0.5 MGD higher due to service area differences.

Collection system infrastructure (trunkline force mains and master lift stations) is evaluated for **Option 3**. Modeling is performed to evaluate force main sizing and timeframes for improvements (with consideration for the service area expansion schedule presented in **Section 2.2.2**). An overview of infrastructure recommendations for **Option 3** is presented in **Table 16**.

Table 16: Projected Infrastructure Improvements and Timeframes for Option 3

Timeframe	Facility	Location / Description		Detail
2020	PWMPS	Constructed		Not used for SEWWTP operations
	Force Main	Corkscrew Road / Overlay Area (*Alico Road to easternmost connection*)		10-inch / 15,000 feet
2025	SEWWTP	Constructed at Location 3		2.0 MGD (*initial capacity*)
	Force Main	Alico Road (*Corkscrew Road to the SEWWTP*)		24-inch / 18,000 feet
2030	PWMPS	Redirected to SEWWTP		1,200 GPM
	Force Main	Corkscrew Road (*WildBlue to Alico Road*)		24-inch / 11,000 feet
2035	SEWWTP	2.0 MGD expansion		4.0 MGD (*interim capacity*)
	Force Main	Alico Road (*Airport Haul Road to the SEWWTP*)	2035 Scenario 1 (*Upsize in 2040*)	6-inch / 12,000 feet
			2035 Scenario 2 (*Not upsized in 2040*)	12-inch / 12,000 feet

Table 16: Projected Infrastructure Improvements and Timeframes for Option 3

Timeframe	Facility	Location / Description		Detail
2040	Force Main	Alico Road (*Airport Haul Road to the SEWWTP*)	2035 Scenario 1 (*Upsize in 2040*)	12-inch / 12,000 feet
Build-Out	SEWWTP	1.0 MGD expansion		5.0 MGD (*build-out capacity*)
	PWMPS	Expansion		3,900 GPM
	Alico Road MPS	Constructed (*Alico Road / Corkscrew Road*)	Build-Out Scenario 2 (*Alico Road MPS*)	7,000 GPM
	Force Main	Ben Hill Griffin Parkway (*Corkscrew Road to the north*)		16-inch / 2,500 feet
		Corkscrew Road (*Ben Hill Griffin Parkway to the PWMPS*)		16-inch / 5,000 feet
		Corkscrew Road (*PWMPS to WildBlue*)	Build-Out Scenario 1 (*no Alico Road MPS*)	24-inch / 7,500 feet
			Build-Out Scenario 2 (*Alico Road MPS*)	20-inch / 7,500 feet
		Corkscrew Road / Overlay Area (*Alico Road to the east*)		12-inch / 7,500 feet
		Corkscrew Road (*end of Overlay Area force main to east residential areas*)		10-inch / 40,000 feet (*if applicable*)
		Alico Road (*Corkscrew Road to the SEWWTP*)	Build-Out Scenario 1 (*no Alico Road MPS*)	30-inch / 18,000 feet
		Alico Road (*Ben Hill Griffin Parkway to the SEWWTP*)		20-inch / 4,000 feet 24-inch / 18,000 feet

DUE DILIGENCE SITING ANALYSIS FOR THE FUTURE SEWWTP

CORKSCREW OVERLAY

LEE COUNTY, FL

September 24, 2018

Prepared for:

Lee County Utilities
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20150095-007

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EXECUTIVE SUMMARY

Johnson Engineering performed a site analysis for the future Lee County Utilities Southeast Wastewater Treatment Plant (SEWWTP). The two locations below were identified by Lee County for the proposed SEWWTP.

- **Location 1**: Along the north side of Alico Road with the site address of 18990 Green Meadows Road, Fort Myers, Florida. See **Appendix A** for location map.

- **Location 2**: Within the existing Lee County owned property that the Corkscrew Water Treatment Plant is located with the address 16101 Alico Road, Fort Myers, Florida. See **Appendix A** for location map.

Multiple assessments were performed for each location to determine which location would be best suited for the proposed SEWWTP. Below is a summary of the assessments performed for each location.

Figure 1: Site Assessment Summary

ASSESSMENT	LOCATION 1	LOCATION 2
Planning and Zoning	• Zoned AG-2 • Land use classified as Essential Service Facility Group II • "Existing Only" permitted use • Property must be rezoned to a planned development, 9-12 month process • Potential "property swap" with neighboring parcel	• Zoned AG-2 • Land use classified as Essential Service Facility Group II • "Existing Only" permitted use • Special exception granted for WTP and wellfield • Existing facility can be expanded under current land use. All LDC apply
Environmental	• Existing drainage ditch, SFWMD & USACE permitting may be required • Listed species, FWC and FWS permitting may be required • See Location 1 Phase 1 ESA Report	• Wetland areas nearby, but not in footprint • Listed species, FWC and FWS permitting may be required • See Location 2 Phase 1 ESA Report
Utilities	• Existing potable water main • Not in Wellfield Protection Zone	• Existing raw water mains, fiber optic conduit, production wells and monitoring wells • Within Wellfield Protection Zones • 500 foot setback from wells, FDEP
Open Space Requirements	• 30% open space required • Categorized as large project, "other" category	• 30% open space required • Categorized as large project, "other" category • Wetland identified nearby • Wetlands may be used towards requires up to 25%
Surface Water	• Permitted for ERP with SFWMD • Further development would require application to modify existing permit • FEMA flood Zone X	• Permitted for ERP with SFWMD • Further development would require application to modify existing ERP • FEMA flood Zone X

ASSESSMENT	LOCATION 1	LOCATION 2
Regulatory/ Permitting	• DO would be required. • No existing active water use permit. • Construction dewatering permit would be required.	• DO would be required. • PWS Permit for wells • Small test/monitor wells may be present. • Construction dewatering permit may be required.

The Location 1 footprint (as shown in this report) is within the parcel located along Alico Road near the intersection with Green Meadows Road. There is potential to swap this location, of a portion thereof, with the neighboring parcel to the east. By doing so, this could locate the SEWWTP further north from Alico Road along the northern property line of the adjacent parcel. This may eliminate the SEWWTP as an "eye sore" from Alico Road and would allow the parcel along Alico Road to be used for future development.

Location 2 is located in the Corkscrew Wellfield Protection Zones as set forth by Lee County Ordinance No. 14-07. There are prohibitions on the land use and activities that can take place in each zone. The Lee County Board of County Commissioners may declare a land use or activity exempt at a public meeting. However, the general public is typically not fond of locating a wastewater treatment plant in close proximity to a water treatment plant and well field, even though all engineering protocol and guidelines would be followed.

After these considerations and assessment for each location, Johnson Engineering finds that each location would be acceptable for the placement of the future SEWWTP, however Location 1 may be the better fit. Location 1 is not located within a Wellfield Protection Zone, is not in close proximity to an existing Water Treatment Plant, has few existing utilities nearby, and could potential place the SEWWTP further from Alico Road via a land swap with the neighboring parcel. Additionally, Lee County has preliminary plans to locate a solid waste transfer facility near Location 1. This would locate the future SEWWTP and the solid waste transfer facility at nearly the same location.

1.0 LOCATION 1

Location 1 is located along the north side of Alico Road with the site address of 18990 Green Meadows Road, Fort Myers, Florida. The property is made up of a portion of one (1) parcel in Lee County: 04-46-26-00-00001.0000. A location map showing the approximate location of the subject property is provided in **Appendix A**. Property data of the parcel obtained from the Lee County Property Appraisers website, which includes brief legal descriptions, is provided in **Appendix B**.

1.1 Planning and Zoning Assessment

The subject property is zoned AG-2 and is located within the Conservation Lands Uplands Land Use Designation on the Lee County Comprehensive Plan. This use is classified under Essential Service Facility Group II, which includes: above ground water storage facilities, sewage disposal or treatment facilities, solid waste transfer station and water treatment plants. Essential Service Facility Group II is an "Existing Only" permitted use in AG-2 zoning classification. Lee County Land Development Code (LDC) Section 34-622 (13) indicates all new Essential Service Facilities Group II must be approved as a planned development.

In order to utilize this property for the construction of a SEWWTP the property will have to be rezoned to a planned development. This is a 9-12 month process that will be heard by the Lee County Hearing Examiner and the Board of County Commissioners.

The surrounding properties are mainly zoned AG-2 and are rural in nature. It does not appear there would be compatibility issues with the proposed use.

1.2 Environmental Assessment

Location 1 is part of a larger tract of Lee County Conservation 20/20 land that is known as, "Wild Turkey Strand Site 90". Lee County Public Works Department obtained permits from the South Florida Water Management District (SFWMD) and U.S. Army Corps of Engineers (USACE) for a 556.4-acre mitigation area that comprises the majority of the parent tract. The remainder of the parent parcel was not included in the conservation easement, of which the majority is now the subject of this current site evaluation for a potential wastewater treatment plant (Location 1). It is of note this area had been excluded from the mitigation boundary, as it was indicated the land would likely be needed for the future Alico Road widening and/or pond site for the future Alico Road extension. Review of historic aerials indicate Location 1 and the immediate surrounding landscape were converted to agricultural lands by the 1970s. Ditches were installed to support the agricultural uses, resulting in the disturbed upland community (fallow agriculture) that persists today. The site was used for mulch and debris disposal following hurricanes/tropical storms in the later part of 2003. Except for the remaining ditches (Other Surface Waters) that may be present within Location 1, the site does not contain any true wetland communities. Based upon the permitting obtained for the mitigation site, impacts to the ditches/swales may require permitting through the SFWMD and USACE. However, their impact

is not anticipated to warrant offsite mitigation. A location map showing the location of the existing ditches is provided in **Appendix C**.

Despite Location 1 being predominantly a disturbed upland community, its location within known consultation zones for State and federally listed species will likely necessitate permitting efforts to be reviewed by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (FWS) for potential mitigation measures due to perceived habitat impacts. Assuming ditch impacts warrant USACE permitting, impacts to federally listed species habitat will be reviewed by the FWS for potential mitigation needs during that process. The FWC may comments on the potential for State listed species impacts through the SFWMD permit process. Specifically, Location 1 is located within the Primary Zone of the FWS Panther Focus Area and there is recorded panther telemetry within the immediate vicinity of the site. Additionally, the site is located within the 18.6-mile Core Foraging Area (CFA) of the wood stork. Impacts to the onsite ditches may warrant review/mitigation for the loss of wood stork foraging habitat. The property falls within the FWS consultation area for the red cockaded woodpecker (RCW), however there is no habitat onsite to support utilization by this species. Almost the entirety of Lee County falls within the consultation area for the Florida bonneted bat (FBB), which may require species specific survey protocol to determine their presence/absence from the site. The site does not contain a lot of trees or snags that provide suitable roosting habitat for the FBB. However, other projects in the vicinity have been required to conduct such surveys nonetheless. A site specific listed species survey will be required during the permit process to determine potential utilization by other protected species (i.e. gopher tortoise, burrowing owl, etc.) that may require additional permitting/mitigation/relocation offsite prior to development. A location map showing the List Species around Location 2 is provided in **Appendix D**.

Johnson Engineering, Inc. performed a Phase I Environmental Site Assessment (ESA) for subject property Location 1. At the time of the assessment, the subject property consisted of a portion of one (1) parcel operating as mostly vacant agricultural land. The adjoining property to the north, east, south, and west were observed as a developed agricultural property.

At the time of the assessment of the subject property, on-site reconnaissance revealed findings but no recognized environmental condition (RECs). Therefore, Johnson Engineering does not believe further assessment on this property is warranted. Please refer to the Location 1 *Phase 1 Environmental Site Assessment* report for more detail.

1.3 Utility Assessment

Upon review of available record drawings for the area near and around Location 1, existing utilities have been identified. Location 1 is located near the intersection of Alico Road and Green Meadows Road. There is an existing 30-inch potable water main along Alico Road directly adjacent to the Location 1 site. A location map showing the existing water main is provided in **Appendix E**. Location 1 is not located within a Wellfield Protection Zone. A location map showing the nearby Wellfield Protection Zones is provided in **Appendix F**.

1.4 Open Space Requirements Assessment

Upon review of the Lee County LDC, it is anticipated that the open space requirement for this project is 30%, categorized as a large project under the "other" category within the open space table in LDC Section 10-415.

Per LDC Sec 10-415 (d) (2) c. "Existing or proposed bodies of water, including stormwater management areas and areas subject to saltwater inundation, which may be used to offset up to a maximum of 25 percent of the required open space area." There may be areas near the subject property delineated as wetlands that are not identified in this report. If any wetland areas fall with the proposed development site, they may be used towards the open space requirements.

1.5 Surface Water Assessment

The subject property is permitted for a surface water management Environmental Resources Permit (ERP) with the SFWMD. The site was originally part of 2,000 acres permitted as agricultural development in ERP No. 36-00102-S. ERP No. 36-02116-S was issued in 1991 for a conceptual approval to remove 588.4 acres from the agricultural permit and instead develop the site for residential, known as Alico Estates. Construction never commenced on this project and the original Application has since expired, but the permit number remains active. The site was again permitted (ERP No. 36-03237-P) in 1997 for a conceptual approval of a 588.4-acre development known as Alico Estates. Construction never commenced on this project and the permit has since expired.

Further development of the property to construct the SEWWTP will require the submittal of an application to modify the existing ERP.

The site has a Federal Emergency Management Agency (FEMA) flood zone designation of Zone X.

There are existing drainage ditches located at Location 1 that may require permitting through the SFWMD and USACE, see Section 1.2 Environmental Assessment for more details.

1.6 Regulatory and Permitting Assessment

A Lee County Development Order will be required in conjunction with the proposed site work.

Water Use and Well Construction Permits

It is assumed potable water and reclaimed water service will be available from Lee County Utilities to supply potable and miscellaneous uses at the proposed plant site. Landscaping could be irrigated with reclaimed water which Lee County Utilities has indicated will be available at the site, or not irrigated after establishment.

The site does not appear to be covered under an existing SFWMD water use permit. Permit #36-03772-W for agricultural irrigation covered the site previously, but was allowed to expire in February 2005. No SFWMD-permitted wells appear to exist on-site, nor do any wells permitted through Lee County Well Construction. Any wells discovered on-site that will not be incorporated in the project should be properly plugged and abandoned in accordance with Chapter 40E-3.531, Florida Administrative Code (FAC) and applicable Lee County Well Code. A licensed water well contractor would need to obtain a well abandonment permit from Lee County prior to well abandonment.

A Standard Individual dewatering permit from the SFWMD will likely be needed to facilitate construction dewatering. The site may qualify for use of the General Permit by Rule for dewatering if the following criteria from Chapter 40E-2.061(2), FAC can be met:

- Maximum daily pumpage less than 5 million gallons per day (MGD) and 100 million gallons over 1-year period
- All dewatering effluent retained on-site
- No dewatering below 0.0 feet NGVD within 1,000 feet of saline water, except if dewatering effluent exceeds 1,000 milligrams per liter (mg/L) chloride
- No dewatering within 100 feet of a wastewater treatment plant rapid-rate land application system
- No dewatering within 1,000 feet of a landfill or known contamination
- No dewatering within 1,000 feet of a freshwater wetland for longer than 60 days

Of these criteria, retention of all dewatering effluent on-site and no dewatering within 1,000 feet of a wetland for longer than 60 days may be the most difficult with which to comply. Therefore, a Standard Individual dewatering permit, which would allow for off-site discharge and dewatering within 1,000 feet of wetlands for greater than 60 days, will likely be necessary.

In order to receive a dewatering permit for off-site discharge or dewatering effluent, a letter of authorization from the receiving land owner would be necessary. Currently, the land owners adjacent to the project site are Lee County (Conservation 20/20), Harper Brothers, and a number of smaller land owners to the south of Alico Road. Adequate advanced coordination with receiving land owners should take place in order to avoid delays in permit issuance and/or unanticipated refusal of authorization.

2.0 LOCATION 2

Location 2 is located within the existing Lee County owned property that the Corkscrew Water Treatment Plant is located with the address 16101 Alico Road, Fort Myers, Florida. The property is made up of a portion if one (1) parcel in Lee County: 22-46-26-00-00001.0020. A location map showing the approximate location of the subject property is provided in **Appendix A**. Property data for the parcel obtained from the Lee County Property Appraiser's website, which includes a brief legal description, is provided in **Appendix B**.

2.1 Planning and Zoning Assessment

The subject property is zoned AG-2 and is located within the Public Facilities Land Use Designation on the Lee County Comprehensive Plan. The existing use is classified under Essential Service Facility Group II, which includes: above ground water storage facilities, sewage disposal or treatment facilities, solid waste transfer station and water treatment plants. Essential Service Facility Group II is an "Existing Only" permitted use in AG-2 zoning classification.

A Special Exception was granted in conjunction with the subject property under Z-80-88 for a water treatment plant and wellfield.

"Existing Only" states the use is permitted if lawfully existing on September 27, 1993 or was granted a special exception within the two years after that date. A use that qualifies as "existing only" will not be classified as a nonconforming use. It will be afforded the same privileges as a permitted use and may be expanded or reconstructed in accordance with current regulations.

The existing facility can lawfully be expanded under the current land use and zoning. All current Lee County Land Development Regulations must be complied with.

A copy of the following Lee County Land Development Code (LDC) Sections are attached in relation to the subject property and the proposed development:

- LDC 34-653 – AG-2 Use Regulation Table which includes the permitted uses within the AG-2 zoning
- LDC 34-1611 – Essential Services and Facilities Regulations
- LDC 10-415 – Open Space Requirements
- LDC 34-654 – Agricultural Districts Property Development Regulation Table

2.2 Environmental Assessment

The wetland limits for the Corkscrew Wellfield were delineated as part of the SFWMD water use permit renewal (Appl. No. 080403-12). No wetlands were identified within the Location 2 footprint, however a wetland area is located immediately to the northeast of Location 2. As long as a minimum 25 foot wide upland buffer is provided to the wetland no direct or secondary

wetland impacts should result from development of Location 2. A location map showing the identified wetlands in close proximity to Location 2 is provided in **Appendix C**.

Location 2 is located within the Primary Zone of FWS Panther Focus Area (PFA) for the endangered Florida panther (*Puma concolor coryi*). Based on the FWS Florida Panther Effect Determination Key (2007), projects greater than one acre in size "may affect" the panther. If mitigation is required for panther habitat, impacts the FWS's panther habitat methodology will need to be applied to the habitat types impacted at the project site. Mitigation for panther habitat impacts can occur at an approved conservation bank or a Lee County approved panther mitigation site. Location 2 is also within the FWS Consultation Area for endangered Florida Bonneted Bat (FBB) (*Eumops glaucinus floridanus*) and within the Core Foraging Area of three wood stork (*Mycteria americana*) rookeries. Based on an aerial interpretation of Location 1, the site appears to contain potential suitable roosting and FBB habitat. A survey will be required to confirm presence/absence of roosting FBBs. If a roost is documented, coordination will be required with the FWS. Since no wetlands are within the Location 2 footprint, no impacts to wood stork habitat are anticipated from development. A location map showing the List Species around Location 2 is provided in **Appendix D**.

Johnson Engineering, Inc. performed a Phase I Environmental Site Assessment (ESA) for subject property Location 2. At the time of the assessment the subject property and adjoining properties to the north, east, and south consisted of a heavily vegetated portion of the Corkscrew wellfield. The adjoining property to the west was observed as a partially cleared property separated by Alico Road.

At the time of the assessment of the subject property, on-site reconnaissance did not reveal findings or recognized environmental condition (RECs). Therefore, Johnson Engineering does not believe further assessment on this property is warranted. Please refer to the Location 2 *Phase 1 Environmental Site Assessment* report for more detail.

2.3 Utilities

Upon review of available record drawings for the area near and around Location 2, multiple existing utilities were identified. Location 2 is in close proximity to the Corkscrew Water Treatment Plant and within the Lee County Wellfield Protection Zones. There are multiple existing utilities along Alico Road directly adjacent to the subject property and within the subject property that include, but are not limited to, the following:

- Production Wells
- Monitoring Wells
- 24-inch Potable Water Main
- 24-inch Raw Water Main
- 16-inch Raw Water Main
- 20-inch Raw Water Main
- 4-inch Fiber Optic Conduit

A location map showing the existing utilities is provided in **Appendix E**.

The Florida Department of Environmental Protection (FDEP) has placed setback requirements from water wells in Chapter 62-532 Table 1 Part A of the Ground Water Rules. The greatest setback that would be required is 500 feet for the installation of a Domestic Wastewater Residuals Land Application, Solid Waste Disposal Facility, and Phosphogypsum Stack System. A 500 foot setback from the existing wells is used for conservatism.

Wellfield Protection Zones

Location 2 is located with the Wellfield Protection Zones as set forth by the Lee County. Wellfield protection zones are taken from Lee County Ordinance No. 14-07 based on modeling performed by RMA GeoLogic Consultants, Inc. and documented in the reports titled "Supporting Documentation for the Update of the Lee County Wellfield Protection Zones," dated January 2009 and "Supporting Documentation for the 2011 Update of the Lee County Wellfield Protection Zones," dated October 2011.

Wellfield protection zones are established for 6-month, 1-year, 5-year, and 10-year travel times around each public supply well. Lee County has put prohibitions on land use and activities within each protection zone per Section 14-214 (a) (1) of the LDC. Some of these prohibitions are as follows:

- The use, handling, production, or storage of regulated substances as set forth by section 14-208 in the LDC
- Wastewater effluent disposal, except for public access reuse of reclaimed water and land application under the conditions set forth in FAC Chapter 62-610 part III
- Solid and Liquid waste disposal

These prohibitions may apply to the SEWWTP depending on the details of the treatment and operation processes. A location map showing the Wellfield Protections Zones for Corkscrew Wellfield is provided in **Appendix F**.

2.4 Open Space Requirements Assessment

Upon review of the Lee County LDC, it is anticipated that the open space requirement for this project is 30%, categorized as a large project under the "other" category within the open space table in LDC Section 10-415.

Per LDC Sec 10-415 (d) (2) c. "Existing or proposed bodies of water, including stormwater management areas and areas subject to saltwater inundation, which may be used to offset up to a maximum of 25 percent of the required open space area." There are areas near the subject property delineated as wetlands classified by Johnson Engineering. The wetlands are not within the current footprint of the future SEWWTP, however if any of these areas fall with the proposed development site, they may be used towards the open space requirements. A location map

showing the locations of existing wetlands in close proximity to the project site is provided in **Appendix C**.

2.5 Surface Water Assessment

The subject property is permitted for a surface water management ERP with the SFWMD. The site is located in an area that was originally permitted in 1979 as agricultural development under ERP No. 36-00108-S. The nearby water treatment plant was permitted in ERP Application No. 930504-11 and the Plant's wellfield was permitted in ERP Application No. 940201-6. Permit numbers were not issued with either Application. The wellfield expansion was permitted through FDEP, ERP App. No. 36-0247943-002. ERP No. 43-0005-F documented a formal wetland determination near the project site.

Further development of the property to construct the SEWWTP will require the submittal of an application to modify the existing ERPs.

The site has a FEMA flood zone designation of Zone X.

There are existing wetlands located in close proximity to Location 2 that may require a 25 foot buffer, see Section 2.2 Environmental Assessment for more details.

2.6 Regulatory and Permitting Assessment

A Lee County Development Order will be required in conjunction with the proposed site work.

Water Use and Well Construction Permits

It is assumed potable water and reclaimed water service will be available from Lee County Utilities to supply potable and miscellaneous uses at the proposed plant site. Landscaping could be irrigated with reclaimed water which Lee County Utilities has indicated is available at the site, or not irrigated after establishment.

The site does not appear to be covered under an existing SFWMD water use permit, although several production wells and monitor wells authorized under public water supply (PWS) permit #36-00003-W for Lee County Utilities Corkscrew wellfield exist in close proximity to the site. No SFWMD-permitted wells appear to exist within the footprint of the proposed plant site, nor do any wells permitted through Lee County Well Construction. Given the historical use of the site as a wellfield, small diameter test/monitor wells may be present at the site, even if not noted in publicly available well construction databases. Any wells discovered on-site that will not be incorporated in the project should be properly plugged and abandoned in accordance with Chapter 40E-3.531, FAC and applicable Lee County Well Code. A licensed water well contractor would need to obtain a well abandonment permit from Lee County prior to well abandonment.

A Standard Individual dewatering permit from the SFWMD will likely be needed to facilitate construction dewatering. The site may qualify for use of the General Permit by Rule for dewatering if the following criteria from Chapter 40E-2.061(2), FAC can be met:

- Maximum daily pumpage less than 5 MGD and 100 million gallons over 1-year period
- All dewatering effluent retained on-site
- No dewatering below 0.0 feet NGVD within 1,000 feet of saline water, except if dewatering effluent exceeds 1,000 milligrams per liter (mg/L) chloride
- No dewatering within 100 feet of a wastewater treatment plan rapid-rate land application system
- No dewatering within 1,000 feet of a landfill or known contamination
- No dewatering within 1,000 feet of a freshwater wetland for longer than 60 days

Of these criteria, retention of all dewatering effluent on-site and no dewatering within 1,000 feet of a wetland for longer than 60 days may be the most difficult with which to comply. Therefore, a Standard Individual dewatering permit, which would allow for off-site discharge and dewatering within 1,000 feet of wetlands for greater than 60 days, will likely be necessary.

In order to receive a dewatering permit for off-site discharge or dewatering effluent, a letter of authorization from the receiving land owner would be necessary. Currently, the land owners adjacent to the project site are Lee County (Utilities), and the SFWMD to the south of the County-owned property south of Alico Road (Flint Pen Strand conservation area). Adequate advanced coordination with receiving land owners should take place in order to avoid delays in permit issuance and/or unanticipated refusal of authorization.

3.0 CONCLUSION

In conclusion, Johnson Engineering performed a site analysis for the future Lee County Utilities SEWWTP. The two locations below were identified by Lee County for the proposed SEWWTP.

- **Location 1**: Along the north side of Alico Road with the site address of 18990 Green Meadows Road, Fort Myers, Florida. See **Appendix A** for location map.

- **Location 2**: Within the existing Lee County owned property that the Corkscrew Water Treatment Plant is located with the address 16101 Alico Road, Fort Myers, Florida. See **Appendix A** for location map.

Location 1 has the potential to swap a portion of its parcel with the neighboring parcel to the east. This could allow the SEWWTP to be located further from Alico Road along the northern property line of the adjacent parcel, thus eliminating the SEWWTP as a possible “eye sore” from Alico Road.

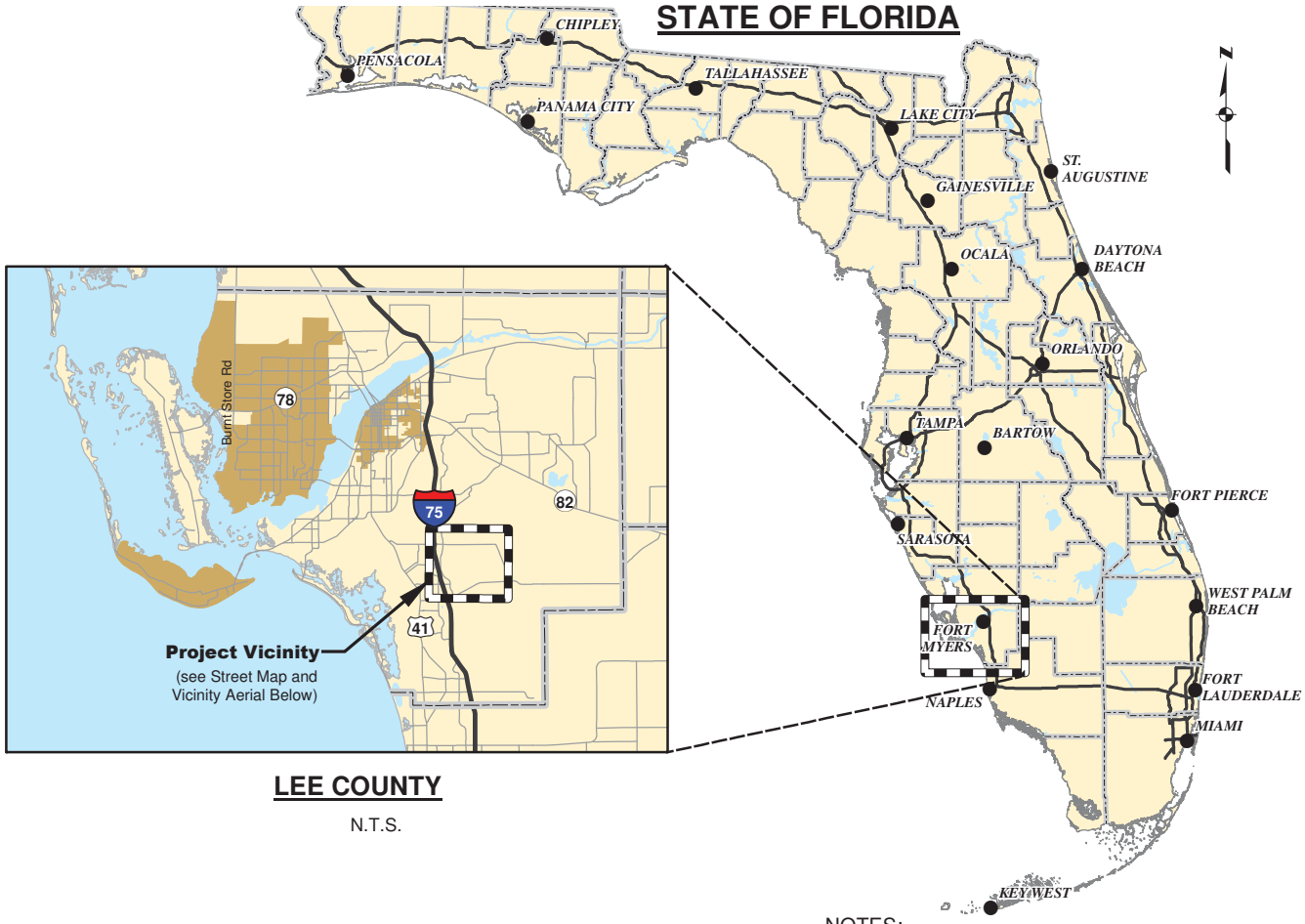
Location 2 is located within the Corkscrew Wellfield Protection Zones as set forth by Lee County. There are prohibitions on the land use and activities that can take place in each zone. The Lee County Board of County Commissioners may declare a land use or activity exempt at a public meeting, however the general public is typically not fond of locating a wastewater treatment plant in close proximity to a water treatment plant.

After these considerations and assessment for each location, Johnson Engineering finds that each location would be acceptable for the placement of the future SEWWTP, however Location 1 may be the better fit. Location 1 is not located within a Wellfield Protection Zone, is not in close proximity to an existing Water Treatment Plant, has few existing utilities nearby, and could potential place the SEWWTP further from Alico Road via a land swap with the neighboring parcel. Additionally, Lee County has preliminary plans to locate a solid waste transfer facility near Location 1. This would locate the future SEWWTP and the solid waste transfer facility at nearly the same location.

APPENDIX A

LOCATION MAPS

STATE OF FLORIDA



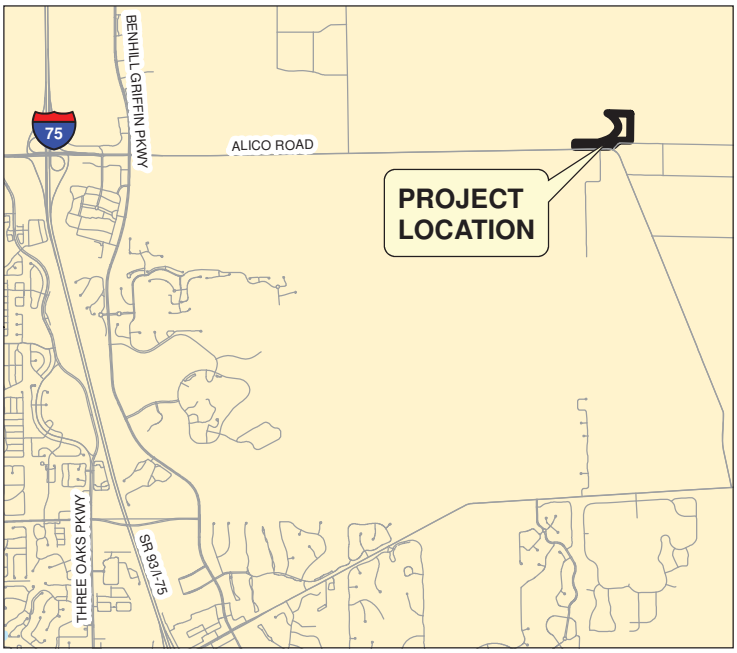
LEE COUNTY

N.T.S.

Section 04, Township 46 South, Range 26 East
Latitude:26° 29' 41.1" N, Longitude: 81° 43' 09.3" W

NOTES:

The aerial photos shown were taken in 2016.



STREET MAP

N.T.S.

VICINITY AERIAL

N.T.S.

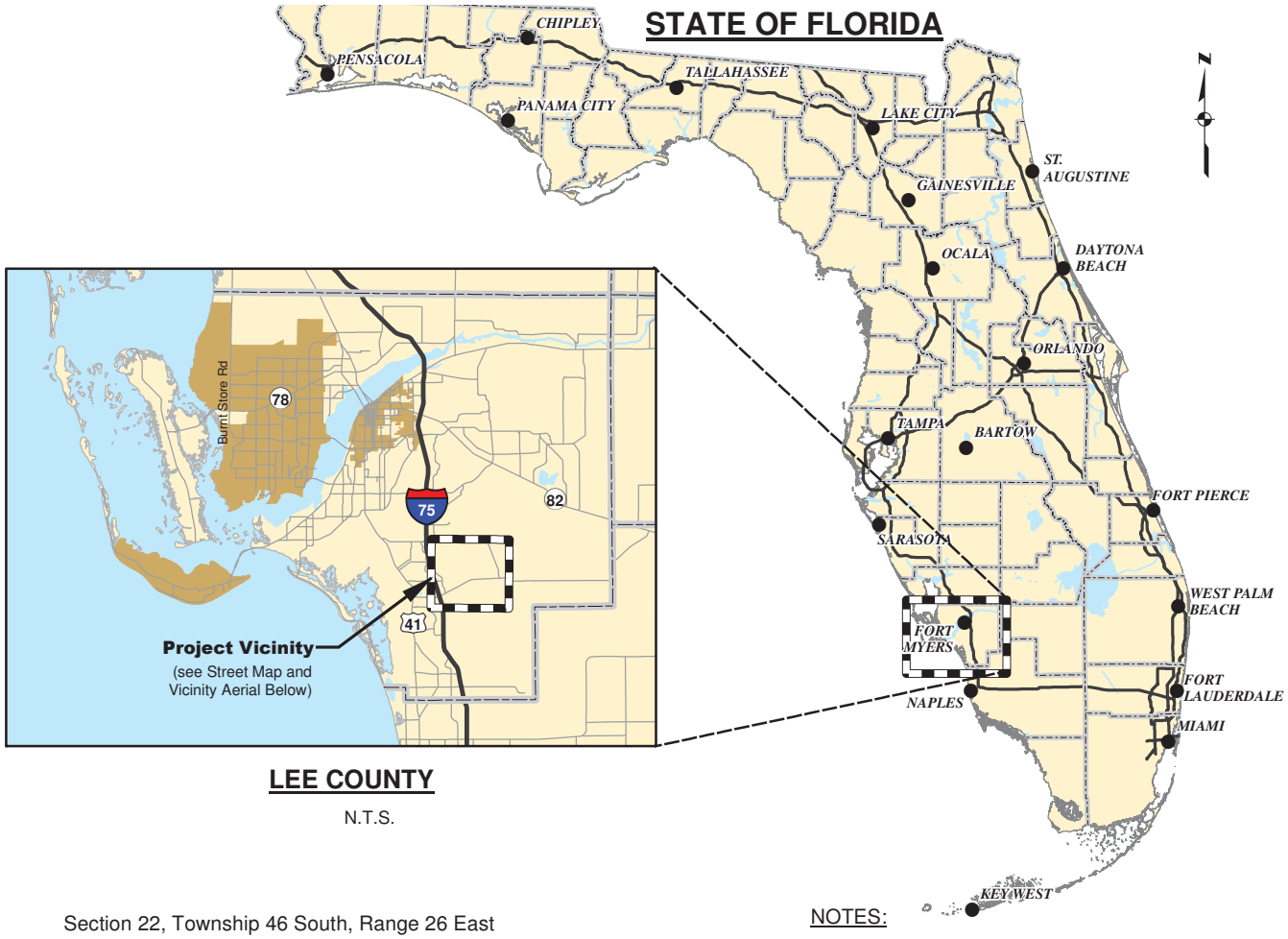
JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
FAX (239) 334-3661
E.B. #642 & L.B. #642

Location Map
Location 1 - 18990 Green Meadows Rd.

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	04-46-26	Not to Scale	Figure 1

\\FTMS01\Drawings\2015\20150095-007\ESA Ph1\Location 1 - 18990 Green Meadows Rd\Fig 1 Location Map.mxd



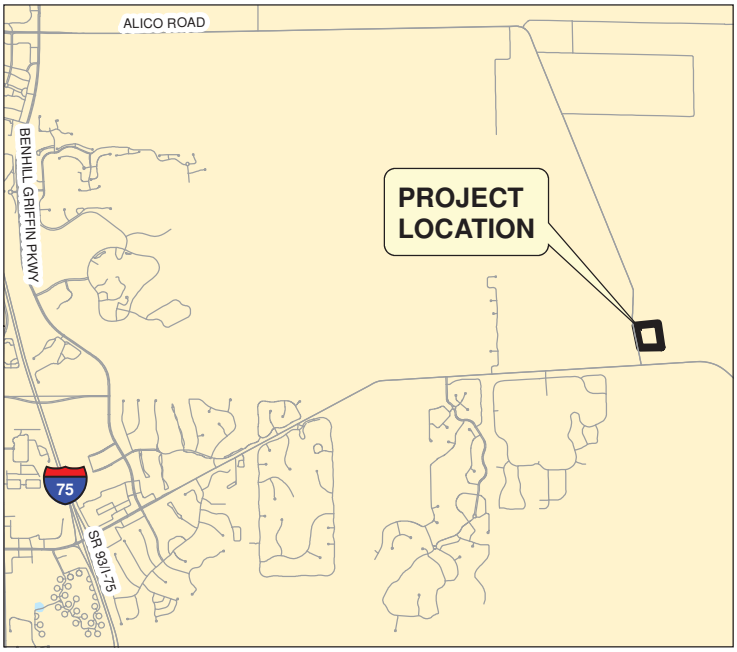
LEE COUNTY

N.T.S.

Section 22, Township 46 South, Range 26 East
Latitude:26° 27' 21.2" N, Longitude: 81° 43' 10.0" W

NOTES:

The aerial photos shown were taken in 2016.



STREET MAP

N.T.S.

VICINITY AERIAL

N.T.S.

JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
FAX (239) 334-3661
E.B. #642 & L.B. #642

Location Map
Location 2 - 16101 Alico Rd.

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	22-46-26	Not to Scale	Figure 1

\\FTMS01\Drawings\2015\20150095-007\ESA Ph1\Location 2 - 16101 Alico Rd\Fig 1 Location Map.mxd

APPENDIX B

PROPERTY APPRAISER INFORMATION

LOCATION 1

18990 Green Meadows, Fort Myers, Florida

Property Data

STRAP: 04-46-26-00-00001.0000 Folio ID: 10351497

Owner Of Record

LEE COUNTY
PO BOX 398
FORT MYERS FL 33902

Site Address

18990 GREEN MEADOW RD
FORT MYERS FL 33913

Property Description **Do not use for legal documents!**

SEC 4 LESS N 959.405 FT
+ LESS S 1319.318 FT OF
SE 1/4

Classification / DOR Code

VACANT GOVERNMENTAL / 80

[Tax Map Viewer]

[Pictometry Aerial Viewer]

Current Working Values

Just	3,215,830	As Of	06/30/2016

Attributes

Land Units Of Measure	AC
Units	568.03
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0
Total Living Area	0
1st Year Building on Tax Roll	0
Historic District	No

Image of Structure

Property Value History

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	2,975,660	264,390	264,390	264,390
1993	2,080,760	117,610	117,610	117,610
1994	2,080,440	128,940	128,940	128,940
1995	1,824,630	106,320	106,320	106,320
1996	1,824,310	95,600	95,600	95,600
1997	1,888,510	186,100	186,100	186,100
1998	1,872,780	171,840	171,840	171,840
1999	1,872,340	167,690	167,690	167,690
2000	1,871,880	169,150	169,150	169,150
2001	1,845,430	1,845,430	1,845,430	0
2002	3,480,610	3,480,610	3,480,610	0
2003	3,480,610	3,480,610	3,480,610	0
2004	3,480,610	3,480,610	3,480,610	0
2005	3,480,610	3,480,610	3,480,610	0
2006	5,834,210	5,834,210	5,834,210	0
2007	5,988,090	5,988,090	5,988,090	0
2008	5,988,090	5,988,090	5,988,090	0
2009	4,311,150	4,311,150	4,311,150	0
2010	3,215,830	3,215,830	3,215,830	0
2011	3,215,830	3,215,830	3,215,830	0
2012	1,744,830	1,744,830	1,744,830	0
2013	1,744,830	1,744,830	1,744,830	0
2014	1,744,830	1,744,830	1,744,830	0
2015	1,744,830	1,744,830	1,744,830	0
2016	3,215,830	3,215,830	1,919,313	0

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (F.A.C. 12D-1.002).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (*F.S. 193.011*) . For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (*F.S. 193.461 (6) (a)*). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*.
(i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or *10% Assessment Limitation* cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes.
(i.e. Taxable = Capped Assessed - Exemptions)

Exemptions

Exemption	Amount
Wholly	1,919,313.00

Values (2016 Tax Roll)

Property Values		Attributes	
Just	3,215,830	Land Units Of Measure	AC
Assessed	3,215,830	Units	568.03
Portability Applied	0	Frontage	0
Cap Assessed	1,919,313	Depth	0
Taxable	0	Total Number of Buildings	0
Cap Difference	1,296,517	Total Bedrooms / Bathrooms	0
		Total Living Area	0
		1st Year Building on Tax Roll	0
		Historic District	No

Taxing Authorities

SAN CARLOS FIRE / 071

Name / Code	Category	Mailing Address
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
SAN CARLOS PARK FIRE DISTRICT / 077	Independent District	DAVID CAMBARERI FIRE CHIEF 19591 BEN HILL GRIFFIN PKWY FORT MYERS FL 33913-8989
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408

PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406

Sales / Transactions

Sale Price	Date	OR Number	Type	Description	Vacant / Improved
3,100,000.00	08/01/2001	3467/3193	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	08/01/2001	3467/3186	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	08/01/2001	3467/3184	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	08/01/2001	3467/3182	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	08/01/2001	3467/3180	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	08/01/2001	3467/3178	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	07/25/2001	3467/3175	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	07/11/2000	3278/29	03	**Sales disqualified as a result of examination of the deed** Disqualified (Interest Sales / Court Docs / Government)	I
100.00	06/18/1998	2978/4009	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	05/01/1996	2704/1959	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	06/20/1991	2240/1729	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V

Building/Construction Permit Data

Permit Number	Permit Type	Date
MRV199603731	Mobile Home	04/09/1996

IMPORTANT INFORMATION: THIS MAY NOT BE A COMPREHENSIVE OR TIMELY LISTING OF PERMITS ISSUED FOR THIS PROPERTY.

Note: The Lee County Property Appraiser's Office does not issue or maintain any permit information. The Building/Construction permit data displayed here represents only those records this Office may find necessary to conduct Property Appraiser business. Use of this information is with the understanding that in no way is this to be considered a comprehensive listing of permits for this or any other parcel.

The Date field represents the date the property appraiser received information regarding permit activity; it may or not represent the actual date of permit issuance or completion.

Full, accurate, active and valid permit information for parcels can only be obtained from the appropriate permit issuing agency.

Location Information

Township	Range	Section	Block	Lot
46	26E	04		

Municipality	Latitude	Longitude
Lee County Unincorporated	26.50158	-81.71728

Links

View Parcel on Google Maps | View Parcel on GeoView | View Parcel on GeoView

Solid Waste (Garbage) Roll Data

Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	-			0.00

Collection Days

Garbage	Recycling	Horticulture
Wednesday	Tuesday	Tuesday

Flood and Storm Information

Storm Surge Zone	Evacuation Zone	Flood Insurance [FIRM Look-up]			
		Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

Appraisal Details (2016 Tax Roll)

Land

Land Tracts

Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure
8600	County Owned, Offices, Library, Government Bldg	0	0	294.20	Acres
9660	Resource Protect., Wetlands, Preserve, Cypress Head	0	0	273.83	Acres

GeoView Map

March 16, 2017

1:25,520

0 1,150 2,300 4,600 ft

0 350 700 1,400 m

HospitalLocations
Library Locations

School Locations
School Locations

CCC_Parks

Major Roads Medium
I - 75
US 41

Other Highways
Other Roads

Parcels Far
CONDO BUILDING

PARCEL
County Parks

LOCATION 2

16101 Alico Road, Fort Myers, Florida

GeoView Map

March 23, 2017

1:38,400

0 1,750 3,500 7,000 ft

0 500 1,000 2,000 m

CityLimits_Boundary

- City of Bonita Springs
- City of Cape Coral
- City of Fort Myers
- City of Sanibel
- Town of Fort Myers Beach
- Village of Estero

Major Roads High

- I - 75
- US 41
- Other Highways

- Other Roads
- Local Roads High

Property Data

STRAP: 22-46-26-00-00001.0020 Folio ID: 10351664

Owner Of Record

LEE COUNTY
PO BOX 398
FORT MYERS FL 33902

Site Address

16101 ALICO RD
FORT MYERS FL 33913

Property Description **Do not use for legal documents!**

ALL OF SEC 22 LYING N
OF CORKCREW GRADE +
E OF ALICO RD + PARL S OF
CORKSCREW RD DESC IN
OR 1538 PG 439

Classification / DOR Code

COUNTIES - OTHER / 86

[Tax Map Viewer]

[Pictometry Aerial Viewer]

Current Working Values

Just	27,276,338	As Of	06/30/2016

Attributes

Land Units Of Measure	AC
Units	476.46
Frontage	0
Depth	0
Total Number of Buildings	5
Total Bedrooms / Bathrooms	0 / 4.0
Total Living Area	13,436
1st Year Building on Tax Roll	1980
Historic District	No

Image of Structure

Photo Date January of 2015

Property Value History

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	2,505,350	2,505,350	2,505,350	0
1993	2,501,430	2,501,430	2,501,430	0
1994	2,497,490	2,497,490	2,497,490	0
1995	2,493,570	2,493,570	2,493,570	0
1996	2,488,400	2,488,400	2,488,400	0
1997	2,991,800	2,991,800	2,991,800	0
1998	3,002,250	3,002,250	3,002,250	0
1999	3,100,520	3,100,520	3,100,520	0
2000	3,092,010	3,092,010	3,092,010	0
2001	4,417,060	4,417,060	4,417,060	0
2002	4,411,880	4,411,880	4,411,880	0
2003	5,552,020	5,552,020	5,552,020	0
2004	5,544,140	5,544,140	5,544,140	0
2005	30,395,690	30,395,690	30,395,690	0
2006	50,559,060	50,559,060	50,559,060	0
2007	49,299,810	49,299,810	49,299,810	0
2008	48,843,190	48,843,190	48,843,190	0
2009	46,965,580	46,965,580	46,965,580	0
2010	46,422,032	46,422,032	46,422,032	0
2011	37,060,042	37,060,042	37,060,042	0
2012	28,125,746	28,125,746	28,125,746	0
2013	25,734,183	25,734,183	25,734,183	0
2014	25,485,920	25,485,920	25,485,920	0
2015	27,313,330	27,313,330	27,313,330	0
2016	27,276,338	27,276,338	27,276,338	0

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (F.A.C. 12D-1.002).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (*F.S. 193.011*) . For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (*F.S. 193.461 (6) (a)*). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*.
(i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or *10% Assessment Limitation* cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes.
(i.e. Taxable = Capped Assessed - Exemptions)

Exemptions

Exemption	Amount
Wholly	27,276,338.00

Values (2016 Tax Roll)

Property Values		Attributes	
Just	27,276,338	Land Units Of Measure	AC
Assessed	27,276,338	Units	476.46
Portability Applied	0	Frontage	0
Cap Assessed	27,276,338	Depth	0
Taxable	0	Total Number of Buildings	5
Cap Difference	0	Total Bedrooms / Bathrooms	0 / 4.0
		Total Living Area	13,436
		1st Year Building on Tax Roll	1980
		Historic District	No

Taxing Authorities

ESTERO FIRE / 079

Name / Code	Category	Mailing Address
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
ESTERO FIRE RESCUE DIST / 029	Independent District	SCOTT A VANDERBROOK CHIEF 21500 THREE OAKS PKWY ESTERO FL 33928
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408

PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406

Sales / Transactions

Sale Price	Date	OR Number	Type	Description	Vacant / Improved
100.00	08/01/1981	1538/439	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	01/01/1981	1483/1418	04	**Sales disqualified as a result of examination of the deed** Disqualified (Multiple STRAP # - 01,03,04,07)	V
466,700.00	03/01/1979	1338/1965	06	**Sales qualified and included for sales ratio analysis** Qualified (Fair Market Value / Arms Length / One STRAP #)	V

Building/Construction Permit Data

Permit Number	Permit Type	Date
COM2011-00969	Building Miscellaneous	08/02/2011
COM2011-00168	Building Miscellaneous	03/22/2011
COM2009-01052	Building Miscellaneous	01/04/2010
FNC2009-01347	Fence	01/04/2010
COM2009-00742	Building Miscellaneous	09/02/2009
COM2009-00227	Building Miscellaneous	04/13/2009
FNC2008-00867	Fence	07/01/2008
FNC2007-02144	Fence	11/26/2007
COM2006-01147	Building Miscellaneous	02/16/2007
COM2006-02653	Shutter, Awning	09/08/2006
COM2003-02125	Building Miscellaneous	01/20/2006
COM2003-02070	Building Miscellaneous	08/08/2005
COM2003-02124	Building Addition	08/08/2005
COM2004-00366	Building Miscellaneous	03/18/2004
ROF2003-03477	Roof	09/26/2003
COM2002-01046	Commercial	09/13/2002
COM2000-01824	Commercial	11/30/2000
COM2000-01825	Commercial	11/30/2000
FNC2000-00959	Fence	11/30/2000
FNC2000-00019	Fence	02/09/2000
FNC2000-00020	Fence	02/09/2000
FNC2000-00021	Fence	02/09/2000
COM199905957	Building Miscellaneous	06/03/1999
COM199905958	Building Miscellaneous	06/03/1999
COM199905959	Building Miscellaneous	06/03/1999
COM199905960	Building Miscellaneous	06/03/1999

COM199905961	Building Miscellaneous	06/03/1999
COM199903382	Building Miscellaneous	03/30/1999
71106	Commercial	06/24/1980
69930	Commercial	04/22/1980

IMPORTANT INFORMATION: THIS MAY NOT BE A COMPREHENSIVE OR TIMELY LISTING OF PERMITS ISSUED FOR THIS PROPERTY.

Note: The Lee County Property Appraiser's Office does not issue or maintain any permit information. The Building/Construction permit data displayed here represents only those records this Office may find necessary to conduct Property Appraiser business. Use of this information is with the understanding that in no way is this to be considered a comprehensive listing of permits for this or any other parcel.

The Date field represents the date the property appraiser received information regarding permit activity; it may or not represent the actual date of permit issuance or completion.

Full, accurate, active and valid permit information for parcels can only be obtained from the appropriate permit issuing agency.

Parcel Numbering History

Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date
22-46-26-00-00001.000	N/A	Split (From another Parcel)	
00-00-00-00-00000.0000	10456585	Combined (With another parcel-Delete Occurs)	07/09/1997

Location Information

Township	Range	Section	Block	Lot
46	26E	22		

Municipality	Latitude	Longitude
Lee County Unincorporated	26.45722	-81.69884

Links

View Parcel on Google Maps | View Parcel on GeoView | View Parcel on GeoView

Solid Waste (Garbage) Roll Data

Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	C - Commercial Category	C	17830	461.16

Collection Days

Garbage	Recycling	Horticulture
Wednesday	Tuesday	Tuesday

Flood and Storm Information

Storm Surge Zone	Evacuation Zone	Flood Insurance [FIRM Look-up]			
		Community	Panel	Version	Date
D	E	125124	0625	F	8/28/2008

Appraisal Details (2016 Tax Roll)

Land

Land Tracts

Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure
8600	County Owned, Offices, Library, Government Bldg	0	0	476.46	Acres

Land Features

Description	Year Added	Units
FENCE - CHAIN LINK - 6 FOOT	1980	4,150
BLACK TOP - IMPROVED	1980	15,800
WALL - DECORATIVE - C.B.S.	1980	495
SLAB - CONCRETE	1980	300
FENCE - CHAIN LINK - 10 FOOT	1996	7,985
SLAB - CONCRETE	1985	192
FENCE - CHAIN LINK - 8 FOOT	2001	100

Buildings

Building 1 of 5

Building Characteristics

Improvement Type	Model Type	Stories	Living Units
84 - Warehouse - CB/Brick	6 - Warehouse/Industrial	1.0	0
Bedrooms	**Bathrooms**	**Year Built**	**Effective Year Built**
0	4.0	1980	1980

Building Subareas

Description	Heated / Under Air	Area (Sq Ft)
AOF - AVERAGE OFFICE	Y	2,091
AOF - AVERAGE OFFICE	Y	1,140
AOF - AVERAGE OFFICE	Y	585
AOF - AVERAGE OFFICE	Y	585
AOF - AVERAGE OFFICE	Y	15
BAS - BASE	Y	5,630
BAS - BASE	Y	1,140
FCP - FINISHED CARPORT	N	1,008
FOP - FINISHED OPEN PORCH	N	56
FOP - FINISHED OPEN PORCH	N	15

Building Features

Description	Year Added	Units
OVERHEAD DOOR - LARGE 10X10 OR LARGER	1980	2
TANK - WATER	1980	2,000,000
CARPORT - UNFINISHED	1985	216
SHED - METAL W/FLOOR	1985	336
UTILITY - FINISHED	1985	117
UTILITY - FINISHED	1985	77
UTILITY - FINISHED	2001	200
SEWER PLANT (PER GALLON CAPACITY)	2004	5,000,000
SEWER PLANT (PER GALLON CAPACITY)	2004	5,000,000
SEWER PLANT (PER GALLON CAPACITY)	2005	5,000,000
TANK - WATER	2010	4,000,000

Building Front Photo **Building Footprint**

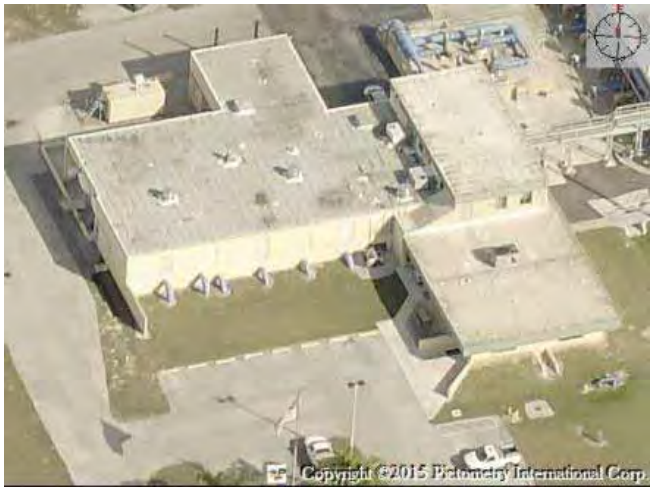
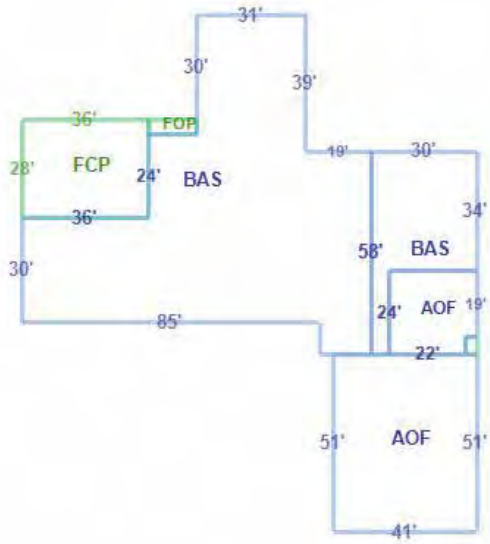
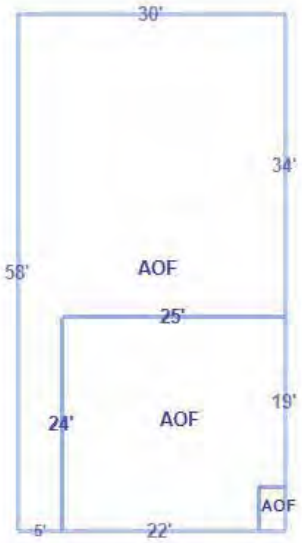


Photo Date: January of 2015





Building 2 of 5

Building Characteristics

Improvement Type	Model Type	Stories	Living Units
73 - Utilities	6 - Warehouse/Industrial	1.0	0
Bedrooms	**Bathrooms**	**Year Built**	**Effective Year Built**
0	0.0	2005	2005

Building Subareas

Description	Heated / Under Air	Area (Sq Ft)
BAS - BASE	Y	570

Building Features

Description	Year Added	Units
OVERHEAD DOOR - SMALL LESS THAN 10X10	1980	1

Building Front Photo **Building Footprint**

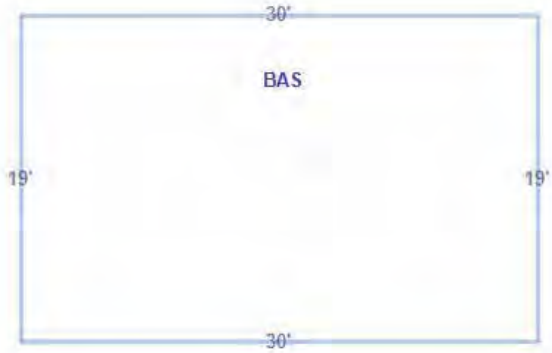


Photo Date: January of 2015

Building 3 of 5

Building Characteristics

Improvement Type	Model Type	Stories	Living Units
73 - Utilities	6 - Warehouse/Industrial	1.0	0
Bedrooms	**Bathrooms**	**Year Built**	**Effective Year Built**
0	0.0	1980	1980

Building Subareas

Description	Heated / Under Air	Area (Sq Ft)
BAS - BASE	Y	300

Building Front Photo

Photo Date: January of 2015

Building Footprint

Building 4 of 5

Building Characteristics

Improvement Type	Model Type	Stories	Living Units
82 - Warehouse - Metal/Frame	6 - Warehouse/Industrial	1.0	0
Bedrooms	**Bathrooms**	**Year Built**	**Effective Year Built**

0	0.0	2004	2004

Building Subareas

Description	Heated / Under Air	Area (Sq Ft)
BAS - BASE	Y	1,200

Building Features

Description	Year Added	Units
OVERHEAD DOOR - LARGE 10X10 OR LARGER	2004	1

Building Front Photo

Photo Date: January of 2015

Building Footprint

Building 5 of 5

Building Characteristics

Improvement Type	Model Type	Stories	Living Units
73 - Utilities	6 - Warehouse/Industrial	1.0	0
Bedrooms	**Bathrooms**	**Year Built**	**Effective Year Built**
0	0.0	2014	2014

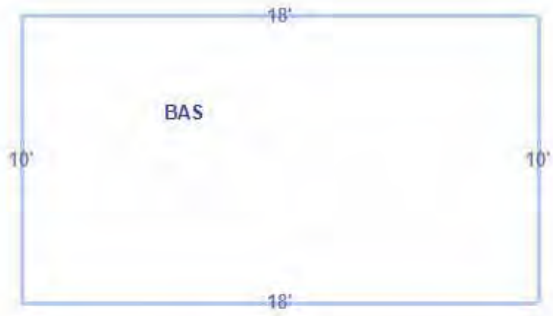
Building Subareas

Description	Heated / Under Air	Area (Sq Ft)
BAS - BASE	Y	180

Building Front Photo

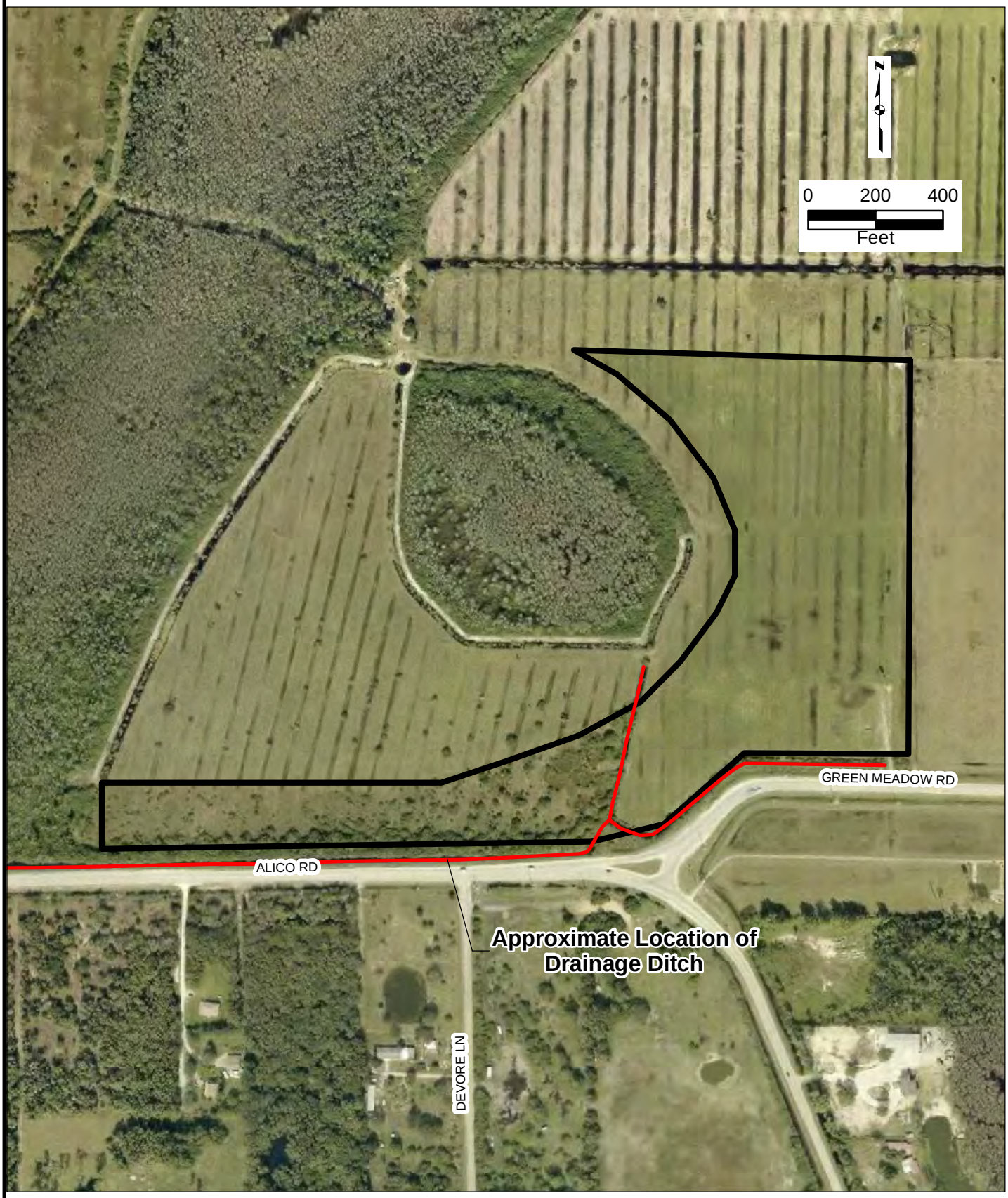
Building Footprint

Photo Date: January of 2015



APPENDIX C

WETLAND AND DRAINAGE DITCH MAPS



NOTES:

The aerial photos shown from Lee County Digital Library and dated: January 2016.

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FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
FAX (239) 334-3661
E.B. #642 & L.B. #642

Drainge Ditch
Location 1 - 18990 Green Meadows Rd.

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	04-46-26	As Shown	Figure 4

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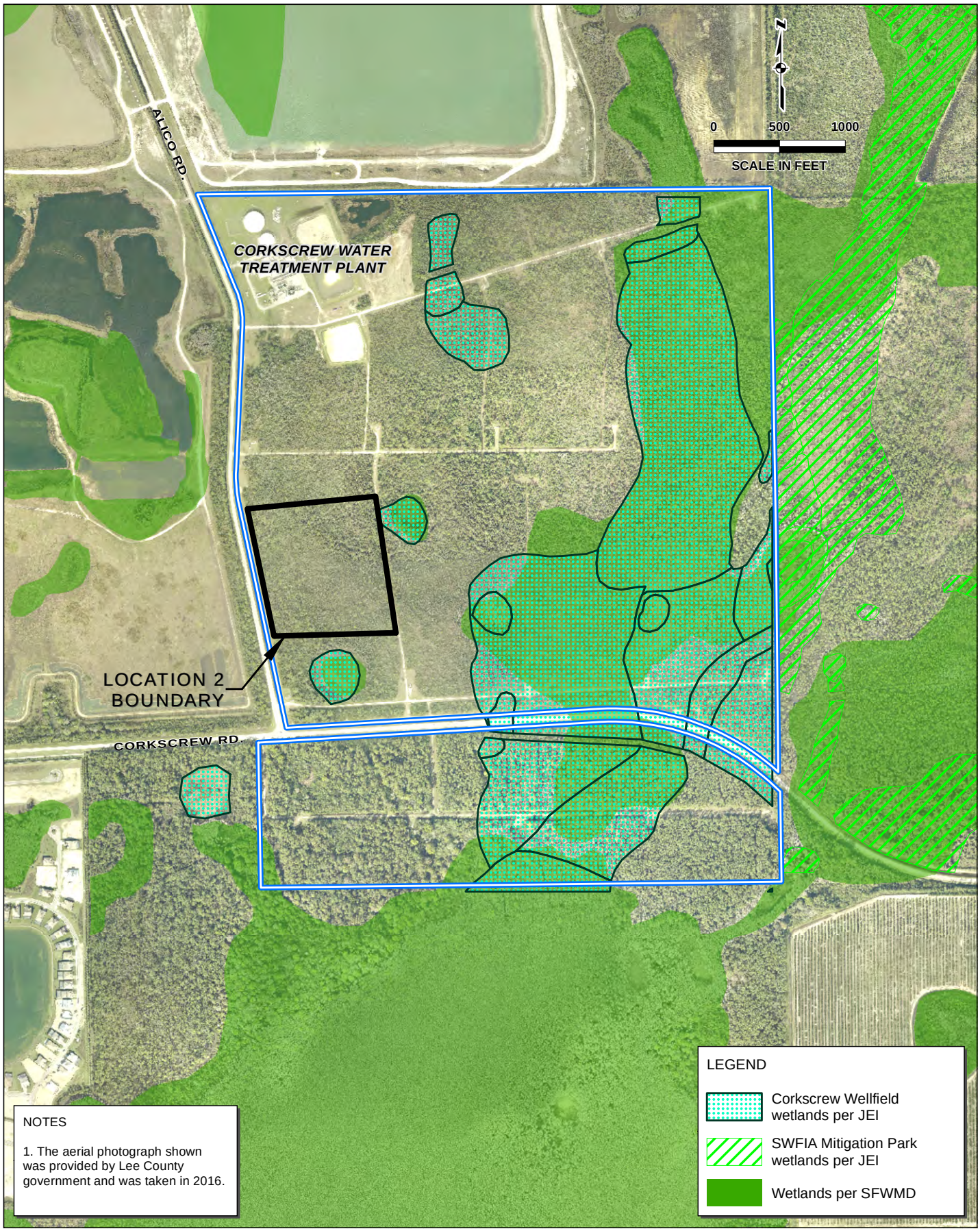

NOTES

1. The aerial photograph shown was provided by Lee County government and was taken in 2016.

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Location 2 Wetlands

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	--	As Shown	1

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APPENDIX D

SPECIES MAPS

ONE-MILE BUFFER

LOCATION 1 BOUNDARY

ALICO RD.

GREEN MEADOWS RD.

N. MALLARD RD.

S. MALLARD RD.

ALICO RD.

CORKSCREW WATER TREATMENT PLANT

0 750 1500

SCALE IN FEET

173 5/21/2010
173 9/3/2010
173 9/17/2010
173 1/27/2010
173 3/24/2010
159 4/12/2013
173 4/28/2010
159 1/22/2014
159 6/15/2012
198 6/1/2012
198 5/14/2012
159 12/17/2012
159 7/23/2012
198 2/2/2015
159 12/16/2013
198 5/7/2012
198 1/21/2015
159 1/17/2014
198 2/26/2016
159 10/19/2012
159 2/10/2014
173 11/12/2010
11/26/2008
173 4/14/2010
173 11/10/2010
173 6/25/2010
198 12/1/2014
173 2/8/2010
173 10/15/2010
198 6/15/2016
168 9/10/2010
198 12/19/2014
159 12/19/2014

LEGEND

RCW consultation area (USFWS, 9/2003) See Note 2

Bonneted Bat consultation area (USFWS, 2013) See Note 3

Woodstork core foraging areas (USFWS, 2010) See Note 4

Panther primary zone (USFWS, 2007)

Panther secondary zone (USFWS, 2007)

Panther telemetry (2006 through 2016) (USFWS 6/2016)

Panther road kills (FFWCC, 4/2016)

NOTES
1. The aerial photographs shown were provided by Lee County government and were taken in 2016.
2. The entire one-mile buffer is within the RCW Consultation Area.
3. The entire one-mile buffer is within the Bonneted Bat Consultation Area.
4. The entire one-mile buffer is within the core foraging area for Woodstork Colonies 619310, 619041 and Corkscrew.

Species / layers checked include those shown and:

-Florida grasshopper sparrow habitat (USFWS 10/2001)
-Snail kite consultation area (USFWS 10/2003)
-Snail kite critical habitat (USFWS 11/2016)
-Pine barrens tree frog (FWC 9/2015)
-Bog frog (FWC 9/2015)
-Flatwoods salamander (FWC 9/2015)
-Sand skink sightings (FFWCC 4/2003)
-RCW consultation area (USFWS 9/2003)
-Caracara roosts (Dwyer 2013)
-RCW general locations (FFWCC 2010)
-Woodstork nests (USFWS 2006)
-Scrub Jay locations (USFWS 2011)
-Wading bird colony observations (USFWS 2007)
-Florida Panther telemetry (FWC 4/2016)
-Florida Panther mortality (FWC 12/2015)
-Scrub jay habitat (USFWS 1/2000)
-Caracara consultation area (USFWS 3/2007)
-Skink consultation area (USFWS 9/2011)
-Eagle nests (FFWCC 3/2017)
-Sherman fox squirrel potential habitat (FWC 8/2009)

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Lee County Utilities
Lee County, Florida

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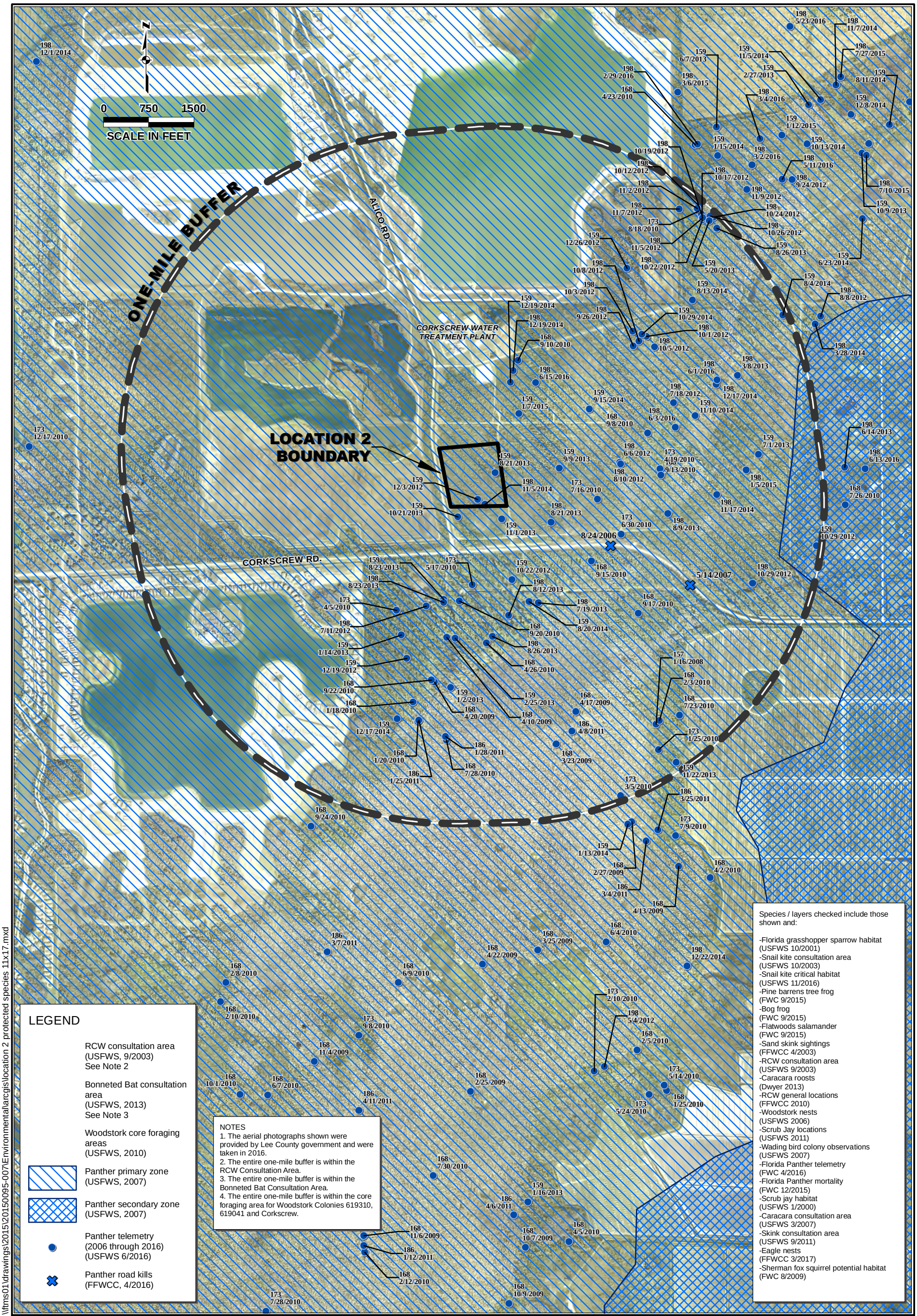
Location 1 - Agency Listed Species Map

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
March 2017	20150095-007	--	As Shown	1



LEGEND

- RCW consultation area (USFWS, 9/2003) See Note 2
- Bonneted Bat consultation area (USFWS, 2013) See Note 3
- Woodstork core foraging areas (USFWS, 2010)
- Panther primary zone (USFWS, 2007)
- Panther secondary zone (USFWS, 2007)
- Panther telemetry (2006 through 2016) (USFWS 6/2016)
- Panther road kills (FFWCC, 4/2016)

NOTES
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-Skink consultation area (USFWS 9/2011)
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-Sherman fox squirrel potential habitat (FWC 8/2009)

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Lee County Utilities
Lee County, Florida

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Location 2 - Agency Listed Species Map

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
March 2017	20150095-007	--	As Shown	2

APPENDIX E

EXISTING UTILITY MAPS

NOTES:

The aerial photos shown from Lee County Digital Library and dated: January 2016.

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E.B. #642 & L.B. #642

Aerial Map
Location 1 - 18990 Green Meadows Rd.

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	04-46-26	As Shown	Figure 1

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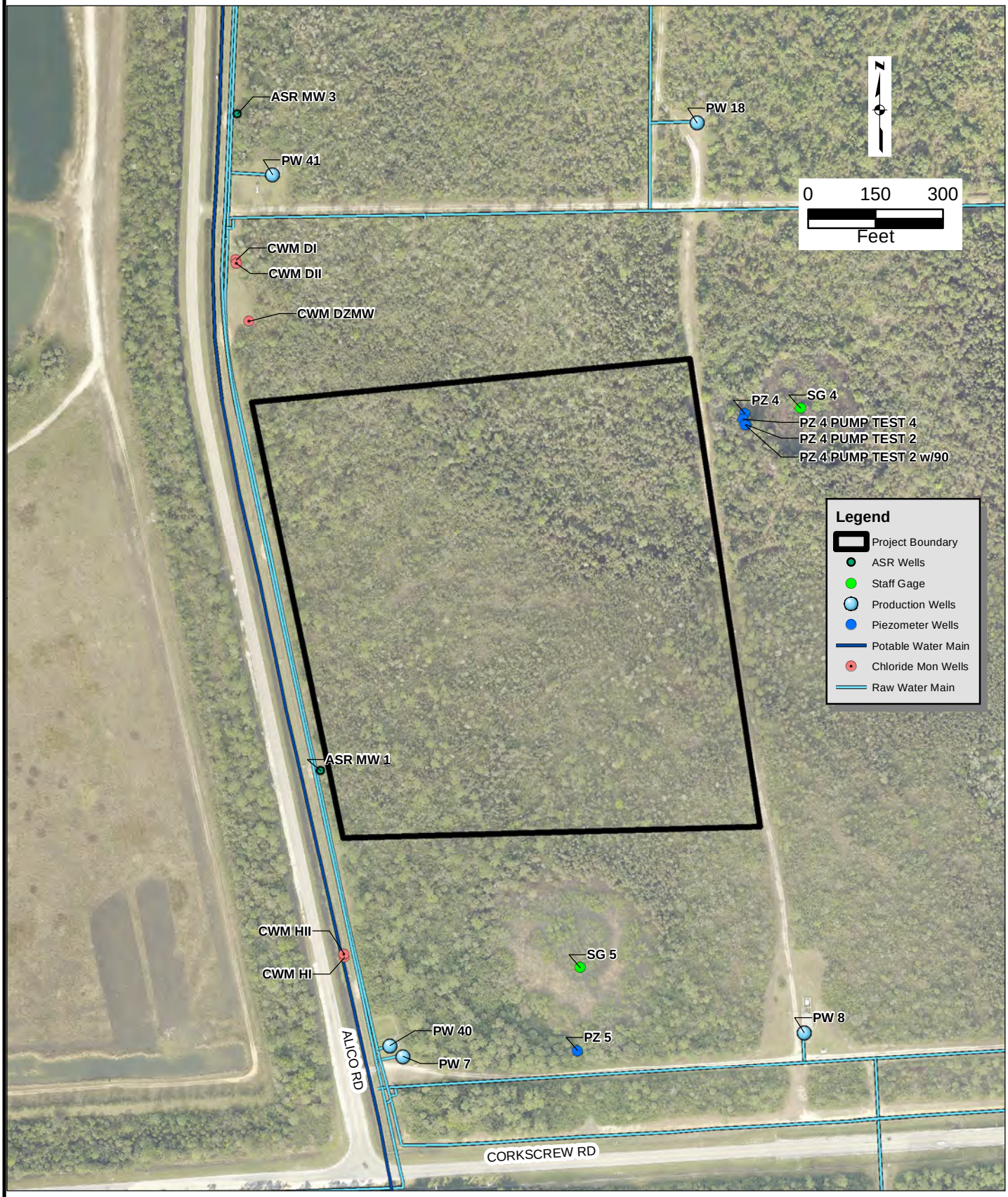

NOTES:

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Aerial Map
Location 2 - 16101 Alico Rd.

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	22-46-26	As Shown	Figure 2

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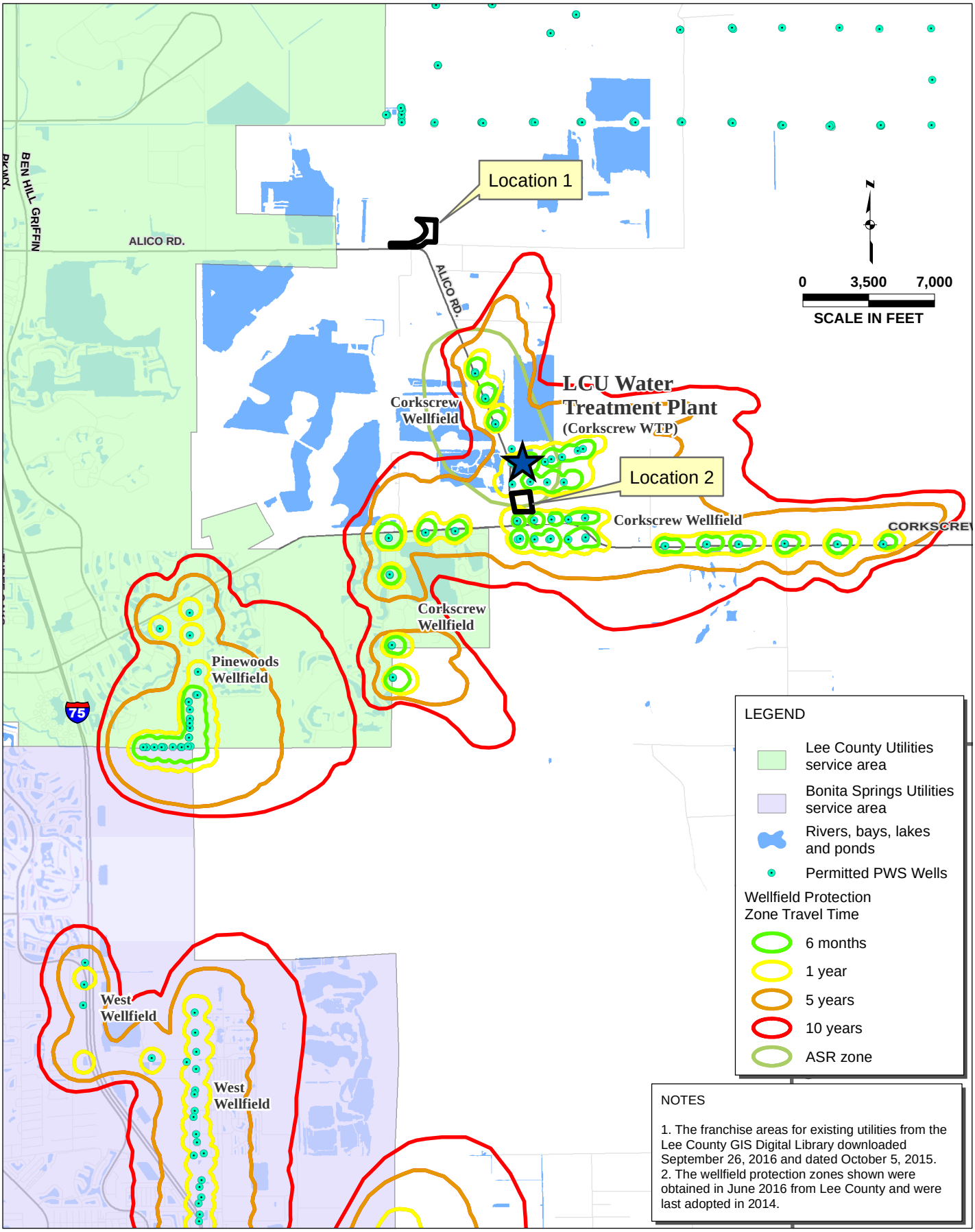
APPENDIX F

WELLFIELD PROTECTION ZONE MAP



\\FTMS01\Drawings\2015\20150095-007\Exhibits\Fig 3 LCU Facility Map.mxd

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FORT MYERS, FLORIDA 33902-1550
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FAX (239) 334-3661
E.B. #642 & L.B. #642

LCU Facilities Map

DATE	PROJECT	FILE NO.	SCALE	SHEET
March 2017	20150095-007	04-46-26	As Shown	Figure 3

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY (SEAWRF)

Small-Scale Comprehensive Plan Amendment (Map Amendment)

September 13, 2023

PREPARED FOR:
Lee County Utilities
1500 Monroe Steet, Third Floor,
Fort Myers FL 33901

SUBMITTED TO:
Lee County Community Development
Planning Section
1500 Monroe Street, 2nd Floor
Fort Myers, FL 33901

RVi

TABLE OF CONTENT

Contents

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT (SMALL-SCALE MAP AMENDMENT)

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT - MAP

Project Name: Southeast Advanced Water Reclamation Facility

Project Description: A request to amend the Lee County Future Land Use Map (Map 1A) to redesignate 36+/- acres from the Density Reduction/Groundwater Resource future land use category (FLU) to the Public Facilities FLU category.

Map(s) to Be Amended: Map 1-A

State Review Process: [x] Small-Scale Review [ ] State Coordinated Review [ ] Expedited State Review

---

1. **Name of Applicant:** Lee County - Lee County Public Utilities
   Address: 1500 Monroe Street
   City, State, Zip: Fort Myers, FL 33901
   Phone Number: 239-533-8725 E-mail: MAvoglia@leegov.com & PKeyes@leegov.com

2. **Name of Contact:** Alexis V. Crespo, AICP - RVi Planning + Landscape Architecture, Inc.
   Address: 28100 Bonita Grande Drive, Suite 305
   City, State, Zip: Bonita Springs, FL 34135
   Phone Number: 239-850-8525 E-mail: ACrespo@RViPlanning.com

3. **Owner(s) of Record:** Same as applicant
   Address:
   City, State, Zip:
   Phone Number: E-mail:

4. **Property Location:**
   1. Site Address: 18940 Green Meadow Road Fort Myer , FL 33913
   2. STRAP(s): 04-46-26-00-00001.1010

5. **Property Information:**
   Total Acreage of Property: 80 +/- Total Acreage Included in Request: 36 +/-
   Total Uplands: 40 +/- Total Wetlands: 40+/- Current Zoning: AG-2
   Current Future Land Use Category(ies): Density Reduction/Groundwater Resource (DR/GR)
   Area in Each Future Land Use Category: DR/GR 40+/- acres & 40 +/- Wetlands
   Existing Land Use: Vacant Public Lands & Wireless Communication Facility & Wetlands

6. **Calculation of maximum allowable development under current Lee Plan:**
   Residential Units/Density: 1 DU/10AC Commercial Intensity: N/A Industrial Intensity: N/A

7. **Calculation of maximum allowable development with proposed amendments:**
   Residential Units/Density: N/A Commercial Intensity: N/A Industrial Intensity: N/A

Public Facilities Impacts

NOTE: The applicant must calculate public facilities impacts based on the maximum development.

1. **Traffic Circulation Analysis**: The analysis is intended to determine the affect of the land use change on the Financially Feasible Highway Plan Map 3A (20-year plus horizon) and on the Capital Improvements Element (5-year horizon). Toward that end, an applicant must submit a Traffic Impact Statement (TIS) consistent with Lee County Administrative Code (AC)13-17.

    a. Proposals affecting less than 10 acres, where development parameters are contained within the Traffic Analysis Zone (TAZ) or zones planned population and employment, or where there is no change in allowable density/ intensity, may be eligible for a TIS requirement waiver as outlined in the Lee County TIS Guidelines and AC-13-17. Identification of allowable density/intensity in order to determine socio-economic data for affected TAZ(s) must be coordinated with Lee County Planning staff. Otherwise a calculation of trip generation is required consistent with AC-13-17 and the Lee County TIS Guidelines to determine required components of analysis for:

        i. Total peak hour trip generation less than 50 total trip ends – tripgeneration.

        ii. Total peak hour trip generation from 50 to 300 total trip ends – trip generation, trip distribution and trip assignment (manual or Florida Standard Urban Transportation Modeling Structure (FSUTMS) analysis consistent with AC-13-17 and TIS Guidelines), short-term (5 year) and long-range (to current Lee Plan horizon year) segment LOS analysis of the nearest or abutting arterial and major collector segment(s) identified in the Transportation Inventory based on the trip generation and roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is recommended prior to submittal of the application to discuss use of FSUTMS, any changes to analysis requirements, or a combined CPA and Zoning TIS short term analysis.

        iii. Total peak hour trip generation is over 300 total trip ends - trip generation, mode split, trip distribution and trip assignment (manual or FSUTMS analysis consistent with AC-13-17 and TIS Guidelines), short-term (five-year) and long-range (to current Lee Plan horizon year) segment LOS analysis of arterial and collector segments listed in the Transportation Inventory. LOS analysis will include any portion of roadway segments within an area three miles offset from the boundary of the application legal description metes and bounds survey. LOS analysis will also include any additional segments in the study area based on the roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is required prior to submittal of the application.

    b. Map amendment - greater than 10 acres -Allowable density/intensity will be determined by Lee County Planning staff.

2. **Provide an existing and future conditions analysis for the following (see Policy 95.1.3):**
    a. Sanitary Sewer
    b. Potable Water
    c. Surface Water/Drainage Basins
    d. Parks, Recreation, and Open Space
    e. Public Schools

Analysis for each of the above should include (but is not limited to) the following (see the Lee County Concurrency Management Report):

a Franchise Area, Basin, or District in which the property is located
b Current LOS, and LOS standard of facilities serving the site
c Projected 2030 LOS under existing designation
d Projected 2030 LOS under proposed designation
e Existing infrastructure, if any, in the immediate area with the potential to serve the subject property
f Improvements/expansions currently programmed in 5 year CIP, 6-10 year CIP, and long rangeimprovements
g Provide a letter of service availability from the appropriate utility for sanitary sewer andpotablewater

In addition to the above analysis, provide the following for potable water:

a. Determine the availability of water supply within the franchise area using the current water use allocation (Consumptive Use Permit) based on the annual average daily withdrawal rate.
b. Include the current demand and the projected demand under the existing designation, and the projected demand under the proposed designation.
c. Include the availability of treatment facilities and transmission lines for reclaimed water forirrigation.
d. Include any other water conservation measures that will be applied to the site (see Goal 54).

3. Provide a letter from the appropriate agency determining the adequacy/provision of existing/proposed support facilities, including:

a. Fire protection with adequate response times
b. Emergency medical service (EMS) provisions
c. Law enforcement
d. Solid Waste
e. Mass Transit
f. Schools

In reference to above, the applicant must supply the responding agency with the information from application items 5, 6, and 7 for their evaluation. This application must include the applicant's correspondence/request to the responding agency.

Environmental Impacts

Provide an overall analysis of the character of the subject property and surrounding properties, and assess the site's suitability for the proposed change based upon the following:

1. A map of the Plant Communities as defined by the Florida Land Use Cover and Classification system (FLUCCS).
2. A map and description of the soils found on the property (identify the source of the information).
3. A topographic map depicting the property boundaries and 100-year flood prone areas indicated (as identified by FEMA).
4. A map delineating the property boundaries on the most recent Flood Insurance Rate Map.
5. A map delineating wetlands, aquifer recharge areas, and rare & unique uplands.
6. A table of plant communities by FLUCCS with the potential to contain species (plant and animal) listed by federal, stateor local agencies as endangered, threatened or species of special concern. The table must include the listed species by FLUCCS and the species status (same as FLUCCS map).

Impacts on Historic Resources

List all historic resources (including structure, districts, and/or archaeologically sensitive areas) and provide an analysis of the proposed change's impact on these resources. The following should be included with the analysis:

1. A map of any historic districts and/or sites listed on the Florida Master Site File which are located on the subject property or adjacent properties.
2. A map showing the subject property location on the archaeological sensitivity map for Lee County.

Internal Consistency with the Lee Plan

1. Discuss how the proposal affects established Lee County population projections, Lee Plan Table 1(b) and the total population capacity of the Lee Plan Future Land Use Map.
2. List all goals and objectives of the Lee Plan that are affected by the proposed amendment or that affect the subject property. This analysis should include an evaluation of all relevant policies under each goal andobjective.
3. Describe how the proposal affects adjacent local governments and their comprehensiveplans.

State Policy Plan and Regional Policy Plan

List State Policy Plan and Regional Policy Plan goals, strategies and actions, and policies which are relevant to this plan amendment.

Justify the proposed amendment based upon sound planning principles

Support all conclusions made in this justification with adequate data and analysis.

Planning Communities/Community Plan Area Requirements

If located within a planning community/community plan area, provide a meeting summary document of the required public informational session [Lee Plan Goal 17].

Sketch and Legal Description

The certified legal description(s) and certified sketch of the description for the property subject to the requested change. A metes and bounds legal description must be submitted specifically describing the entire perimeter boundary of the property with accurate bearings and distances for every line. The sketch must be tied to the state plane coordinate system for the Florida West Zone (North America Datum of 1983/1990 Adjustment) with two coordinates, one coordinate being the point of beginning and the other an opposing corner. If the subject property contains wetlands or the proposed amendment includes more than one land use category a metes and bounds legal description, as described above, must be submitted in addition to the perimeter boundary of the property for each wetland or future land use category.

SUBMITTAL REQUIREMENTS

Clearly label all submittal documents with the exhibit name indicated below.

For each map submitted, the applicant will be required to submit a 24"x36" version and 8.5"x11" reduced map for inclusion in public hearing packets.

MINIMUM SUBMITTAL ITEMS (3 Copies)

[x]	Completed Application (Exhibit – M1)
[ ]	Filing Fee (Exhibit – M2)
[x]	Disclosure of Interest (Exhibit – M3)
[x]	Surrounding Property Owners List, Mailing Labels, and Map For All Parcels Within 500 Feet of the Subject Property (Exhibit – M3)
[x]	Future Land Use Map - Existing and Proposed (Exhibit – M4)
[x]	Map and Description of Existing Land Uses (Not Designations) of the Subject Property and Surrounding Properties (Exhibit – M5)
[x]	Map and Description of Existing Zoning of the Subject Property and Surrounding Properties (Exhibit – M6)
[x]	Signed/Sealed Legal Description and Sketch of the Description for Each FLUC Proposed (Exhibit – M7)
[x]	Copy of the Deed(s) of the Subject Property (Exhibit – M8)
[x]	Aerial Map Showing the Subject Property and Surrounding Properties (Exhibit – M9)
[x]	Authorization Letter From the Property Owner(s) Authorizing the Applicant to Represent the Owner (Exhibit – M10)
[x]	Lee Plan Analysis (Exhibit – M11)
[x]	Environmental Impacts Analysis (Exhibit – M12)
[x]	Historic Resources Impact Analysis (Exhibit – M13)
[x]	Public Facilities Impacts Analysis (Exhibit – M14)
[x]	Traffic Circulation Analysis (Exhibit – M15)
[x]	Existing and Future Conditions Analysis - Sanitary Sewer, Potable Water, Surface Water/Drainage Basins, Parks and Rec, Open Space, Public Schools (Exhibit – M16)
[x]	Letter of Determination For the Adequacy/Provision of Existing/Proposed Support Facilities - Fire Protection, Emergency Medical Service, Law Enforcement, Solid Waste, Mass Transit, Schools (Exhibit – M17)
[x]	State Policy Plan and Regional Policy Plan (Exhibit – M18)
[x]	Justification of Proposed Amendment (Exhibit – M19)
[x]	Planning Communities/Community Plan Area Requirements (Exhibit – M20)

APPLICANT – PLEASE NOTE:

Once staff has determined the application is sufficient for review, 15 complete copies will be required to be submitted to staff. These copies will be used for Local Planning Agency hearings, Board of County Commissioners hearings, and State Reviewing Agencies. Staff will notify the applicant prior to each hearing or mail out to obtain the required copies.

If you have any questions regarding this application, please contact the Planning Section at (239)533-8585.

AFFIDAVIT

I, Pamela Keyes, P.E., as Public Utilities Director, on behalf of Lee County, a political subdivision of the State of Florida , certify that I am the owner or authorized representative of the property described herein, and that all answers to the questions in this application and any sketches, data, or other supplementary matter attached to and made a part of this application, are honest and true to the best of my knowledge and belief. I also authorize the staff of Lee County Community Development to enter upon the property during normal working hours for the purpose of investigating and evaluating the request made through this application.

12/1/22

Signature of Applicant Date

Pamela Keyes, P.E., as Public Utilities Director, on behalf of Lee County, a political subdivision of the State of Florida

Printed Name of Applicant

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of ☑ physical presence or ☐ online notarization on 12/9/2022 (date) by (name of person providing oath or affirmation), who is personally known to me or who has produced _____ (type of identification) as identification.

Signature of Notary Public

ELIZABETH GARCIA
MY COMMISSION # HH 140161
EXPIRES: June 9, 2025
Bonded Thru Notary Public Underwriters

(Name typed, printed or stamped)

DISCLOSURE OF INTEREST (EXHIBIT M3)

DISCLOSURE OF INTEREST
AFFIDAVIT

BEFORE ME this day appeared Pamela Keyes, P.E., as Public Utilities Director, on behalf of Lee County, a political subdivision of the State of Florida, who, being first duly sworn and deposed says:

1. That I am the record owner, or a legal representative of the record owner, of the property that is located at 18940 Green Meadow Road, Fort Myers, FL and is the subject of an Application for zoning action (hereinafter the "Property").

2. That I am familiar with the legal ownership of the Property and have full knowledge of the names of all individuals that have an ownership interest in the Property or a legal entity owning an interest in the Property.

[OPTIONAL PROVISION IF APPLICANT IS CONTRACT PURCHASER: In addition, I am familiar with the individuals that have an ownership interest in the legal entity that is under contract to purchase the Property.]

3. That, unless otherwise specified in paragraph 6 below, no Lee County Employee, County Commissioner, or Hearing Examiner has an Ownership Interest in the Property or any legal entity (Corporation, Company, Partnership, Limited Partnership, Trust, etc.) that has an Ownership Interest in the Property or that has contracted to purchase the Property.

4. That the disclosure identified herein does not include any beneficial Ownership Interest that a Lee County Employee, County Commissioner, or Hearing Examiner may have in any entity registered with the Federal Securities Exchange Commission or registered pursuant to Chapter 517, whose interest is for sale to the general public.

5. That, if the Ownership Interest in the Property changes and results in this affidavit no longer being accurate, the undersigned will file a supplemental Affidavit that identifies the name of any Lee County Employee, County Commissioner, or Hearing Examiner that subsequently acquires an interest in the Property.

6. Disclosure of Interest held by a Lee County Employee, County Commissioner, or Hearing Examiner.

Name and Address	Percentage of Ownership

Under penalty of perjury, I declare that I have read the foregoing and the facts alleged are true to the best of my knowledge and belief.

Property Owner

Pamela Keyes, P.E., as Public Utilities Director, on behalf of Lee County, a political subdivision of the State of Florida

Print Name

************NOTE: NOTARY PUBLIC IS NOT REQUIRED FOR ADMINISTRATIVE APPROVALS************
ALL OTHER APPLICATION TYPES MUST BE NOTARIZED

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of ☑ physical presence or ☐ online notarization, on 12/9/2022 (date) by _____ (name of person providing oath or affirmation), who is personally known to me or who has produced _____ (type of identification) as identification.

STAMP/SEAL

ELIZABETH GARCIA
MY COMMISSION # HH 140161
EXPIRES: June 9, 2025
Bonded Thru Notary Public Underwriters

Signature of Notary Public

LEE COUNTY
PO BOX 398
FORT MYERS, FL 33902

FLORIDA ROCK PROPERTIES INC
1200 URBAN CENTER DR
BIRMINGHAM, AL 35242

LEE COUNTY CONSERVATION 2020
PO BOX 398
FORT MYERS, FL 33902

ROMO EDUARDO PLASCENCIA +
1014 ROSEMARY LN
NAPLES, FL 34103

HARPER PROPERTY HOLDINGS 3 LLC
5571 HALIFAX AV
FORT MYERS, FL 33912

THRASHER HAROLD K
PO BOX 367672
BONITA SPRINGS, FL 34136

SPAHN PETER J
17100 WOBEGON DR
FORT MYERS, FL 33913

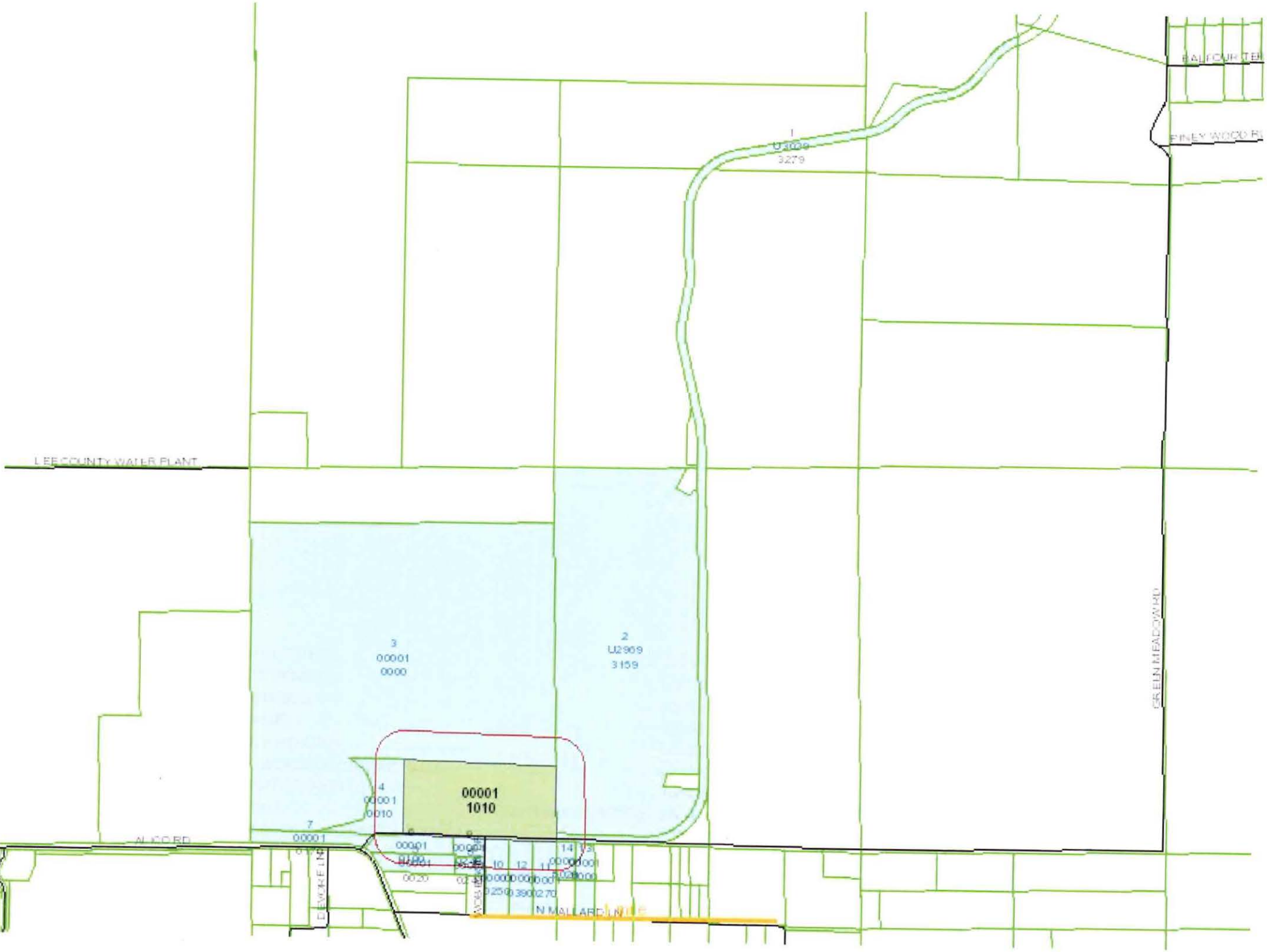
MBW HOLDINGS LLC
7256 SWAN LAKE DR
FORT MYERS, FL 33919

MBW HOLDINGS LLC
PO BOX 347
ESTERO, FL 33929

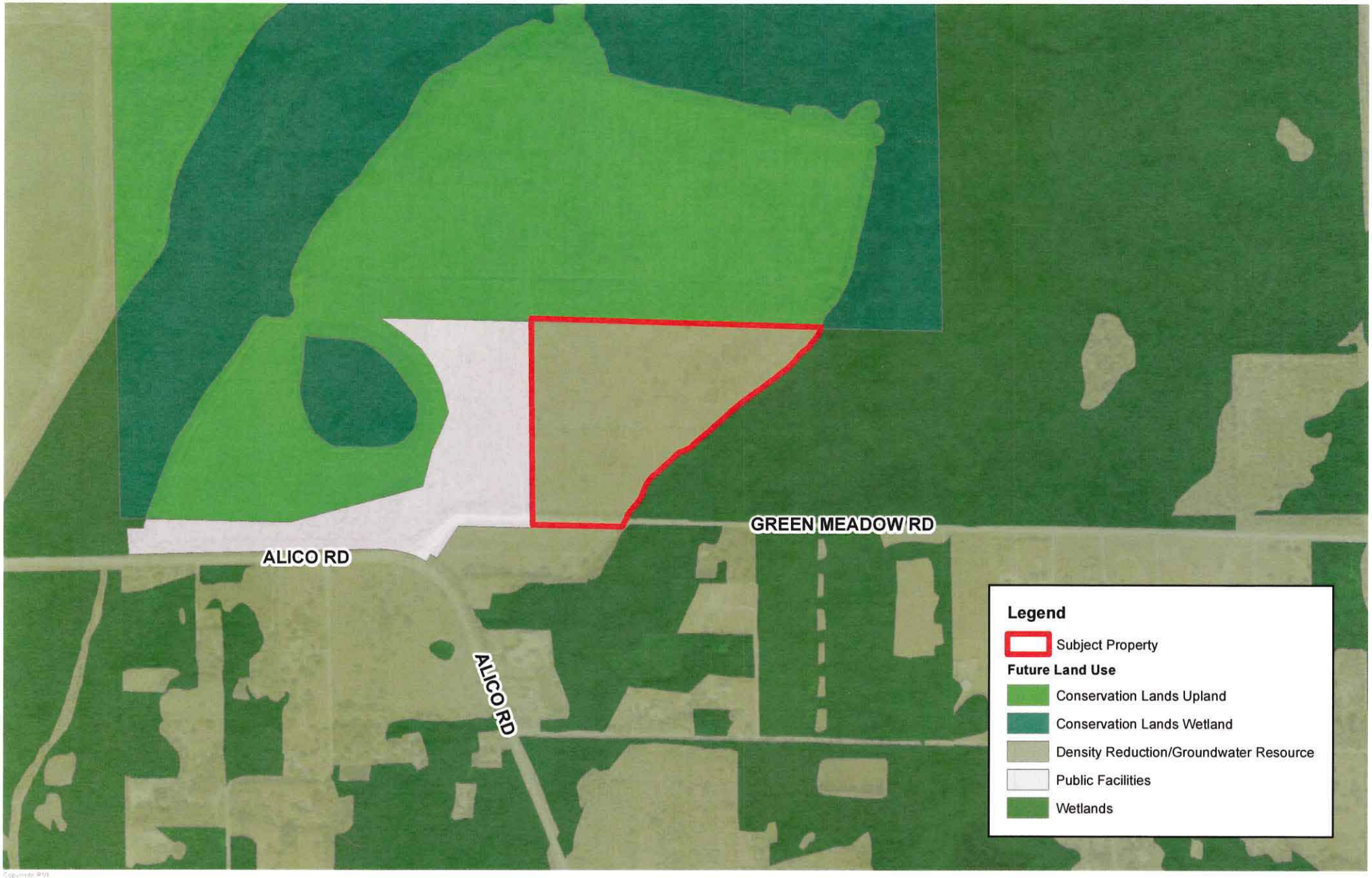
PELICAN HOME LLC
1217 CAPE CORAL PKWY E
STE 176
CAPE CORAL, FL 33904

Southeast Advanced Water Reclamation Facility (SEAWRF)
Surrounding Property Owners List

STRAP	OwnerName	OwnerName2	MailAddress	MailAddress2	MailCity	MailState	MailZip
34-45-26-L3-U3029.3279	LEE COUNTY		PO BOX 398		FORT MYERS	FL	33902
03-46-26-L1-U2969.3159	FLORIDA ROCK PROPERTIES INC		1200 URBAN CENTER DR		BIRMINGHAM	AL	35242
04-46-26-00-00001.0000	LEE COUNTY	CONSERVATION 2020	PO BOX 398		FORT MYERS	FL	33902
09-46-26-00-00001.0020	ROMO EDUARDO PLASCENCIA +		1014 ROSEMARY LN		NAPLES	FL	34103
09-46-26-00-00001.0100	HARPER PROPERTY HOLDINGS 3 LLC		5571 HALIFAX AV		FORT MYERS	FL	33912
09-46-26-00-00001.0240	THRASHER HAROLD K		PO BOX 367672		BONITA SPRINGS	FL	34136
09-46-26-00-00001.024B	SPAHN PETER J		17100 WOBEGON DR		FORT MYERS	FL	33913
09-46-26-00-00001.0250	MBW HOLDINGS LLC		7256 SWAN LAKE DR		FORT MYERS	FL	33919
09-46-26-00-00001.0270	MBW HOLDINGS LLC		PO BOX 347		ESTERO	FL	33929
10-46-26-00-00001.8000	PELICAN HOME LLC		1217 CAPE CORAL PKWY E	STE 176	CAPE CORAL	FL	33904


LEE COUNTY WATER PLANT
1
U2909
3279
3
00001
0000
2
U2909
3159
4
00001
0010
00001
1010
7
00001
ALICO RD
N MALLARD LN E
GREENMEADOW RD

FUTURE LAND USE MAP EXISTING AND PROPOSED (EXHIBIT M4)

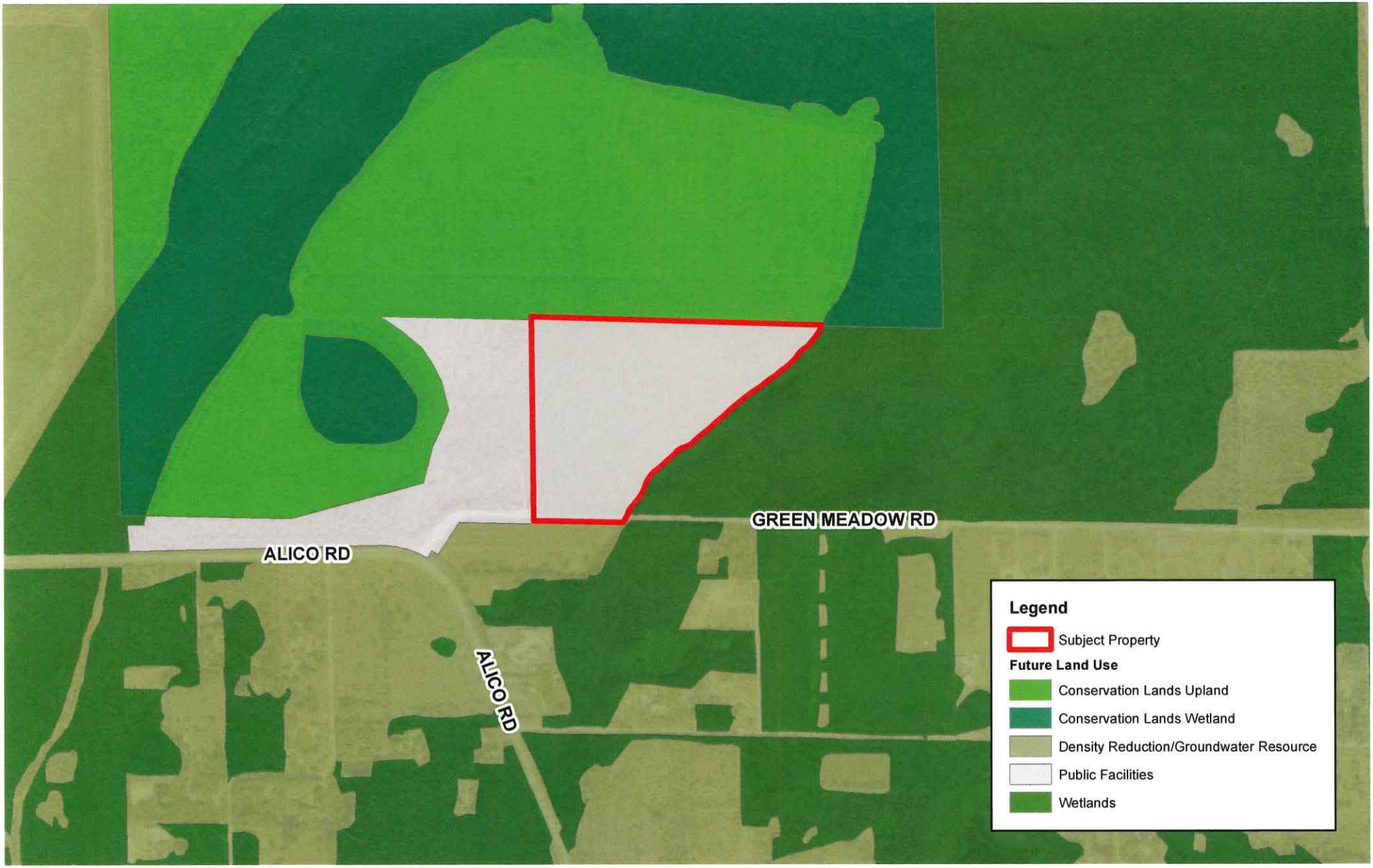


Southeast Advanced Water Reclamation Facility • **Existing FLU Map**

- Lee County, FL
- Date: 5/01/2023
- 22000368
- Lee County Utilities

RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239.405.7777

0 750
FEET



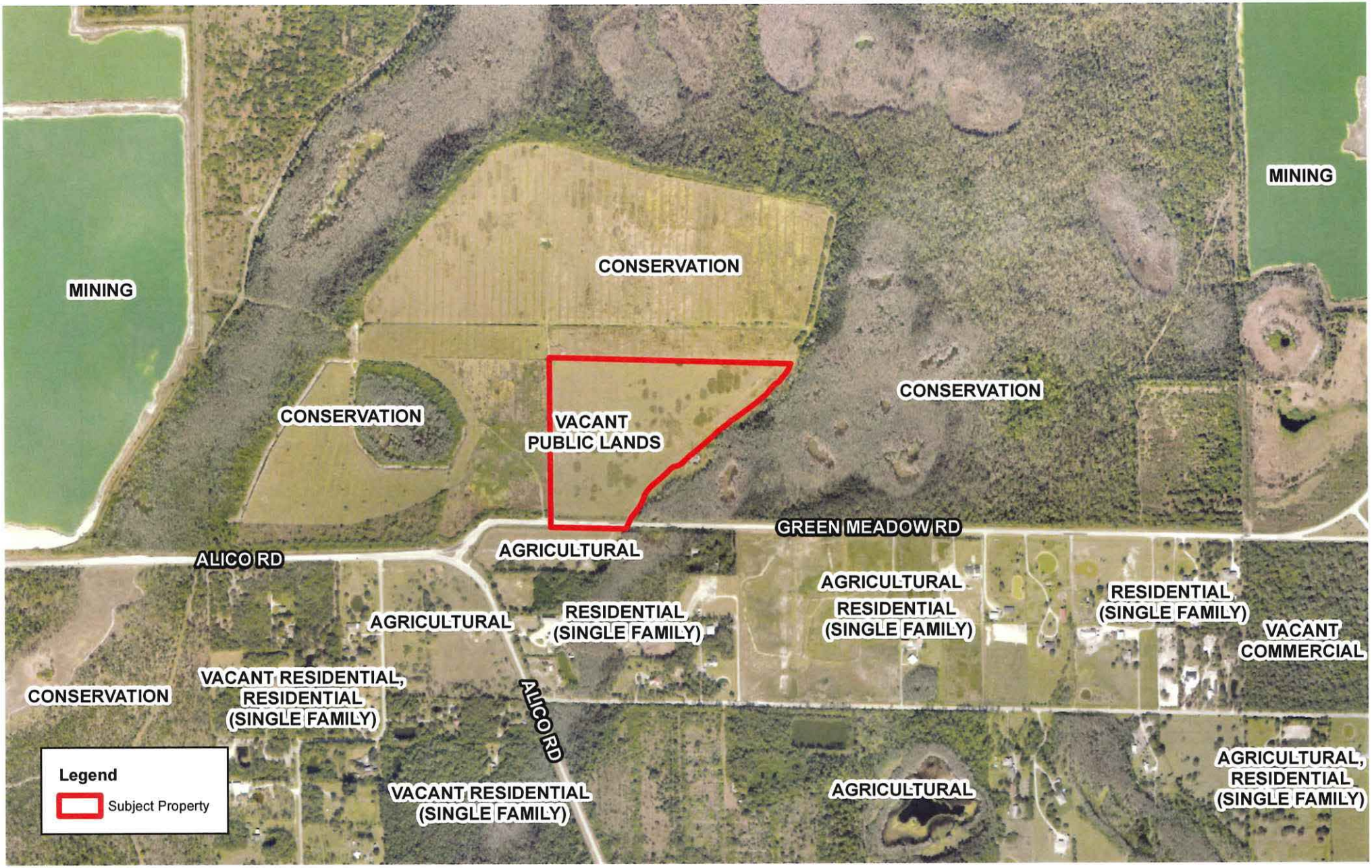
Southeast Advanced Water Reclamation Facility • **Proposed FLU Map**

- Lee County, FL
- Date: 5/01/2023
- 22000368
- Lee County Utilities

RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239.405.7777

0 750
FEET

SURROUNDING LAND USE MAP (EXHIBIT M5)



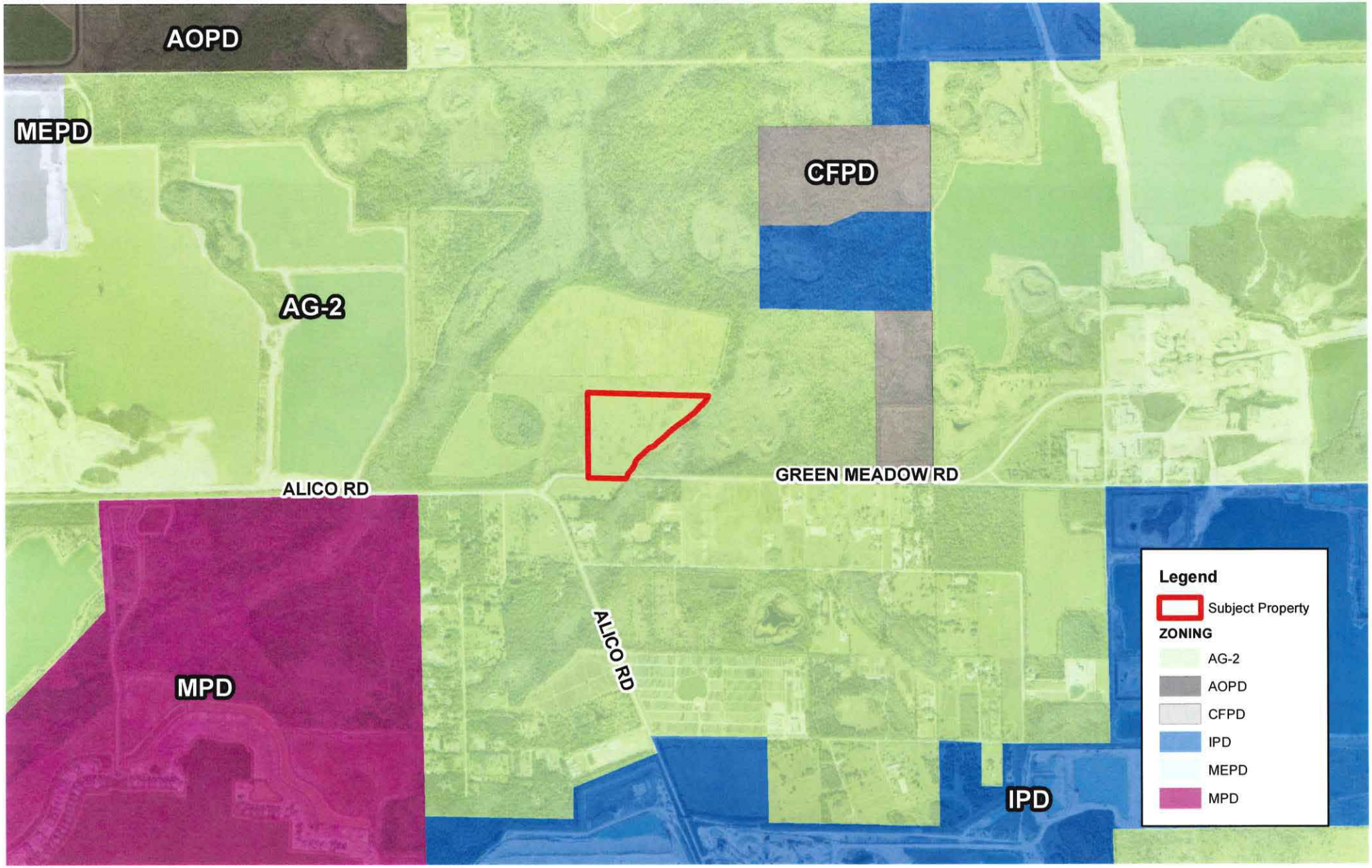
RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel 239.405.7777

Southeast Advanced Water Reclamation Facility • **Existing Land Use Map**

- Lee County, FL
- Date: 5/01/2023
- 22000368
- Lee County Utilities

0 1,000
FEET

ZONING MAP EXISTING & PROPOSED (EXHIBIT M6)

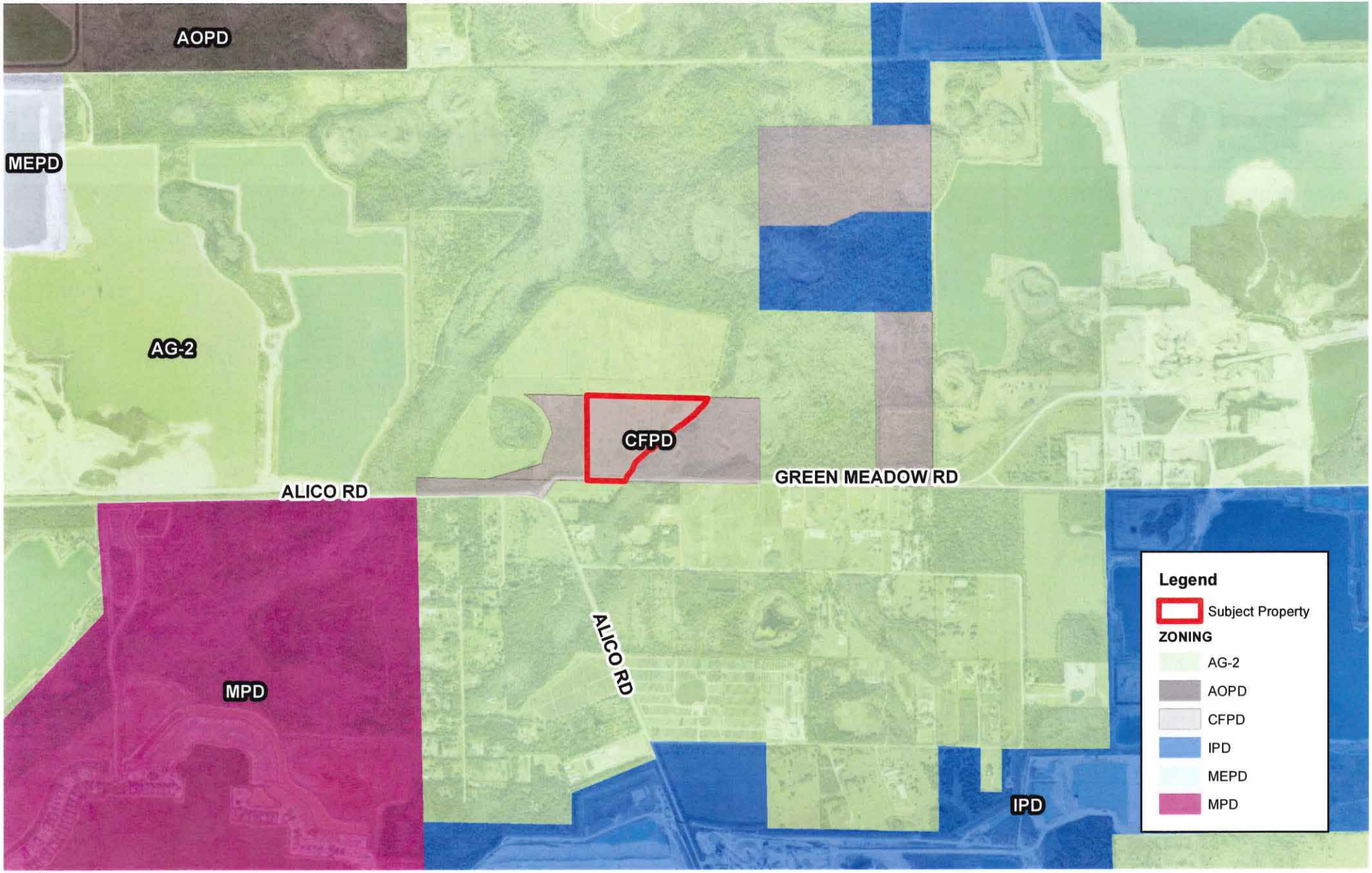


RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239.405.7777

Southeast Advanced Water Reclamation Facility • **Existing Zoning Map**

- Fort Myers, FL
- Date: 4/28/2023
- 22000368
- Lee County Utilities

0 1,000 2,000
FEET



RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel. 239.405.7777

Southeast Advanced Water Reclamation Facility • **Proposed Zoning Map**

- Fort Myers, FL
- Date: 4/28/2023
- 22000368
- Lee County Utilities

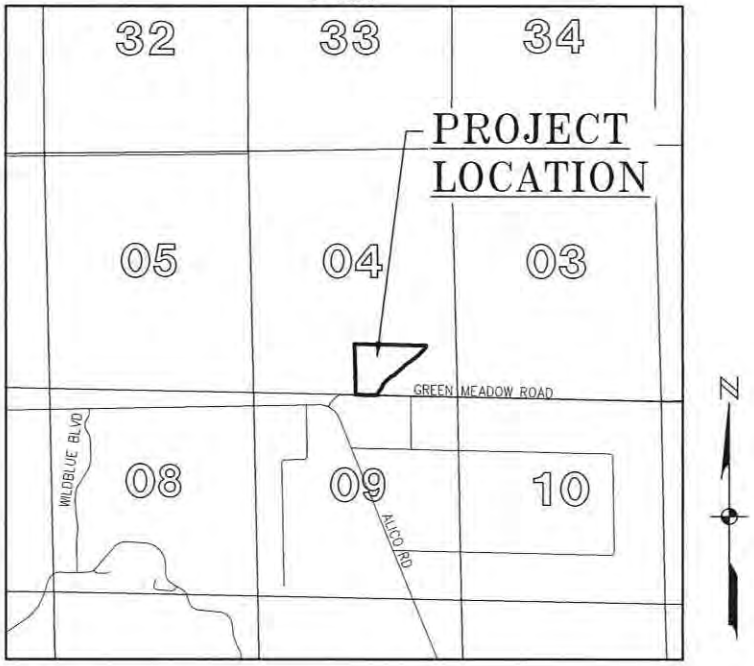
0 1,000 2,000
FEET

SIGNED/SEALED LEGAL DESCRIPTION AND SKETCH (EXHIBIT M7)

SKETCH AND DESCRIPTION
SOUTHEAST ADVANCED WATER RECLAMATION FACILITY (SEAWRF) EAST

A PARCEL OF LAND LYING IN
SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST,
LEE COUNTY, FLORIDA

VICINITY MAP
1"=5000'



0 1250 2500 5000
(INTENDED DISPLAY SCALE: 1"=5000')

THIS IS NOT A SURVEY.

I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE LEGAL DESCRIPTION AND ATTACHED SKETCH WERE PREPARED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 5J-17.05, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472, FLORIDA STATUTES.

NOTES:
1. THIS IS NOT A BOUNDARY SURVEY, NOR IS IT INTENDED TO BE USED AS ONE.
2. HORIZONTAL DATA AND COORDINATES SHOWN HEREON ARE IN FEET AND ARE PROJECTED ONTO THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT.
3. BEARINGS SHOWN HEREON ARE BASED ON THE SOUTHERLY BOUNDARY OF SECTION 4, WHEREIN SAID BOUNDARY BEARS N88°44'03"W.
4. PARCEL CONTAINS 1,552,873 SQUARE FEET OR 35.65 ACRES, MORE OR LESS.
5. P.O.B. = POINT OF BEGINNING
6. ORB = OFFICIAL RECORDS BOOK
7. ORI = OFFICIAL RECORDS INSTRUMENT
8. PG = PAGE
9. ROW, R/W = RIGHT-OF-WAY
10. SQ. FT. = SQUARE FEET
11. N: = NORTHING
12. E: = EASTING
13. ℄ = CENTERLINE
14. DESCRIPTION ON SHEET 3.
15. NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.

THIS SKETCH HAS BEEN DIGITALLY SIGNED BY:
RICHARD G. DANIELS (FOR THE FIRM L.B. 642)
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 7229
ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED, AND THE DIGITAL SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

REVISION 02/06/2023-CORRECT SCALE
REVISION 04/25/2023-REVISE PER CURRENT FUTURE LAND USE MAP

JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

SKETCH AND DESCRIPTION
SEAWRF EAST
SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST
LEE COUNTY, FLORIDA

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
01/27/2023	20181232-001	4-46-26	AS SHOWN	1 OF 3

\\FTMS01\Drawings\2018\20181232-001\Surveying\Sketches\SOUTHEAST ADVANCED WATER RECLAMATION FACILITY (SEAWRF) EAST Parcel REV 2023 04 25.dwg (S1) RGD Apr 26, 2023 - 10:51am

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 5J-17.062, F.A.C.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S20°19'56"W	18.18'
L2	S19°49'18"W	8.40'
L3	S24°10'25"W	19.21'
L4	S39°12'09"W	18.04'
L5	S33°30'36"W	26.28'
L6	S41°48'25"W	30.80'
L7	S36°41'16"W	24.98'
L8	S45°10'20"W	23.98'
L9	S58°56'49"W	29.56'
L10	S42°32'35"W	44.48'
L11	S35°14'46"W	24.78'
L12	S43°16'59"W	38.42'
L13	S46°01'40"W	27.96'
L14	S49°55'17"W	31.46'
L15	S53°37'40"W	25.00'

LINE TABLE		
LINE	BEARING	DISTANCE
L16	S48°51'44"W	25.07'
L17	S53°29'52"W	106.37'
L18	S51°10'01"W	33.30'
L19	S56°13'24"W	84.15'
L20	S50°16'28"W	41.82'
L21	S52°53'51"W	38.77'
L22	S51°12'43"W	41.00'
L23	S49°11'34"W	42.49'
L24	S47°41'39"W	93.98'
L25	S49°13'23"W	36.44'
L26	S46°04'00"W	40.62'
L27	S51°04'29"W	81.08'
L28	S48°22'47"W	52.18'
L29	S50°09'27"W	11.08'
L30	S36°28'22"W	11.16'

LINE TABLE		
LINE	BEARING	DISTANCE
L31	S49°37'07"W	22.88'
L32	S65°12'00"W	27.90'
L33	S71°06'44"W	11.63'
L34	S76°22'03"W	16.89'
L35	S66°48'15"W	10.62'
L36	S60°17'01"W	16.02'
L37	S43°13'09"W	52.70'
L38	S50°09'27"W	33.24'
L39	S47°15'07"W	48.59'
L40	S49°20'32"W	54.15'
L41	S53°12'34"W	19.18'
L42	S42°24'30"W	27.98'
L43	S36°30'29"W	39.72'
L44	S26°39'25"W	20.31'
L45	S18°01'11"W	43.43'

LINE TABLE		
LINE	BEARING	DISTANCE
L46	S28°48'52"W	52.86'
L47	S36°00'08"W	45.14'
L48	S42°35'59"W	19.00'
L49	S40°46'49"W	25.08'
L50	S32°18'42"W	18.70'
L51	S25°07'41"W	22.60'
L52	S26°33'54"W	71.42'
L53	S01°15'57"W	20.80'

N

0 75 150 300

(INTENDED DISPLAY SCALE: 1"=300')

04-46-26-00-00001.0000
LEE COUNTY
CONSERVATION 2020
(ORI 2017000056956)

N: 786690.442
E: 748655.241

S88°44'03"E 1873.25'

NORTHERLY LINE OF SOUTH 1319.318' OF SE 1/4

DESCRIBED PARCEL OF LAND CONTAINS 1,552,873± SQ. FT. OR 35.65± ACRES

04-46-26-00-00001.1010
LEE COUNTY
(ORI 2019000218750)

PORTION OF THE SOUTH 1319.318 FEET OF THE SE 1/4 OF SECTION 4

09-46-26-00-00001.0010
LEE COUNTY
(ORI 2017102016?SP)

N01°14'03"W 1320.57'

W. LINE OF SE 1/4 SECTION 4

20' ACCESS EASEMENT
(ORI 2008000045700)
(ORI 2008000163408)
(ORI 2009000067153)
(ORI 2016000121155)

REMAINDER OF SE 1/4
NOT INCLUDED
"WETLAND AREA"

20'x30' LEASE AREA LAND SPACE
(ORI 2009000207699)

75'x75' LEASE AREA
(ORI 2008000045700)
(ORI 2008000163408)
(ORI 2009000067153)
(ORI 2016000121155)
(ITEM 5.)

100' RIGHT-OF-WAY EASEMENT
(ORB 1265, PG 2133)
(ORB 1278, PG 928)
(ORB 1839, PG 2871)
(ORB 1860, PG 755)

20' ACCESS EASEMENT
(ORI 2009000291211)

N88°44'03"W 571.81'

SOUTH BOUNDARY OF SECTION 4

P.O.B.

SW CORNER OF SE 1/4 OF SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA
N: 785370.320
E: 748683.669

09-46-26-00-00001.0100
HARPER PROPERTY
HOLDINGS 3 LLC
(ORI 2011000274245)

THIS IS NOT A SURVEY.

JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

SKETCH AND DESCRIPTION
SEAWRF EAST
SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST
LEE COUNTY, FLORIDA

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
01/27/2023	20181232-001	4-46-26	AS SHOWN	2 OF 3

DESCRIPTION

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY (SEAWRF)
EAST
A PARCEL OF LAND LYING IN
SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST
LEE COUNTY, FLORIDA

A PARCEL OF LAND LYING IN THE SOUTHEAST 1/4 OF SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION 4; THENCE N01°14'03"W, ALONG THE WESTERLY BOUNDARY OF SAID SOUTHEAST 1/4 OF SECTION 4, 1,320.57 FEET TO THE NORTHERLY BOUNDARY OF THE SOUTHERLY 1,319.318 FEET OF SAID SOUTHEAST 1/4; THENCE S88°44'03"E, ALONG SAID NORTHERLY BOUNDARY, 1,873.25 FEET; THENCE S20°19'56"W, 18.18 FEET; THENCE S19°49'18"W, 8.40 FEET; THENCE S24°10'25"W, 19.21 FEET; THENCE S39°12'09"W, 18.04 FEET; THENCE S33°30'36"W, 26.28 FEET; THENCE S41°48'25"W, 30.80 FEET; THENCE S36°41'16"W, 24.98 FEET; THENCE S45°10'20"W, 23.98 FEET; THENCE S58°56'49"W, 29.56 FEET; THENCE S42°32'35"W, 44.48 FEET; THENCE S35°14'46"W, 24.78 FEET; THENCE S43°16'59"W, 38.42 FEET; THENCE S46°01'40"W, 27.96 FEET; THENCE S49°55'17"W, 31.46 FEET; THENCE S53°37'40"W, 25.00 FEET; THENCE S48°51'44"W, 25.07 FEET; THENCE S53°29'52"W, 106.37 FEET; THENCE S51°10'01"W, 33.30 FEET; THENCE S56°13'24"W, 84.15 FEET; THENCE S50°16'28"W, 41.82 FEET; THENCE S52°53'51"W, 38.77 FEET; THENCE S51°12'43"W, 41.00 FEET; THENCE S49°11'34"W, 42.49 FEET; THENCE S47°41'39"W, 93.98 FEET; THENCE S49°13'23"W, 36.44 FEET; THENCE S46°04'00"W, 40.62 FEET; THENCE S51°04'29"W, 81.08 FEET; THENCE S48°22'47"W, 52.18 FEET; THENCE S50°09'27"W, 11.08 FEET; THENCE S36°28'22"W, 11.16 FEET; THENCE S49°37'07"W, 22.88 FEET; THENCE S65°12'00"W, 27.90 FEET; THENCE S71°06'44"W, 11.63 FEET; THENCE S76°22'03"W, 16.89 FEET; THENCE S66°48'15"W, 10.62 FEET; THENCE S60°17'01"W, 16.02 FEET; THENCE S43°13'09"W, 52.70 FEET; THENCE S50°09'27"W, 33.24 FEET; THENCE S47°15'07"W, 48.59 FEET; THENCE S49°20'32"W, 54.15 FEET; THENCE S53°12'34"W, 19.18 FEET; THENCE S42°24'30"W, 27.98 FEET; THENCE S36°30'29"W, 39.72 FEET; THENCE S26°39'25"W, 20.31 FEET; THENCE S18°01'11"W, 43.43 FEET; THENCE S28°48'52"W, 52.86 FEET; THENCE S36°00'08"W, 45.14 FEET; THENCE S42°35'59"W, 19.00 FEET; THENCE S40°46'49"W, 25.08 FEET; THENCE S32°18'42"W, 18.70 FEET; THENCE S25°07'41"W, 22.60 FEET; THENCE S26°33'54"W, 71.42 FEET; THENCE S01°15'57"W, 20.80 FEET TO THE SOUTHERLY BOUNDARY OF SAID SECTION 4; THENCE N88°44'03"W, ALONG SAID SOUTHERLY BOUNDARY, 571.81 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 1,552,873 SQUARE FEET OR 35.65 ACRES, MORE OR LESS.

THIS IS NOT A SURVEY.

JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

SKETCH AND DESCRIPTION
SEAWRF EAST
SECTION 4, TOWNSHIP 46 SOUTH, RANGE 26 EAST
LEE COUNTY, FLORIDA

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
01/27/2023	20181232-001	4-46-26	AS SHOWN	3 OF 3

WARRANT DEEDS (EXHIBIT M8)

INSTR. # 2019000218750, Doc Type D, Pages 4, Recorded 9/20/2019 at 7:32 AM, Deputy Clerk MNOLAN
Rec Fees: $35.50 Deed Doc: $12,600.00

Prepared by and return to:
Edward P. Canterbury, Esq.
HENDERSON, FRANKLIN, STARNES & HOLT, P.A.
1715 Monroe Street
Fort Myers, FL 33901
239-344-1100
File Number: **EPC 27288 2**

Parcel Identification No. **04-46-26-00-00001.1010**

[Space Above This Line For Recording Data]

Warranty Deed

(STATUTORY FORM - SECTION 689.02, F.S.)

This Indenture made this **18th** day of **September, 2019** between **Harper Property Holdings 3, LLC, a Florida limited liability company, as to an undivided 57% interest and McNew Property Holdings 3, LLC, a Florida limited liability company, as to an undivided 43% interest,** whose post office address is **5571 Halifax Avenue, Fort Myers, FL 33912** of the County of **Lee**, State of **Florida**, grantor*, and **Lee County, a Political Subdivison of the State of Florida** whose post office address is **P.O. Box 398, Fort Myers, FL 33902-0398** of the County of **Lee**, State of **Florida**, grantee*,

Witnesseth that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Lee County, Florida**, to-wit:

See "Exhibit A" attached hereto and made a part hereof.

Subject to covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

and said grantor does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever.

* "Grantor" and "Grantee" are used for singular or plural, as context requires.

[Signatures on following pages]

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Harper Property Holdings 3, LLC, a Florida limited liability company

By: Harper Property Management, LLC, a Florida limited liability company, its Manager

By: _____
Ronald E. Inge, as Co-Trustee of the
Harper Family Trust
Its Manager

_____
Witness Name: Edward P. Canterbury

_____
Witness Name: Laura L. Groskios

McNew Property Holdings 3, LLC, a Florida limited liability company

By: McNew Property Management, LLC, a Florida limited liability company, its Manager

By: _____
Ronald E. Inge, as Co-Trustee of the
McNew Family Trust
Its Manager

_____
Witness Name: Edward P. Canterbury

_____
Witness Name: Laura L. Groskios

State of Florida
County of Lee

The foregoing instrument was acknowledged before me this 18th day of September, 2019 by Ronald E. Inge, as Co-Trustee of the Harper Family Trust, the Manager of Harper Property Management, LLC, a Florida limited liability company, the Manager of HARPER PROPERTY HOLDINGS 3, LLC, a Florida limited liability company, on behalf of the companies. He [X] is personally known to me or [ ] has produced _____ as identification.

[Notary Seal]

LAURA L. GROSKLOS
Commission # GG 308219
Expires April 3, 2023
Bonded Thru Troy Fain Insurance 800-385-7019

Laura L. Grosklos
Notary Public

Printed Name: Laura L. Grosklos

My Commission Expires: _____

State of Florida
County of Lee

The foregoing instrument was acknowledged before me this 18th day of September, 2019 by Ronald E. Inge, as Co-Trustee of the McNew Family Trust, the Manager of McNew Property Management, LLC, a Florida limited liability company, the Manager of McNEW PROPERTY HOLDINGS 3, LLC, a Florida limited liability company, on behalf of the companies. He [X] is personally known to me or [ ] has produced _____ as identification.

[Notary Seal]

LAURA L. GROSKLOS
Commission # GG 308219
Expires April 3, 2023
Bonded Thru Troy Fain Insurance 800-385-7019

Laura L. Grosklos
Notary Public

Printed Name: Laura L. Grosklos

My Commission Expires: _____

Acquisition approved by the Lee County Board of Commissioners action on 9-3-2019
and accepted on behalf of the board by _____
Jessica L Mann **on** 9-18-2019
in accordance with CONSENT AGENDA, ITEM 8
Project SW TRANSFER FACILITY **Parcel** 18940 GREEN MEADOW ROAD
UTILITIES WWTP,
ALICO ROAD EXTENSION

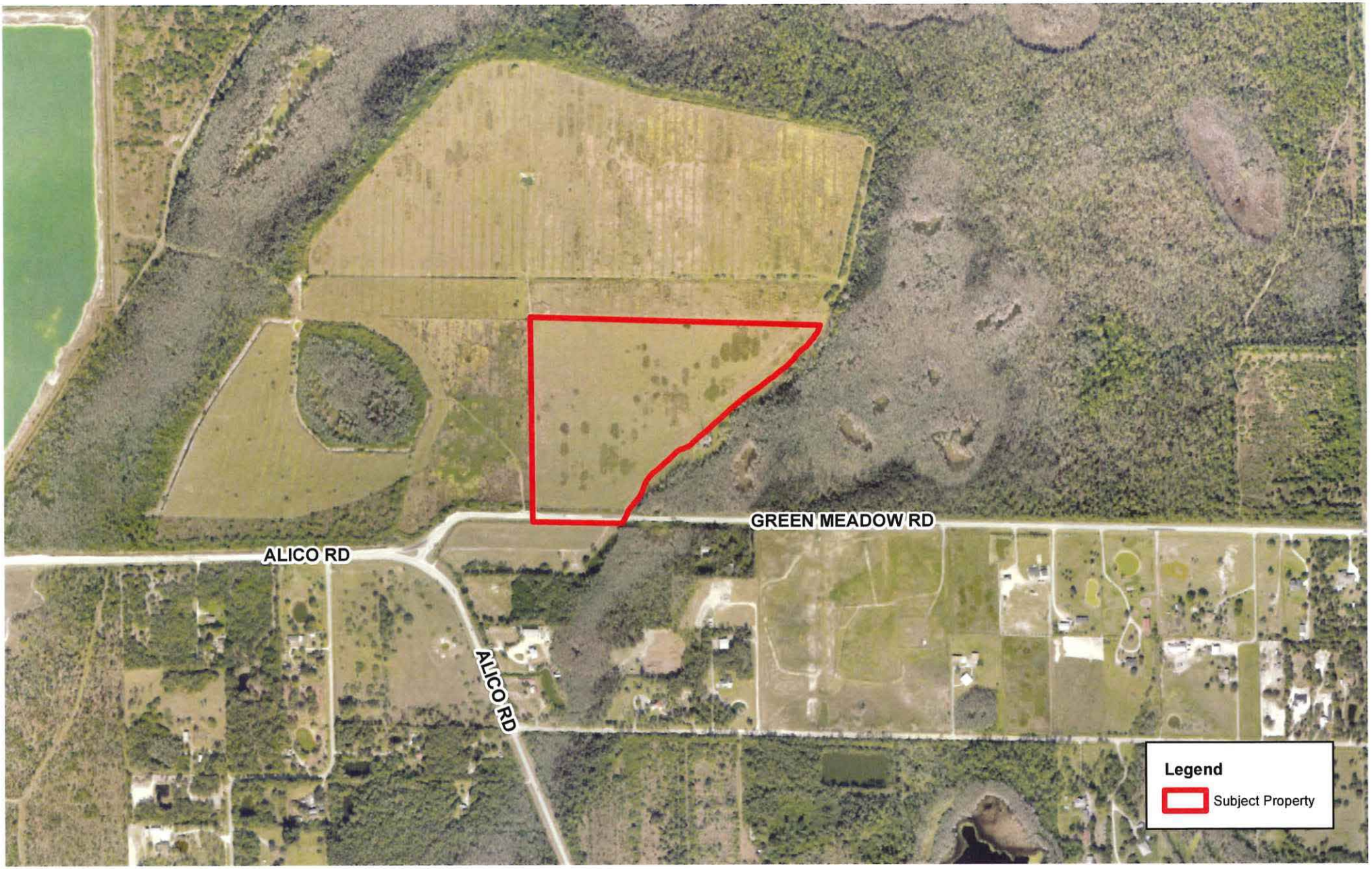
Exhibit A

South 1,319.318 feet of the Southeast quarter (SE 1/4) of Section 4, Township 46 South, Range 26 East. Together with the following easement more particularly described as follows:

A non-exclusive right of way and easement for roadway purposes through, over and across a strip of land lying and abutting North of the North right of way line of Alico Road and lying and abutting West of the West line of a 100 foot wide roadway easement granted to Alico Land Corporation and recorded in O.R. Book 1265, Page 2133, Lee County Records.

From the Northwest corner of Section 9, Township 46 South, Range 26 East, measure South 01° 12' 44" East along the West line of Section 9 for 232.62 feet to the North right of way line of Alico Road; thence measure North 88° 44' 26" East along said North line 1446.41 feet for the Point of Beginning; thence continue North 88° 44' 26" East along said North line 200 feet; thence continue along said North line along a curve deflecting to the right with a radius of 621.78 feet a distance of 273.80 feet (Chord of said curve bearing South 78° 38' 40" East for 271.59 feet) to Southwest corner of a 100 foot wide roadway easement described in O.R. Book 1265, Page 2133, Lee County Records; thence North 33° 13' 16" East along the Westerly line of said easement 249.30 feet to the North line of Section 9; thence South 53° 07' 06" West for 153.40 feet; thence along curve deflecting to the right with a radius of 165 feet a distance of 107.99 feet (Chord of said curve bearing South 68° 25' 01" West for 106.08 feet); thence South 87° 10' 01" West for 182.07 feet; thence South 84° 27' 05" West for 200.56 feet to the Point of Beginning.

AERIAL LOCATION MAP (EXHIBIT M9)



RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239.405.7777

Southeast Advanced Water Reclamation Facility • **Aerial Location Map**

- Lee County, FL
- Date: 5/01/2023
- 22000368
- Lee County Utilities

0 750
FEET

LETTER OF AUTHORIZATION (EXHBIT M10)

LETTER OF AUTHORIZATION

To Whom It May Concern:

Please be advised that Pamela Keyes, P.E., as Public Utilities Director, an authorized persons with Lee County, a political subdivision of the State of Florida owner of the Subject Property, hereby authorizes RVi Planning + Landscape Architecture, Inc., Johnson Engineering, Inc., and Jacobs Engineering, Inc. to act on its behalf in applying for a Lee County Comprehensive Plan Amendment. This authority to represent our interest includes any and all documents required as part of the Comprehensive Plan Amendment petition submitted on my behalf.

STRAP NUMBER(S) or LEGAL DESCRIPTION

STRAP #: **04-46-26-00-00001.1010**

Signature of Owner

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was acknowledged before me this 9 day of December 2022, by Elizabeth Garcia, who is personally known to me, or has produced_____ as identification and who did not take an oath.

(Notary Seal)

ELIZABETH GARCIA
MY COMMISSION # HH 140161
EXPIRES: June 9, 2025
Bonded Thru Notary Public Underwriters

Signature of Notary Public

Commission No.

(Print, type or stamp commissioned name of Notary Public)

LEE PLAN ANALYSIS NARRATIVE (EXHIBIT M11, M18, M19 & M20)

Southeast Advanced Water Reclamation Facility (SEAWRF)
Comprehensive Plan Amendment

Exhibit - M11 Lee Plan Analysis, Exhibit - M18 State Policy Plan and Regional Policy Plan, Exhibit - M19 Justification of Proposed Amendment & Exhibit – M20 Planning Communities/Community Plan Area Requirements

I. Request

Lee County Utilities ("Applicant"), upon authorization by the Board of County Commissioners, is requesting approval of a Small-Scale Comprehensive Plan Amendment to the Future Land Use Map (Lee Plan Map 1-A), redesignating 36 +/- acres of the 112+/-acre subject property ("Property") from the "Density Reduction Groundwater Resource" (DR/GR) future land use category to the "Public Facilities" future land use category. The remaining lands in the 112-acre property that are not subject to this request are appropriately designated as DR/GR, Public Facilities and Wetlands, and are not proposed to change via this application.

The Applicant is filing a companion rezoning application to rezone the entire 112+/- acres from Agricultural – 2 (AG-2) to the Community Facilities Planned Development (CFPD) zoning district. This rezoning will allow for the development of a public wastewater treatment facility, referred to herein as the Southeast Advanced Water Reclamation Facility (SEAWRF), on the property. The intent of this facility is to service the Southeast Lee County area with centralized wastewater treatment facilities to meet the projected demands based upon population growth and approved levels of developments, particularly along Corkscrew Road.

II. Surrounding Land Use Pattern

The Property is within the Southeast Lee County Planning Community, which includes transitional mix of agricultural, industrial/mining, residential and mixed-use developments, both existing and planned, as described in detail below.

The surrounding land use pattern consists of public rights-of-way and reserved public right-of-way for the Alico Road extension, a future 4-lane arterial roadway with the capacity to expand to a 6-lane roadway in the future should it become warranted will serve as a north/south reliever roadway for I-75, which is reaching capacity. Construction for Phase I of the roadway along the subject property's frontage is planned to commence in by mid-year 2024.

Active and large-scale commercial mines have been operating in the area for several decades including CEMEX to the west, Argos to the east and Youngquist Brothers Rock to the south.

In contrast to the high intensity mining operations in the area, large-scale master planned communities lie to the south of Alico along the Corkscrew Road corridor, including WildBlue (1,096 DUs), The Place at Corkscrew (1,325 DUs) and Verdana (2,400 DUs). The Board of County Commissioners also recently approved settlement agreements for a project known as "FFD" allowing for 4,197 DUs. Additionally, 10,000 DUs were approved by the Board in 2022, within a project known as "Kingston", which extends from Corkscrew Road to State Road 82.

Intermingled with the lime rock mines and emerging master-planned communities are low-density single-family residential lots that range between four to twelve acres in size, as well as conservation lands and various agriculture operations.

The approved, permitted and planned growth of Southeast Lee County clearly identifies a shift from the current development pattern to suburban levels of development that require additional public services and infrastructure to serve the increased population within this area.

III. Project Background/Property History

- **Project Context**

The Property subject to this map amendment request consists of 36 +/- acres located north of Green Meadow Road and about 4 miles east of I-75. The Property is zoned Agricultural – 2 (AG-2), located within the Southeast Lee County Planning Community, and is the FLU category of DR/GR.

The Property is part of a larger 81 +/- acre parcel (STRAP - 04-46-26-00-00001.1010). The remaining 45+/- acres to the east of the Property are to remain under their current FLU category of Wetlands and DR/GR and are not part of this amendment request. The uses on the subject Property currently are vacant public lands as well as an approved wireless communication facility (SEZ2508-00013). The Property can be accessed from Green Meadow Road via an existing unimproved driveway at the southern edge of the site. Together, with the 31 +/- acre parcels to the immediate west (STRAPS – 04-46-26-00-00001.1010 & 09-46-26-00-00001.0170) a total of 112 +/- acres will be rezoned through a companion Planned Development rezone application to allow for the SEAWRF use of the site.

- **Historic Uses**

In terms of historic use, the following description of land use and cover are based on observations of current site conditions and analysis of publicly available data sources including Natural Resources Conservation Service (NRCS) soils maps and historical aerial imagery. Prior to the late 1960's, the Property was cleared for the active agricultural production. In 1998 the area was used for row crops and between 2002 and 2005 the Property transitioned to cattle pasture. To the east of the Property is a forested wetland slough. The Property is located outside of historical flowways and the wetlands to the immediate east of the proposed amendment area. These lands will remain undeveloped and naturally vegetated, and under conservation easement to ensure protection.

- **Conservation 20/20 "Land Swap"**

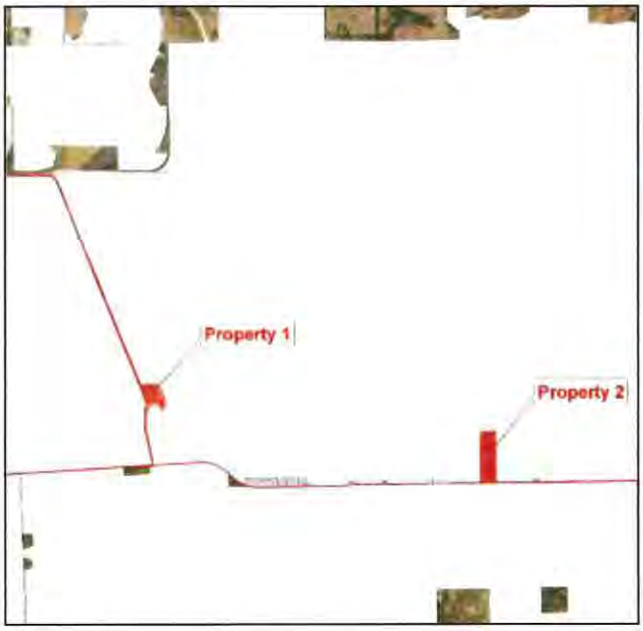
The subject property and adjacent lands were selected for the SEAWRF by Lee County following a significant amount of site location analysis via the Corkscrew Overlay Area Wastewater Master Planning Report which applied sound planning principals, environmental analysis and prioritization, and fiscal responsibility when evaluating possible site locations.

The County's site selection process for the SEAWRF included several criteria that must be met. The first criteria was to locate the facility proximate to the area where the new demand is being generated, to support fiscal and environmental responsibility by reducing the amount of infrastructure and distance untreated water would need to travel to service the area.

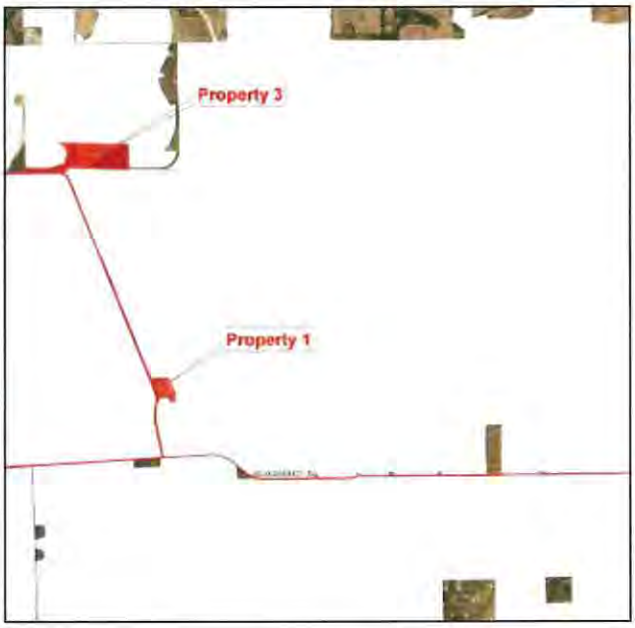
Other limiting criteria included:

- Properties with 40 acres or greater of developable lands to accommodate the scale of facility needed;
- Properties that have limited conservation easements, environmentally sensitive lands, or wetlands;
- Properties that are proximate or had access to major arterial or collector road including I-75;
- Properties that would be able to maintain a buffer to adjacent developed or properties with the potential for future development; and
- Properties where owners were willing to sell.

Map 1: Potential Properties 1 & 2



Map 2: Potential Properties 1 & 3



In 2016 the report narrowed down the new facility to two (2) possible properties identified in Map 1, above. Property 1 was the Corkscrew Water Treatment Plant (WTP) location. Property 2 contained 44.5 +/- acres and was located at 18501 Corkscrew Road and within Tier 1 (highest priority) areas in the Lee Plan's Priority Restoration Strategy Overlay in Map 1-D - Special Treatment Areas. Objective 33.1 of the Lee Plan identities properties within Tier 1 as most critical in providing significant restoration of historic surface and groundwater levels and connecting existing wildlife corridors and conservation areas. Thus, this site was less desirable than the subject property due to environmental factors. Additionally, the site would result in additional infrastructure needs and a less efficient design.

In 2017 Conservation 20/20 staff met with Lee County Utilities and identified a 32 +/- acre section of disturbed lands located directly west of the subject property along Alico Road. These disturbed lands were removed from Site 90 of the Wild Turkey Strand Preserve in 2009 and were used for hurricane debris storage and considered scrap lands. These disturbed lands had been identified in the Wild Turkey Strand Preserve Land Stewardship Plan 2010 Second Edition as lands to potentially swap.

In discussion between Lee County Utilities and Conservation 20/20 it was recognized that the conservation of the property along Corkscrew Road which would help create an approximately four (4) mile uninterrupted preserve corridor provided a higher value to maintaining the integrity and restoration of the large-scale ecosystem in Southeast Lee County compared to the property located along Alico Road which would be more appropriate for an active use. Furthermore, this land swap would be consistent with the intent of the Southeast Lee County Goal 33 and subsequent Objectives, and Policies to protect natural resources through public acquisition and restoration efforts. In May of 2017 an addendum to the

Corkscrew Overlay Area Wastewater Master Planning Report added a third potential site (Property 3), the current proposed site, which contained the Conservation 20/20 Alico Road property.

In October of 2017 the Lee County Board of County Commissioners authorized the land swap of the LCU property along Corkscrew Road and the 32 +/- acre scrap land along Alico Road.

In September of 2018 a due diligence siting analysis for the future Southeast Waste Water Treatment was done between the Corkscrew WTP location and the currently proposed location.

The currently proposed site provided a larger developable area due to being previously heavily disturbed by agricultural activities and provided more opportunities to maintain a buffer and separation from adjacent existing and future developable properties.

- **Previous Zoning Action (DCI2018-10023)**

The property was part of a previous zoning action request in 2018 to allow for a collocated waste water treatment plant (WWTP) and a solid waste facility. The WWTP at that time was proposed to a have a maximum final operation capacity of 6 MGD. The solid waste facility was comprised of approximately 120,000 SF and was of concern to surrounding property owners due to concerns regarding traffic, environmental impacts and other compatibility issues. The Hearing Examiner remanded the case back to the staff level to address items such as pursuit of a comprehensive plan amendment, enhanced community outreach, compatibility with surrounding land uses, and environmental protection.

- **Changed Conditions**

As detailed below, a key change with the current CPA and rezoning request is elimination of the proposed solid waste facility component of the project. The site is solely proposed for the public WWTP.

Another key change that has occurred since the 2018 application was filed is significant increased projected demand for sanitary sewer facilities for Southeast Lee County Planning community for those master planned communities along the Corkscrew corridor outlined above. This increased projected demand has led to the need to further expand the final operation capacity of the SEAWRF from 6 MGD to 10 MGD.

IV. Proposed Amendment Justification

The 36+/- acre CPA will allow for the development of a Southeast Advanced Water Reclamation Facility (SEAWRF) (Lee County CIP # 7467) on a 112 +/- acre site. Approximately 32+/- acres of the site were designated within the Public Facilities Category in 2018 for the purpose of the development of a public utility facility. Therefore, this remaining remnant is proposed for conversion to Public Facility FLU to apply a consistent future land use across the project, and to better reflect Lee Plan consistency with the intended land uses.

The Applicant will submit a companion CFPD rezoning petition to implement the SEAWRF development program, while ensuring compatibility and minimizing the impacts to adjacent land uses, ensuring maintenance of surface and groundwater levels, and protection of environmental resources. It should be noted that natural resource extraction/mining allowed in the current DR/GR FLU, is an extremely impactful use when it comes to degradation of water quality and environmental resources. Thus, the proposal for a public facility that will serve Lee County residents and minimize environmental impacts is a benefit of this petition. The companion CFPD rezone request would further limit the uses allowed within the CFPD and provide additional design standards and protections to adjacent properties.

It is important to note the critical need of the development of this SEAWRF to address water quality in Southeast Lee County through the servicing of wastewater treatment demands of a growing population in Lee County that is projected to surpass 1 million residents by the year 2040 according to the BEBR's medium population projections. The following narrative outlines the relevant data and analysis to support this request.

The proposed designation of the Property to Public Facilities would uphold the overarching intent of the DR/GR to protect groundwater and natural resources. As described the Property itself has been highly disturbed by active agriculture production. The proposed amendment is outside of the jurisdictional wetland to the east and outside of historical flowways. The Surface Water and Groundwater Impacts/Benefits Analysis submitted with this application states that the Property is not significant with respects to recharge of the Surficial aquifer and the proposed on-site stormwater management system associated with the project will enhance the opportunity for recharge and infiltration into the Surficial aquifer.

Lastly, by designating the Property under the Public Facilities designation the Applicant is assuring that the use will be developed to service a public infrastructure need, and the map change represents a logical extension to the property to the west which is already designated as Public Facilities.

V. Public Infrastructure

Lee County Utilities has indicated adequate capacity to serve the project for potable water and sanitary sewer service on site (Exhibit M17).

The proposed SEAWRF generates 58 am peak hour trips and 32 afternoon peak hour trips, and is therefore a relatively low traffic generator as identified in the Traffic Circulation Analysis conducted by Johnson Engineering, Inc.

There are adequate community facilities and services in the immediate vicinity of the project, including Fire, EMS, and Law Enforcement. Please refer to the enclosed infrastructure analysis and agency availability letters (Exhibits M14 & M16) for a complete description of available infrastructure and services to support the amendment request.

VI. Lee Plan Consistency

The following is an analysis of how the proposed amendment is consistent with the goals, policies and objectives of the Lee Plan.

VISION STATEMENT: The Lee Plan is designed to depict Lee County as it will appear in the year 2045 when the population is projected to be 1,056,600 permanent residents with an additional 18% seasonal residents. In order to balance the County's projected growth with evolving planning priorities, the following trends are expected to continue through the year 2045 planning horizon:

The County's public facilities will be maintained at adequate levels of service, partly by the construction of new facilities and partly by the use of new methods to conserve the capacity of existing facilities.

Lee County must strategically plan and prepare for approximately 1 million permanent residents projected by 2040 per the medium population projections. The CPA will allow for construction of the SEAWRF that is already critically needed to maintain the adequate Level of Service (LOS) to keep

up with the wastewater treatment demands of existing and the future projected population in the Southeast Lee County community.

POLICY 1.1.8: The Public Facilities areas include the publicly owned lands within the County such as public schools, parks, airports, public transportation, and other governmental facilities. The allowable uses within these areas are determined by the entity owning each such parcel and the local government having zoning and permitting jurisdiction.

The proposed FLU category that most appropriately fits the property and proposed use is the Public Facilities FLU. The property is owned by Lee County and is intended to be used as a government facility. The specific companion CFPD rezoning is specifically requesting the development of the SEAWRF to provide a critical public service to the community. As previously mentioned, other public uses such as parks and public schools would be permitted by right in the existing zoning district and current DR/GR designation. The intensity of the proposed land uses will be consistent with the maximum intensity permitted by this future land use category which is determined by entity owning the parcel and the local government.

In order to determine the Public Facilities FLU category as the most appropriate designation to redesignate the Property an examination of the current DR/GR FLU category is warranted. The DR/GR FLU category originated from the 1989 Department of Community Affairs settlement with Lee County. The settlement dealt with the over-allocation of County land compared to population growth. Lee County responded to the concerns regarding growth rate, dwelling unit capacity, groundwater recharge, and future water supply within the County by creating a new Density Reduction/Groundwater Resource (DR/GR) FLU category. The category allowed for very low-density development at 1 du/10 acres to address the overallocation of density, but also allowed for intensive land uses, such as mining, that contradict the overarching intent to protect groundwater and natural resources. Lee County over recent years has evolved to provide a mechanism for balanced, well-planned developments in the context of DR/GR. This is evidenced by Babcock Ranch in Northeast Lee County and the communities along Corkscrew Road. The CPAs that made these projects possible recognize that development can be done appropriately to uphold the intent of the DR/GR, and in a manner that enhances instead of detracts from the natural environment, while accommodating population growth and properly utilizing publicly funded infrastructure investments.

POLICY 1.5.1: Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands. All development in Wetlands must be consistent with Goal 124. The maximum density is one dwelling unit per twenty acres (1 du/20 acre) except as otherwise provided in Table 1(a) and Chapter XIII.

In direct compliance with the above policy the SEAWRF development will remain outside of the portion of the property located within Wetlands FLU category as delineated by the Lee County Future Land Use Map. The proposed development will obtain an Environmental Resource Permit and be in compliance with all permit regulations and conditions including a 25-foot wetland buffer mitigating upland development impacts on the wetland areas as identified in the submitted MCP.

POLICY 1.6.5: The Planning Districts Map and Acreage Allocation Table (Map 1-B and Table 1(b)) depict the proposed distribution, extent, and location of generalized land uses through the Plan's horizon. Acreage totals are provided for land in each Planning District in unincorporated Lee County. No development orders or extensions to development orders will be issued or approved by Lee County that would allow the acreage totals for residential, commercial or industrial uses contained in Table 1(b) to be exceeded.

The CPA and companion CFPD Rezone are consistent with the above policy and do not exceed acreage allocations provided for in Table 1(b) Year 2045 Allocation of the Lee County Comprehensive Plan which provides for 3,704 remaining acres for Public land uses within the Southeast Lee County. The remaining allocated acreage within Southeast Lee County after the 112 +/- acre development are removed would be 3,592 acres.

POLICY 2.3.1: **All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Lehigh Acres as described in Policy 54.1.9 and all land in the DR/GR land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change.**

As provided as part of this application the Surface Water and Groundwater Impacts/Benefits Analysis identifies that the SEAWRF has minimal water supply requirements and therefore will not impact present or future water resources. Any on-site irrigation water, if utilized, will be supplied from treated effluent from the SEAWRF, which is considered an "alternative water supply" and encouraged by SFWMD. Prior to future development activities on the Property, the Applicant will need to obtain the requisite Environmental Resource Permit (ERP) from the South Florida Water Management District (SFWMD) or the Florida Department of Environmental Protection (FDEP), and all other applicable state agencies. Furthermore, the proposed use of the site shall serve to allow for the beneficial reuse of water reducing the demand placed on potable drinking water.

POLICY 2.3.2: Future Land Use Map amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the County. It is Lee County's policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in Ch. 163, Part II, Fla. Stat., the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:

1. analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,

The proposed amendment to the Public Facilities FLU category would allow for land uses such as public schools, parks, airports, public transportation, and other governmental facilities which include uses already permitted under the current DR/GR land use designation. However, considering the very limited number of properties that meet the site location criteria for the SEAWRF and the critical need of this facility the intent is for the site to be develop as a WRF. The companion CFPD rezone is for an Advanced Water Reclamation Facility (AWRF) which goes beyond the standard biological wastewater treatment facility by providing further nutrient removal and thereby producing a "higher quality" water output available for water beneficial reuse, helping to lessen the demand on domestic potable water resources and in turn protecting the County's water resources from degradation. The SEAWRF will not require significant irrigation and domestic water sources.

2. identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the

planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,

As previously mentioned, this CPA and companion CFPD will serve to reduce the burden on regional water resources by providing "higher quality" water output available for beneficial reuse. Furthermore, the treatment of water before release will serve to protect the quality of water resources.

3. present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,

As provided as part of this application the Surface Water and Groundwater Impacts/Benefits Analysis identifies that the proposed land use designation change will not cause any significant harm to present or future water resources.

4. Supply data and analysis specifically addressing urban sprawl.

If maintained within the DR/GR FLU category, the resulting development would be urban sprawl, by allowing for very low-density residential uses, at 1 dwelling unit/10 acres, on well and septic systems adjacent to environmentally sensitive lands to the east. The property is located directly on a future arterial roadway network and the County has significant financial investment in infrastructure improvements for the area for the very purpose of maintaining LOS for projected future population growth within Southeast Lee County.

POLICY 5.1.5: Protect existing and future residential areas from any encroachment of uses that are potentially destructive to the character and integrity of the residential environment. Requests for conventional rezonings will be denied in the event that the buffers provided in Chapter 10 of the Land Development Code are not adequate to address potentially incompatible uses in a satisfactory manner. If such uses are proposed in the form of a planned development or special exception and generally applicable development regulations are deemed to be inadequate, conditions will be attached to minimize or eliminate the potential impacts or, where no adequate conditions can be devised, the application will be denied altogether. The Land Development Code will continue to require appropriate buffers for new developments.

The closest existing residential structure is located 350 south east from the proposed development and any potential for future residential development is limited to only south of Green Meadow Road and Alico Road right of ways. The lands to the east, west and north are all conservation lands either through conservation easements or as part of Lee County 20/20 holdings. The proposed SEAWRF, similar to the Three Oaks WRF, will be operated in a neighborhood-friendly manner implementing best management practices to provide protection from noise, odor, and light impacts to surrounding properties.

To reduce visual and noise impacts to surrounding residential uses the development will provide a 30-foot-wide type D buffer along the southern property boundary adjacent to the Alico Road right-of-way. To assure further protection from the southwest or southeast viewsheds is the on-site30 acre vegetated preserve area located to the east of the site and a 30-foot Type F Buffer along 300 feet of the southern portion of the western property boundary. The design site conditions such as the placement of SEAWRF structures as far north on the property as possible, including a 200-foot setback from Alico Road ROW to the south, the LDC requires for all above ground structures to maintain a 100-foot perimeter setback from all PD boundaries, however as identified on the MCP no

building or structure is located less than 200 feet from the Alico Road ROW. The placement of stormwater management areas along the southern perimeter of the development serves to provide further separation from any existing or future residential development areas to the south.

To limit the visual impacts to residential areas from the associated buildings and structures of the SEAWRF, overall heights of all structures have been limited to 60 feet. Structures in excess of 35 feet in height have been limited near the northern boundary and all structures and buildings in proximity to the southern boundary shall be less than 35 feet in height with the exception of the existing communication tower.

The SEAWRF will contain odor abatement technology such as scrubbers and activated carbon filters and use best management practices to limit odor. The headworks channels, screens, grit basins, and splitter box will be covered for odor control. As previously mentioned, the site will provide expansive setbacks of structures from property lines.

The development would also have to adhere to LDC Sec. 34-625 Outdoor lighting standards.
POLICY 17.3.2: One public information meeting is required for privately-initiated applications that propose a text change within a community plan or revises a map designation within a community plan area boundary. The meeting must be conducted before the application can be found complete.

The proposed comprehensive plan map amendment was initiated by Lee County and not privately initialed therefore does not require a public information meeting to be held. However, the application did hold an public information meeting on January 31 which informed the public about the proposed Map Amendment and the companion CFPD rezone. Meeting summary and back up documentation has been submitted with this application.

GOAL 33 SOUTHEAST LEE COUNTY COMMUNITY PLAN: Protect Southeast Lee County's natural resources through public and private acquisition and restoration efforts. Development incentives will be utilized as a mechanism to preserve, enhance, and protect natural resources, such as regional flow-ways and natural habitat corridors in the development of privately owned land. Allowable land uses will include conservation, agriculture, public facilities, low density or clustered residential, natural resource extraction operations, and private recreation facilities; allowable land uses must be compatible with protecting Southeast Lee County's environment.

The SEAWRF property is located within the Southeast Lee County Community. Goal 33 of the Lee Plan is specifically to protect Southeast Lee County's natural resources most notably groundwater resources. The CPA request is specific for the portion of the Parcel located outside of the jurisdictional wetland line and historic flowway. The amendment proposes to preserve the wetland designation for the portion of the property to the east and through the CFPD ensure the protection and preservation of this wetland area. Furthermore, of greater impact to groundwater and other natural resources as and permitted within the current FLU category is active mining natural resource extraction/mining which is not being proposed as part of the CFPD permitted schedule or uses.

POLICY 33.1.7: Impacts of proposed land disturbances on surface and groundwater resources will be analyzed using integrated surface and groundwater models that utilize site-specific data to assess potential adverse impacts on water resources and natural systems within Southeast Lee County. Lee County Division of Natural Resources will determine if the appropriate model or models are being utilized, and assess the design and outputs of the modeling to ensure protection of Lee County's natural resources.

As identified in the submitted Surface Water and Groundwater Impacts/Benefits Analysis by Johnson Engineering, Inc. the amendment will allow for the development of a SEAWRF. This development will not have an impact to surface or groundwater systems. The Property is not significant with respect to recharge of the Surficial aquifer with an existing typical water budget of recharge depths of less than 3 inches annually. The proposed onsite stormwater management system for this development will be designed to retain at least 0.6 inches of runoff per storm event, therefore will recharge the surficial aquifer. The proposed stormwater management will limit the peak discharge from the site resulting from the 25-year 3-day storm event assuring the slow down of discharge rates of stormwater runoff to the area.

POLICY 33.1.8: The County supports a comprehensive and coordinated effort to manage water resources in a manner that includes the protection and restoration of natural systems within Southeast Lee County.

Through the proposed map amendment, the SEAWRF would be able to be developed within the most appropriate land use category within the Lee Plan. The SEAWRF will serve to manage water resources within Southeast Lee County by the treatment of water and production of a "higher quality" water output available for beneficial reuse helping to lessen the demand on water resources and in turn improving and protecting the County's water quality from degradation. Furthermore, the proposed amendment leaves the jurisdictional wetland to the east within the Wetlands FLU category and through the companion CFPD rezone retains the wetland slough to be undeveloped allowing the historical flowway to remain to the east of the property.

POLICY 56.1.3: All utilities are encouraged to construct and install sufficient treatment facilities and collection systems that will meet or exceed the minimum acceptable service standards. These facilities will have capacity to service the demand so generated and will meet or exceed the minimum requirements of the Florida Department of Environmental Protection (DEP), Florida Department of Health, U.S. Environmental Protection Agency (USEPA), or local ordinances that exceed those requirements. All utilities will advise the County of system expansions or modification to ensure coordination.

As previously identified, the CPA allows the development of the SEAWRF to be located within the most appropriate FLU category within the Lee Plan. The critical need for this facility to supplement the Three Oaks WRF capacity to service current and future water treatment demands as the County and Southeast Lee County population continues to grow has been heavily identified as part of this application.

POLICY 60.1.1: Require design of surface water management systems to protect or enhance the groundwater.

The proposed on-site stormwater management system associated with the project will provide recharge and infiltration into the Surficial aquifer. The treatment of water provided by the facility for reuse will serve to further protect surface and ground water quality. The treatment of water provided by the facility for reuse will serve to further protect surface and ground water quality. Prior to future development activities on the Property, the Applicant will obtain the requisite Environmental Resource Permit (ERP) from the South Florida Water Management District or the Florida Department of Environmental Protection (FDEP), and all other applicable state agencies.

POLICY 60.1.2: Incorporate, utilize, and where practicable restore natural surface water flowways and associated habitats.

The development designates lands to the east as an on-site wetland preserve impeding any development being done on these environmentally sensitive areas, which incorporates and utilizes the existing historic flowway within this associated habitat.

POLICY 123.2.3: Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.

The proposed on-site stormwater management system associated with the project retains the existing wetland slough to the east as preserve area which will maintain connectivity with the historic wetland slough's southwest water flow conditions.

POLICY 123.2.4: Encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.

The development protects high-quality plant communities to the east of the development designated as on-site preserve within the CFPD with no wetland impacts being proposed. All development within the CFPD is limited to previously disturbed agricultural upland areas. This on-site preserve area is protected from development impacts by a 25-foot wetland buffer running along the entirety of the eastern Water Reclamation Facility Tract boundary.

POLICY 123.2.10: Require that development adjacent to aquatic and other nature preserves, wildlife refuges, and recreation areas be designed to protect the natural character and public investment in these areas.

The development will be designed to protect the natural character of the adjacent Site 90 Regional Mitigation Area to the north and west of the development through the provision of a 5-foot-wide buffer containing a fence and hedge that will be maintained at 5 feet in height providing protection from noise and light from the proposed water reclamation facility. Furthermore, the development will adhere to LDC Sec. 34-625 Outdoor lighting standards.

POLICY 123.3.1: Encourage upland preservation in and around preserved wetlands to provide habitat diversity, enhance edge effect, and promote wildlife conservation.

The Protected Species Survey by Johnson Engineering, Inc. identified no direct signs of listed species were observed on the Property. The proposed amendment will enhance ecological corridors and biodiversity by maintaining the wetlands to the east under the existing Wetlands FLU category. The companion CFPD rezone will assure that no developmental occurs under what will be designed as the on-site preserve area for this CFPD. The 30 +/- acre wetland area will connect to the conservation easement further east and the Conservation 20/20 site that surrounds the SEAWRF site to the north and west. The connection to these conservation areas further enhances the ecological corridor providing for habitat diversity particularly for far ranging species such as panthers and bears. Additionally, as part of the Alico Road Expansion a wildlife crossing is proposed to connect the southwest portion of the 20/20 Conservation site with the conservation lands part of the Wild Blue MPD development southwest of the proposed amendment.

OBJECTIVE 123.11: FLORIDA PANTHER. Develop strategies to protect the Florida panther.

POLICY 123.11.1: Coordinate with regulatory agencies to maintain data on sightings and habitat for the Florida panther.

POLICY 123.11.2: Encourage state land acquisition programs to include and restore known panther corridors of habitats beneficial to the Florida panther.

POLICY 123.11.3: Coordinate corridor projects with neighboring jurisdictions to encourage a regional approach to wildlife movement.

POLICY 123.11.4: Protect and expand upon the Corkscrew Regional Ecosystem Watershed Greenway, a regionally significant greenway with priority panther habitat, through continued participation in public land acquisition and restoration programs, and incentive programs to preserve and restore habitats.

POLICY 123.11.5: Include plant species that provide forage for prey of the Florida panther in restoration projects of land acquired for environmental sensitivity.

POLICY 123.11.6: Ensure panther habitat needs are incorporated in the planning of new roads and road expansion projects.

POLICY 123.11.7: Provide education and outreach to increase public understanding of Florida panthers and the need for panther conservation.

The site plan promotes connectivity for the Florida panther, as well as all wildlife, by preserving the slough system on the eastern side of the property, which has a direct connection to the Site 90 Regional Mitigation Area and other private and public conservation lands to the north. The habitat within the eastern slough will be enhanced through removal and maintenance of exotic vegetation. Through the direct connection to the Site 90 Regional Mitigation Area, which was permitted by Lee County to provide enhanced habitat for wildlife, there is a wildlife crossing being constructed under Alico Road at the western slough crossing with Lee County's Alico Road widening project. This crossing will provide for safer passage for the Florida panther, providing a direct connection through private preserves in Wild Blue, leading to additional wildlife crossings under Corkscrew Roads in to private and public preserve corridors within the Corkscrew Regional Ecosystem and Watershed. Fencing will be in place to promote wildlife usage in the preserve areas and preventing access into the actual development site. In addition to the County planning that has been done through a combination of projects to ensure panther habitat needs are incorporated into adjacent roadway projects (i.e., Alico Road widening and Corkscrew Road widening), coordination will occur with wildlife agencies through the permitting process to determine the potential need for additional mitigation for the loss of panther habitat that is currently provided by the agricultural areas proposed for development.

POLICY 123.12.1: Promote connectivity within and among Florida black bear sub-populations by maintaining, improving, or creating landscape connectivity as identified within the FWC Florida Black Bear Management Plan.

The site plan promotes connectivity for the Florida black bear, as well as all wildlife, by preserving the slough system on the eastern side of the property, which has a direct connection to the Site 90 Regional Mitigation Area and other private and public conservation lands to the north. Through the Site 90 Regional Mitigation Area, there is a wildlife crossing being constructed under Alico Road at the western slough crossing with Lee County's Alico Road widening project, which then provides direct connection through private preserves in Wild Blue, leading to additional wildlife crossings under Corkscrew Roads in to private and public preserve corridors within the Corkscrew Regional Ecosystem and Watershed. Fencing will be in place to promote wildlife usage in the preserve areas and preventing access into the actual development site.

POLICY 123.12.2: Encourage use of bearproof containers to secure waste and other attractants within and adjacent to known bear habitats.

Bearproof containers will be utilized within the proposed development site.

POLICY 124.1.1: Ensure that development in wetlands is limited to very low-density residential uses and uses of a recreational, open space, or conservation nature that are compatible with wetland functions. The maximum density in the Wetlands category is one unit per 20 acres, except that one single family residence will be permitted on lots meeting the standards in Chapter XIII. Owners of wetlands adjacent to Intensive Development, General Interchange, Central Urban, Urban Community, Suburban, New Community, Outlying Suburban, Sub-Outlying Suburban, and Rural future land use categories may transfer dwelling units from preserved freshwater wetlands to developable contiguous uplands under common ownership at the same underlying density as permitted for those uplands.

Johnson Engineering ecologists conducted an assessment on the property to examine the existing condition, inclusive of limits of potential jurisdictional wetlands and listed species utilization. Based on the proposed limits of wetland jurisdiction, which will be verified/permitted through the South Florida Water Management District (SFWMD) and Florida Department of Environmental Protection (FDEP) through the State Environmental Resource Permit (ERP) and State 404 permitting program, respectively, the site plan will avoid direct impact to the wetland slough located on the eastern side of the property. The eastern slough is proposed for preservation and will be enhanced through the removal and maintenance of invasive exotic vegetation. Potential impacts to listed species habitat is also minimized through the preservation of the slough system. Site development is proposed on that portion of the land was previously converted to agricultural uses.

POLICY 125.1.2: New development and additions to existing development must not degrade surface and ground water quality.

It should be noted that existing permitted land uses within the DR/GR designation such as mining and very low-density residential on well and septic would serve to degrade surface and ground water quality. The Surface Water and Groundwater Impacts/Benefits Analysis by Johnson Engineering, Inc. identifies no impacts to surface and ground water quality from the proposed development. Furthermore, the proposed on-site stormwater management system associated with the project will provide recharge and infiltration into the Surficial aquifer. The treatment of water provided by the facility for beneficial reuse will serve to further protect surface and ground water quality. Prior to future development activities on the Property, the Applicant will obtain the requisite Environmental Resource Permit (ERP) from the South Florida Water Management District or the Florida Department of Environmental Protection (FDEP), and all other applicable state agencies.

POLICY 125.1.3: The design, construction, and maintenance of artificial drainage systems must provide for retention or detention areas and vegetated swale systems that minimize nutrient loading and pollution of freshwater and estuarine systems.

The stormwater management system will provide on-site water detention system through a series of interconnected storm water pond systems. Runoff from the site will be collected through yard drains, swales, ditches, and catch basins with conveyance via pipes or swales to the stormwater ponds maximizing the quality and attenuation requirements by temporarily detaining stormwater runoff, and allowing opportunities for treatment processes to occur and minimizing nutrient loading and pollution, prior to slow controlled discharge of the treated water through a single control structure to the western slough, Site 90 – Wild Turkey Strand Conservation Area, via a spreader swale or multiple structures. The stormwater management system will be consistent with the rules and regulations governing the SFWMD or FDEP Environmental Resource Permitting requirements.

POLICY 126.1.1: Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed.

As identified in the Surface Water and Groundwater Impacts/Benefits Analysis the upland areas of this site are not significant with respect to recharge, however, the natural water system feature of the existing wetland slough to the east has been identified and retained as a preserve area which will maintain connectivity with the historic wetland slough's southwest water flow conditions.

POLICY 126.1.4: Development designs must provide for maintaining or improving surface water flows, groundwater levels, and lake levels at or above existing conditions.

The development's proposed stormwater management system will serve to enhance the existing conditions as the upland areas of the site are existing disturbed agricultural lands that do not provide significant aquifer recharge. The stormwater management system resulting from this development will include a retention component to foster additional percolation and attenuation. Furthermore, the development will meet or exceed the requirements set forth in South Florida Water Management District or FDEP Environmental Resource Permit for the project in terms of discharge rates and water quality.

POLICY 127.1.1: Development must prevent significant emissions of air pollution.

The facility will be designed to prevent odorous air from going offsite being captured for treatment in a bio scrubber for treatment and the headworks channels, screens, grit basins, and splitter box will be covered for odor control. The facility will be designed to reduce the possibility of aerosol drift through the use of low-speed surface mechanical aerators within oxidation ditches where the greatest potential for aerosol generation exists. Other controls to assure the reduction of aerosol drift includes extended walls to contain aerosols from each aerator. The facility will use electric power to the extent possible aside from transportation vehicles and diesel-powered generators which will all have proper emission controls in place.

VII. Adjacent Local Governments

The subject property is located entirely within Lee County. The map amendment for the Southeast Water Reclamation Facility (SEAWRF) will have no affect on existing adjacent local governments and their comprehensive plans. The closest adjacent local government to the subject property is the Village of Estero.

VII. State Comprehensive Plan Consistency

The CPA is consistent with the State Comprehensive Land Use Plan's intent to ensure protection of water and natural resources. Specifically, the amendment is consistent with the following guiding policies:

Water Resources. Florida shall assure the availability of an adequate supply of water for all competing uses deemed reasonable and beneficial and shall maintain the functions of natural systems and the overall present level of surface and ground water quality. Florida shall improve and restore the quality of waters not presently meeting water quality standards.

The proposed amendment would allow for the development of a WRF within the Southeast Lee County Community, an ideal location to limit public expenditure on infrastructure to transport untreated and treated water. The SEAWRF goes beyond the standard biological wastewater treatment facility by providing further nutrient removal and thereby producing a "higher quality" water output available for beneficial reuse to reduce the degradation of water resources.

Natural Systems and Recreational Lands. Florida shall protect and acquire unique natural habitats and ecological systems, such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.

The Property is vacant previously disturbed land with a history of agricultural uses. However, 30 +/- acres of jurisdictional wetlands located within the same parcel of the requested amendment are remaining under the Wetlands land use category. These wetlands are planned to be designated as on-site preserve within the companion CFPD rezone.

Land Use. In recognition of the importance of preserving the natural resources and enhancing the quality of life of the state, development shall be directed to those areas which have in place, or have agreements to provide, the land and water resources, fiscal abilities, and service capacity to accommodate growth in an environmentally acceptable manner.

There is service capacity in place to serve the project in terms of potable water, sanitary sewer service, solid waste, law enforcement, fire, and public safety (Exhibit M17). Furthermore, through the companion CFPD rezone petition, the project will ensure preservation of environmental resources through the preservation of wetlands, other sensitive lands, and an engineered stormwater management system. Development will be clustered to the north to ensure open space as well as adequate buffering along Alico and Green Meadow Road. As further indicated below the SEAWRF will be phased out to assure the fiscal ability to service the capacity as needed to accommodate for projected growth in the area.

Public Facilities: Florida shall protect the substantial investments in public facilities that already exist and shall plan for and finance new facilities to serve residents in a timely, orderly, and efficient manner.

The proposed amendment would allow for a public facility that has been identified as Capital Improvement Project Number 7467 as part of the Lee County Capital Improvement Plan. The new facility is being developed with the intention of having three phases for expansion based on being able to allocate the cost of funding from the benefits received from servicing residents as a response to population growth and demand of the area being serviced. The three (3) phases are as follows: Phase 1, a 6 Million Gallons per Day (MGD) facility capacity, then, Phase 2 a 8 MGD facility capacity, and followed by Phase 3, a 10 MGD plant capacity. Expansions of the facility will be dependent on reaching a projected LOS of 80% treatment capacity.

Transportation. Florida shall direct future transportation improvements to aid in the management of growth and shall have a state transportation system that integrates highway, air, mass transit and transportation.

The project's proposed access and current access is via Green Meadows Road, a 2-lane local roadway. Green Meadow Road intersects with Alico Road, a 4-lane arterial roadway, to the west which provides access to I-75 located 4 miles to the west of the Property. Green Meadows Road is set to be upgraded to a 4-lane major arterial roadway as part of Phase 1 of the Alico Road Extension, which will connect to the north to SR-82 at the Sunshine Boulevard intersection as

outlined in the Lee County Long Range Transportation Plan and Cost Feasible Roadway Project Map 3-A (Ordinance No.22-21/CPA2022-00004). Therefore, the project will have direct access to Lee County's arterial roadway. Pedestrian access options will be available through a shared use path and on-road bikeway are planned for the area (Map 3-D). The proposed development will be required to adhere to requirements of the Land Development Code at the time of development order.

VIII. Regional Policy Plan Consistency

The proposed amendment is consistent with the Southwest Florida Regional Policy Plan (SWFRPP) as follows:

Emergency Preparedness Element
Goal 6: New private and public developments are built further from flood prone areas than in the past and structures and roadways are protected from rain induced flooding.

The proposed public development will be built where structures for the proposed SEAWRF and roadways to the south are protected from rain induced flooding.

Natural Resources Element
Goal 4: Livable communities designed to improve quality of life and provide for the sustainability of our natural resources.

The CPA and companion CFPD rezoning application will provide for a public utilities facility that will specifically address water reclamation demands for the Southeast Lee County community and the CFPD rezoning will ensure preservation of jurisdictional wetlands located to the east of the Property from any development or possible expansion. Furthermore, the proposed stormwater management system will include a retention component that will foster additional percolation allowing for recharge of the surficial aquifer.

Regional Transportation
Goal 2: Livable communities designed to affect behavior, improve quality of life and responsive to community needs.

The property is serviced by Green Meadow Road, a local 2-lane road. The road is part of the Alico Road Phase 1 & 2 Expansion which anticipates the road becoming a 4-lane arterial roadway. Pedestrian access options through a shared use path and on-road bikeway are planned for the area (Map 3-D). As demonstrated in the Traffic Circulation Analysis by Johnson Engineering, Inc., there is adequate capacity available to serve the project.

X. Conclusion

Approval of this CPA will allow the development of a critically needed public facility, the SEAWRF (Lee County CIP # 7467), addressing existing and future population service demands as envisioned by the Lee County Comprehensive Plan. The CPA will bring the remaining acreage of the site into the most appropriate land use category for the proposed use within the Lee Plan, similar to the 32+/- acre property to the west, which was designated Public Facilities in 2018.

From a hydrological standpoint as identified as part of this application's analysis the CPA for the SEAWRF represents a carefully selected site that is not significant with respect to recharge of the Surficial aquifer.

The request serves to protect environmental resources through the companion CFPD rezone which retains existing jurisdictional wetlands as an on-site preserve area.

The companion CFPD will also provide enhanced performance standards such as buffering, sensitive site design, and limitations on the built form of development to address compatibility with the surrounding large-lot residential land uses.

For these reasons, the Applicant submits that the proposed Comprehensive Plan Map Amendment is based upon sound planning principles, in direct consistency with the Lee Plan and respectfully requests approval.

ENVIRONMENTAL IMPACT ANALYSIS (M12)

LEE COUNTY SEAWRF

PROTECTED SPECIES SURVEY

February 2023

Prepared for:

Lee County Utilities

Prepared by:

JOHNSON ENGINEERING
2122 Johnson Street
Fort Myers, Florida 33901

Proj-fma/20181232-002/Environmental/PSS

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

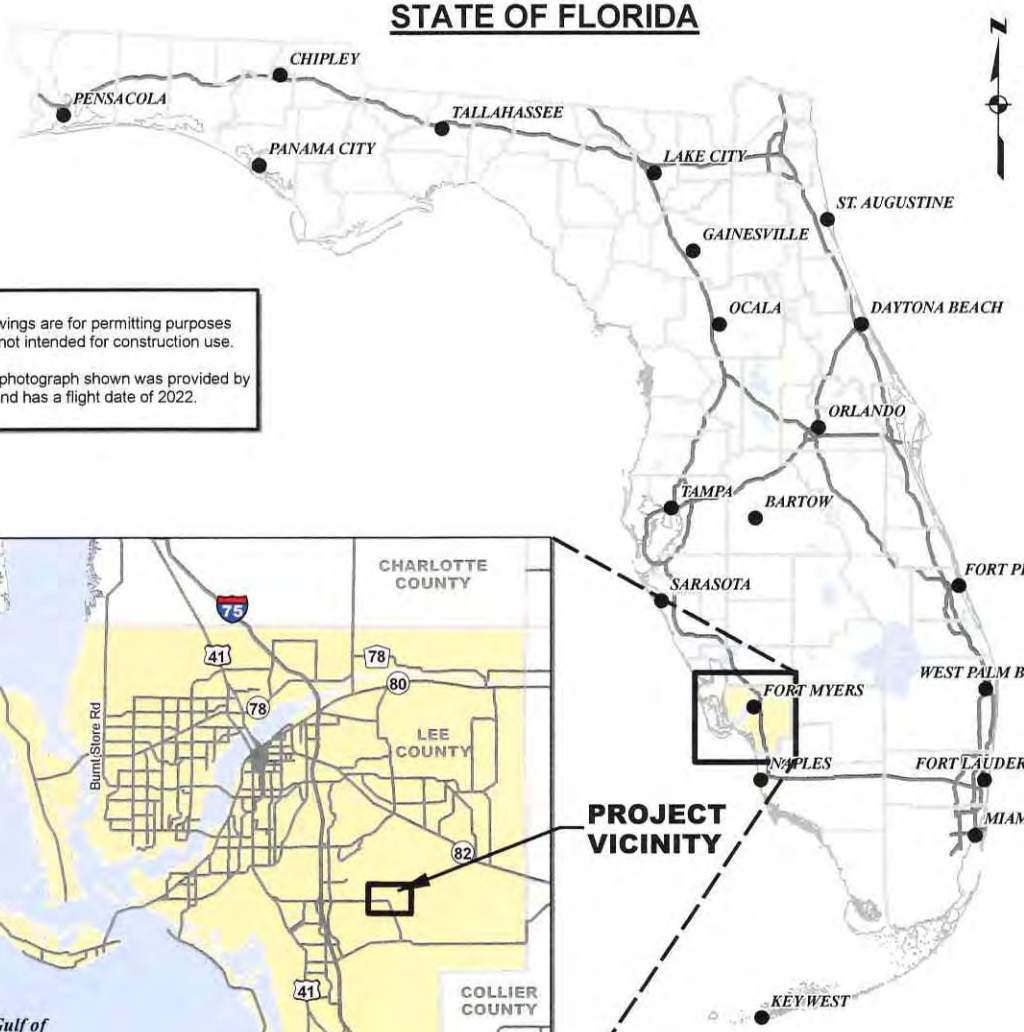
1.0 INTRODUCTION

Lee County Utilities (LCU) requires an additional water reclamation facility (WRF) to serve increasing wastewater flows within the Southeast Lee County Planning Community. The proposed WRF site is located north of the Alico Road and Green Meadow Road intersection and is known as the Southeast Advanced Water Reclamation Facility (SEAWRF). The total project area is ±112.22 acres and is comprised of three parcels (Folios 10351526, 10582187, & 10351499) and portions of the adjacent right-of-way (ROW), as depicted in **Figure 1-1**.

A protected species survey (PSS) was conducted by Johnson Engineering, Inc. ecologists within the project area on February 17, 2023, to identify the potential presence of protected plant and wildlife species that may impact the future development of the subject site.

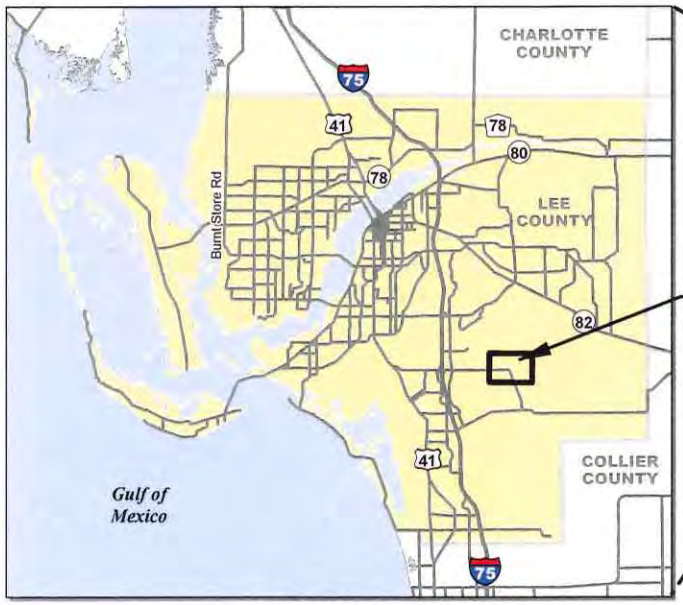
This report represents the results of the PSS prepared in accordance with Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat) and utilizing Florida Fish and Wildlife Conservation Commission (FWC) approved methods for gopher tortoise (*Gopherus polyphemus*) burrow surveys, as provided in the *Gopher Tortoise Permitting Guidelines* (FWC, 2020), as well as U.S. Fish and Wildlife Service (USFWS) approved methods for conducting Florida bonneted bat (*Eumops floridanus; FBB*) roost surveys, as provided in the *FBB Consultation Guidelines* (USFWS, 2019).

STATE OF FLORIDA

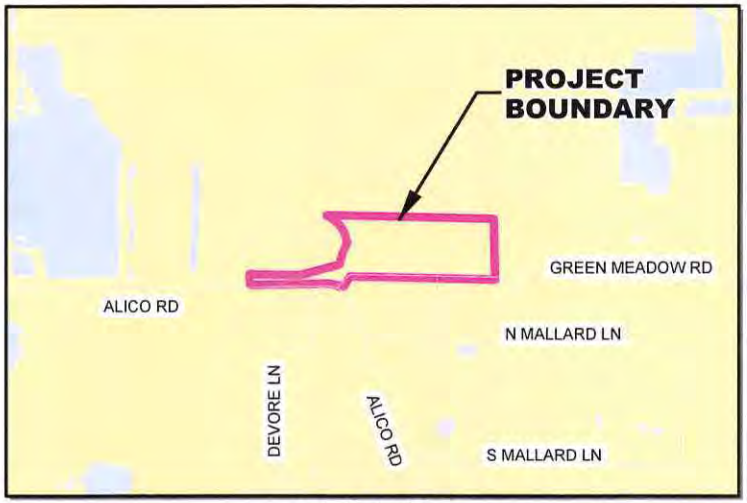


NOTES
1. These drawings are for permitting purposes only and are not intended for construction use.

2. The aerial photograph shown was provided by Lee County and has a flight date of 2022.



LEE COUNTY
N.T.S.



STREET MAP
N.T.S.

VICINITY AERIAL
N.T.S.

Section 4 Township 46 South, Range 26 East
Latitude: 26° 42' 46" N, Longitude: 81° 47' 48" W

Zoning

Southeast Advanced Water Reclamation Facility
Lee County, Florida

JOHNSON ENGINEERING

JOHNSON ENGINEERING, INC.
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P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
E.B. #642 & L.B. #642

Location Map

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
February 2023	20181232-002	--	As Shown	Figure 1-1

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2.0 VEGETATION ASSOCIATIONS

Through mapping and classifying the various vegetative habitats occurring onsite, qualified determinations can be made with regards to the potential presence of protected species. The cover and vegetation association types across the subject site were delineated using Lee County 2022 digital aerial photographs, Natural Resources Conservation Service (NRCS) Soil Survey Maps for Lee County (**Figure 2-1**), and field observations. The habitat types were classified according to Levels III and IV of the Florida Land Use, Cover and Forms Classification System (FLUCFCS) [Florida Department of Transportation (FDOT), 1999]. The resulting FLUCFCS Map is provided in **Appendix A**. The approximate acreages for the various FLUCFCS Codes can be found in **Table 2-1**. The habitats were originally classified by Dex Bender in November 2018 and updated by Johnson Engineering, as needed, to reflect current conditions. The following is a brief description of each surveyed FLUCFCS Code.

FLUCFCS Code 211: Improved Pastures

The eastern portion of the agricultural fields is actively being managed and grazed by cattle. Bahia grass (*Paspalum notatum*) is the dominant species. Additional species include smutgrass (*Sporobolus indicus*), cogongrass (*Imperata cylindrica*), goatweed (*Scoparia dulcis*), dog fennel (*Eupatorium capillifolium*), tropical soda apple (*Solanum viarum*), and Richard's flatsedge (*Cyperus richardii*).

FLUCFCS Code 261: Fallow Crop Land

The western portion of the agricultural fields have not been recently maintained and are not currently being used as cattle pasture. Common ground cover species include Bahia grass, cogongrass, paragrass (*Urochloa mutica*), broomsedges (*Andropogon* spp.), Bermuda grass (*Cynodon dactylon*), frog fruit (*Phyla nodiflora*), foxtail grass (*Setaria* spp.), guineagrass (*Panicum maximum*), and dog fennel. The westerly most portion of this area also contains scattered woody vegetation, which includes Brazilian pepper (*Schinus terebinthifolius*), wax myrtle (*Myrica cerifera*), and earleaf acacia (*Acacia auriculiformis*).

FLUCFCS Code 411: Pine Flatwoods

A narrow band of disturbed pine flatwoods is present along the western edge of the fallow pasture. This area contains scattered slash pine (*Pinus elliottii*). Brazilian pepper appears to have been removed from this area in the past. Ground cover consists of dog fennel, Caesar weed (*Urena lobata*), jointvetch (*Aeschynomene* spp.), broomsedges, rattle-box (*Crotalaria* spp.), Brazilian pepper saplings, and scattered saw palmetto (*Serenoa repens*).

FLUCFCS Code 510: Ditch

Ditches are present onsite within the agricultural lands and adjacent to the roadways. These ditches vary in width and depth and are dominated by Brazilian pepper and primrose willow (*Ludwigia peruviana*). Ground cover vegetation is nearly absent but includes torpedo grass (*Panicum repens*) and paragrass along the perimeter.

FLUCFCS Code 619: Exotic Wetland Hardwoods

A wetland dominated by Brazilian pepper and primrose willow is present along the north side of the ditch along Alico Road and portions of Green Meadows Road. Ground cover species present are consistent with disturbed wetland areas.

FLUCFCS Code 621: Cypress

This forested wetland habitat is present within the slough on the eastern portion of the subject site. Cypress (*Taxodium* spp.) is the dominant canopy and subcanopy species. Scattered dahoon holly (*Ilex cassine*), cabbage palm (*Sabal palmetto*), and red maple (*Acer rubrum*) are also present in the canopy and subcanopy. Swamp fern (*Telmatoblechnum serrulatum*), Virginia chain fern (*Woodwardia virginica*), and cinnamon fern (*Osmunda cinnamomea*) are the predominant ground cover species. This habitat is proposed to be preserved as part of the overall development plan.

FLUCFCS Code 621D: Cypress, Drained

Two areas mapped as drained cypress are present directly east of the improved pasture area. Much of the subcanopy vegetation appears to have been previously removed. Ground cover species includes West Indian marsh grass (*Hymenachne amplexicaulis*), smartweed (*Polygonum* spp.), dayflower (*Commelina diffusa*), flatsedges (*Cyperus* spp.), dog fennel, and climbing hempweed (*Mikania scandens*). This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

Table 2-1 Vegetation Associations and Acreages

FLUCFCS Code	Description	Acreage (±)	Jurisdictional Status
211	Improved Pastures	37.05	N
261	Fallow Crop Land	25.43	N
411	Pine Flatwoods	0.94	N
510	Ditch	3.48	SW
619	Exotic Wetland Hardwoods	4.40	W
621	Cypress	7.19	W
621D	Cypress, Drained	1.11	W
621E	Cypress, Exotics	7.44	W
621E1	Cypress (1-24% Exotics)	11.27	W
621E2	Cypress (25-49% Exotics)	3.55	W
624E2	Cypress – Pine – Cabbage Palm (25-49% Exotics)	1.51	W
641E4	Freshwater Marshes (>75% Exotics)	1.67	W
643E	Wet Prairie, Exotics	0.39	W
740	Disturbed Land	1.38	N
742	Borrow Pit	0.09	SW
814	Road Right of Way	5.19	N
822	Communication Facilities	0.13	N
	Total N =	**70.12**	
	Total SW =	**3.57**	
	Total W =	**38.53**	
	Grand Total:	**112.22**	

Legend:
N = Non-jurisdictional
SW = Surface water
W = Wetland

FLUCFCS Code 621E: Cypress, Exotics

This area is consistent with FLUCFCS Code 621 with the additional of minimal (less than 10%) exotic vegetation coverage. When present this consists of Brazilian pepper, earleaf acacia, date palm (*Phoenix* spp.), and West Indian marsh grass. This habitat is not proposed for impact.

FLUFCS Code 621E1: Cypress (1-24% Exotics)

This wetland habitat is consistent with FLUCFCS Code 621E with increased exotic vegetation coverage to 1-24% throughout. This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

FLUCFCS Code 621E2: Cypress (25-49% Exotics)

This wetland habitat is consistent with FLUCFCS Code 621E with increased exotic vegetation coverage to 25-49% throughout. This area also contains climbing cassia (*Senna pendula*) and old-world climbing fern (*Lygodium microphyllum*). This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

FLUCFCS Code 624E2: Cypress – Pine – Cabbage Palm (25-49% Exotics)

A wetland habitat with a canopy comprised of cypress, slash pine, and scattered cabbage palm is present north of Green Meadows Road. Melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper are also present in the canopy and subcanopy. Ground cover observed consists of sawgrass (*Cladium jamaicense*), spadeleaf (*Centella asiatica*), and swamp fern. This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

FLUCFCS Code 641E4: Freshwater Marshes (>75% Exotics)

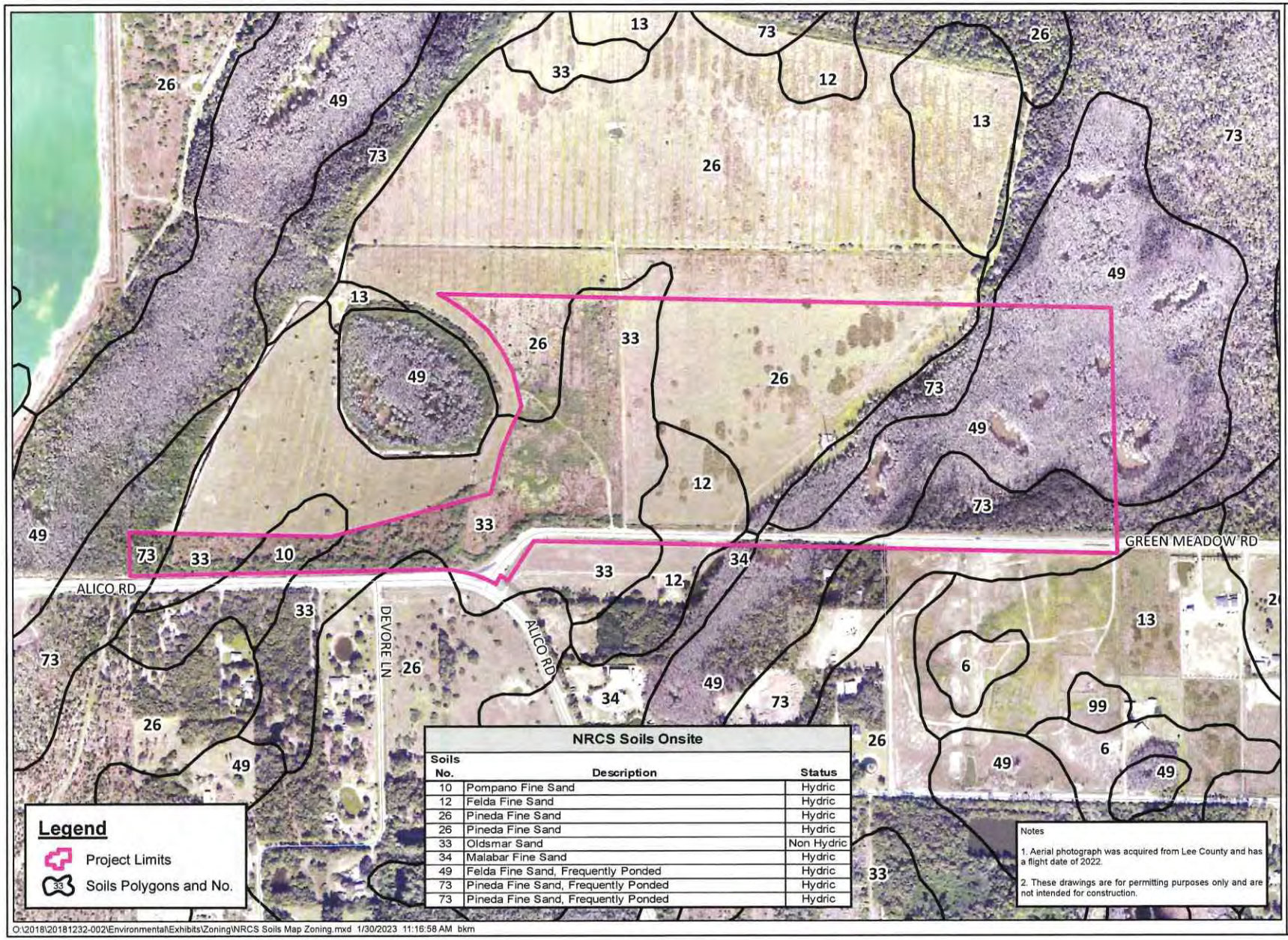
Four freshwater marshes are imbedded within the cypress wetlands. These marshes are dominated by West Indian marsh grass with scattered areas of nut rush (*Scleria* spp.). This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

FLUCFCS Code 643E: Wet Prairie, Exotics

A wet prairie is located in southeast portion of the subject site. This wetland is vegetated by scattered melaleuca, little blue maidencane (*Amphicarpum muhlenbergianum*), dog fennel, and foxtail grass. This habitat is proposed to be preserved as part of the overall development plan and enhanced through exotic removal.

FLUCFCS Code 740: Disturbed Land

This FLUCFCS Code was used to identify areas of disturbed lands outside of the agricultural fields and includes berms associated with ditches. Commonly occurring species include Brazilian pepper, tickseed (*Coreopsis* spp.), ragweed (*Ambrosia artemisiifolia*), and cogongrass.



NRCS Soils Onsite

Soils No.	Description	Status
10	Pompano Fine Sand	Hydric
12	Felda Fine Sand	Hydric
26	Pineda Fine Sand	Hydric
26	Pineda Fine Sand	Hydric
33	Oldsmar Sand	Non Hydric
34	Malabar Fine Sand	Hydric
49	Felda Fine Sand, Frequently Ponded	Hydric
73	Pineda Fine Sand, Frequently Ponded	Hydric
73	Pineda Fine Sand, Frequently Ponded	Hydric

Notes

1. Aerial photograph was acquired from Lee County and has a flight date of 2022.

2. These drawings are for permitting purposes only and are not intended for construction.

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Jacobs Engineering Group

Southeast Advanced Water Reclamation Facility
Lee County, Florida

REVISIONS

NO.	DESCRIPTION	DATE

DATE	February 2023
PROJECT NO.	20000000-000
FILE NO.	4-46-26
SCALE	As Shown

NRCS Soils Map

Zoning

SHEET NUMBER

Figure 2-1

FLUCFCS Code 742: Borrow Pit

A borrow pond was excavated in the eastern portion of the improved pasture and may have provided fill for the adjacent communication tower and/or serve as a water source for onsite cattle. The area is primarily open water with a narrow fringe of torpedo grass.

FLUCFCS Code 814: Road Right of Way

A portion of Green Meadow Road is present within the eastern portion of the project area and includes the paved areas as well as the regularly mowed shoulder.

FLUCFCS Code 822: Communication Facilities

A communications tower is present on the eastern side of the improved pasture. The area is enclosed by a fence and surrounded by planted shrubs.

3.0 SURVEY METHODOLOGY

The purpose of the survey was to identify and document the presence of plant or wildlife species afforded protection by federal, state, or local regulations. The PSS was conducted in accordance with the Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat) and is valid in Lee County for five years. The PSS included field surveys and a literature review. Field surveys were conducted utilizing pedestrian belt transects. Transects were performed in all vegetation associations (FLUCFCS) listed by the Lee County Protected Species Ordinance, which may be inhabited by listed flora or fauna. The distance between transects was established to cover a minimum of 80% of each habitat type per Lee County requirements. The PSS was also designed to comply with survey methods outlined in the Gopher Tortoise Permitting Guidelines (FWC, 2020), and FBB Consultation Guidelines (USFWS, 2019). The Protected Species Survey Map in **Appendix A** depicts the approximate survey transect locations. **Table 3-1** lists the times and weather conditions during the field survey.

Literature review sources included Florida's Endangered Species, Threatened Species and Species of Special Concern (FWC, 2022), Florida Natural Areas Inventory (FNAI), USFWS Environmental Conservation Online System (ECOS), as well as the species list referenced in the Lee County Protected Species Ordinance. Based on the literature review, a compilation of federal,

state and/or Lee County protected species was developed. **Table 3-2** lists the species referenced in the Lee County Protected Species Ordinance. A summary of visibility, number, and total length of transects performed, and percent of each habitat covered is provided in **Table 3-3**.

Table 3-1 Date, Times, Weather Conditions and Purpose of Field Survey.

Date[1]	Time	Weather Conditions	Purpose	Ecologists
February 17, 2023	8:00am – 1:00pm	Clear, Temperature mid 70°s, SE winds 5-10 mph	PSS	KRP, AGN

Legend:
PSS = Protected species survey
KRP = Kyle Philpot
AGN = Gary Nychyk

Table 3-2 Potential Protected Species Based on Habitat

FLUCFCS Code	Descriptions	Potential Protected Species
211	Improved pasture	Florida sandhill crane Florida panther Gopher tortoise* Burrowing owl*
411	Pine Flatwoods	Eastern indigo snake Gopher tortoise Gopher frog Southeastern American kestrel Red-cockaded woodpecker Florida panther Big cypress fox squirrel Florida black bear Fakahatchee burmannia Satinleaf Beautiful paw-paw Florida coontie

Table 3-2 Potential Protected Species Based on Habitat. *Continued.*

FLUCFCS Code	Descriptions	Potential Protected Species
510	Ditch	American alligator Roseate spoonbill Limpkin Little blue heron Reddish egret Snowy egret Tricolored heron Everglades snail kite Everglades mink
621 621D 621E 621E1 621E2 624E2	Cypress Cypress, Drained Cypress, Exotics Cypress (1-24% Exotics) Cypress (25-49% Exotics) Cypress – Pine – Cabbage Palm (25-49% Exotics)	Little blue heron Snowy egret Tricolored heron Gopher frog Arctic peregrine falcon Everglades mink Big cypress fox squirrel American alligator Limpkin Wood stork Florida panther
641 E4 643 E	Freshwater Marches (>75% Exotics) Wet Prairie, Exotics	Wood stork Reddish egret American alligator Limpkin Florida sandhill crane Everglades snail kite Everglades mink
740	Disturbed Land	Gopher tortoise* Burrowing owl*
742	Borrow Pit	American alligator* Roseate spoonbill* limpkin* Little blue heron* Reddish egret* Snowy egret* Tricolored heron* Everglades mink*
814 822	Road Right of Way Communications Facilities	Gopher tortoise* Burrowing owl*

* Based on presence of suitable habitat, although not referenced in Lee County Protected Species Ordinance.

Table 3-3 Summary of Habitat Survey Coverage.

FLUCFCS Code	Total Area[1] (acres)	Number of Transects	Transects Total Length (feet)	Average Visibility (feet)	Percent Covered
211	37.05	28	36,400	40	90
261	25.43	23	29.600	30	80
411	0.94	4	1,100	30	80
510	3.48	1	3,450	40	90
619	4.40	2	5,150	30	80
621	7.19	19	6,300	40	80
621D	1.11	14	1,000	40	80
621E	7.44	13	8,650	30	80
621E1	11.27	24	13,100	30	80
621E2	3.55	23	4,150	30	80
624E2	1.51	3	1,800	30	80
641E4	1.67	11	2,000	30	80
643E	0.39	3	500	30	85
740	1.38	2	1,400	40	90
742	0.09	1	90	40	90
814	5.19	2	5,100	40	90
822	0.13	1	130	40	90

1. Areas surveyed in accordance with Lee County Ordinance No. 89-34 and Lee County Administrative Code No. 13-10.
2. Surveys of the surface waters were conducted from the perimeter.

4.0 RESULTS

No direct signs of listed species utilization were observed within the project area during this specific survey event. A number of non-listed species were observed during the PSS and are outlined in **Table 4-1**. A protected species summary related to this specific survey event is provided in **Table 4-2**. The site is located within several USFWS listed species consultation zones and there are occurrences of listed species within the project vicinity documented in the FWC and USFWS databases. The map in **Appendix B** provides an overview of the project in relation to this information, which is also further discussed in Section 5.0 of this report.

Table 4-1. Non-listed Wildlife Observed during the PSS

	Scientific Name	**Common Name**
Birds	*Quiscalus quiscula*	Common grackle
	Mimus polyglottos	Northern mockingbird
	Columbina passerina	Ground dove
	Charadrius vociferus	Killdeer
	Sturnella magna	Eastern meadowlark
	Cathartes aura	Turkey vulture

Table 4-2. Protected Species Summary Sheet

Protected Species	Listing Status	FLUCFCS Area	Present	Absent
Reptiles/Amphibians:				
American alligator	FT (S/A)	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 641E4, 643		X
Eastern indigo snake	FT	411		X
Gopher tortoise	ST	211, 211H, 411, 740, 814, 822		X
Gopher frog	Lee	211, 211H, 411, 740, 814, 822		X
Mammals:				
Everglades mink	Lee	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 641E4, 643E, 742		X
Florida panther	FE	211, 211H, 411, 621, 621D, 621E, 621E1, 621E2, 624E2		X
Big Cypress fox squirrel	ST	411, 621, 621D, 621E, 621E1, 621E2, 624E2		X
Birds:				
Little blue heron	ST	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 742		X
Arctic peregrine falcon	Lee	621, 621D, 621E, 621E1, 621E2, 624E2		X
Florida sandhill crane	ST	211, 211H, 641E4, 643E		X
Burrowing owl	ST	211, 211H, 740, 814, 822		X

Table 4-2. Protected Species Summary Sheet. *Continued.*

Protected Species	Listing Status	FLUCFCS Area	Present	Absent
Birds:				
Wood stork	FT	621, 621D, 621E, 621E1, 621E2, 624E2, 641E4, 643E		X
Limpkin	Lee	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 641E4, 643E, 742		X
Reddish egret	ST	510, 641E4, 643E, 742		X
Roseate spoonbill	ST	510, 742		X
Tricolored heron	ST	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 643E, 742		X
Snowy egret	Lee	510, 621, 621D, 621E, 621E1, 621E2, 624E2, 643E, 742		X
Southeastern American kestrel	ST	411		X
Red-cockaded woodpecker	FE	411		X
Everglades snail kite	FE	510, 624E2, 643E		X
Plants:				
Fakahatchee burmannia	Lee	411		X
Satinleaf	Lee	411		X
Beautiful paw-paw	Lee	411		X
Florida coontie	Lee	411		X

Listing Status:
FE = Federally Endangered FT = Federally Threatened
FT(S/A) = Federally Threatened (Similarity of Appearance)
Lee = Lee County Protected Species Ordinance ST = State Threatened

5.0 DISCUSSION

The project site is located within USFWS consultation areas for a number a listed species, as further discussed below and noted on the map in Appendix B. Although the site falls within the consultation area for the scrub jay and Everglades snail kite, the site does not provide suitable habitat for these species and therefore are not discussed herein.

Wading/Marsh Birds

No evidence of wading/marsh bird nesting/rookeries was observed during the survey. Most of the listed wading bird species common in Florida are transitory in nature and can be found foraging and roosting in a wide variety of wetland habitats. Listed wading birds may occasionally utilize wetlands and ditches onsite either seasonally or year-round for foraging when water levels are appropriate. But the development portion of the project site itself does not provide significant nesting/roosting opportunities for listed wading birds.

The site is within the USFWS 18.6-mile core foraging area (CFA) of at least one wood stork (*Mycteria americana*) colony. Although no rookeries are onsite, the project may be required to provide compensation for unavoidable surface water impacts during the State Environmental Resource Permit (ERP) and/or FDEP State 404 application review process, which would compensate for potential loss of wood stork foraging habitat (i.e., onsite ditches; onsite wetlands are not being impacted and therefore will not require mitigation). Typically, wood stork foraging habitat impacts are addressed by the purchase of credits from an approved wetland mitigation or conservation bank.

Bald Eagle (*Haliaeetus leucocephalus*)

Although the bald eagle is no longer a listed species, it is afforded protection in accordance with the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and Lee County Land Development Code Chapter 14, Article II, Division 3 Southern Bald Eagle. The USFWS has established a standard 660' protection zone around a bald eagle nest for this region [USFWS 2007].

No active bald eagle nests were documented on or within 660' of the project area. The closest documented bald eagle nest site is LE-123, which is approximately 2.25 miles south of the project. Future development of the site is not expected to have any effect on the nest.

Gopher tortoise (*Gopherus polyphemus*)

Gopher tortoises are listed as Threatened by FWC and are most often found on well-drained sandy soils in upland habitats with low-growing herbs. The project site was surveyed utilizing methodologies outlined in the FWC Gopher Tortoise Permitting Guidelines [FWC, 2020]. No gopher tortoises or their burrows were observed on or within 25 feet of the project area. In the future, if a gopher tortoise burrow is located within 25' of the development the appropriate FWC permit will be obtained to excavate the burrow(s) prior to the start of clearing to an approved Lee County gopher tortoise recipient site.

Florida Bonneted Bat (*Eumops floridanus*)

Effective November 2013, The USFWS listed the Florida bonneted bat (FBB) as endangered under the Endangered Species Act (ESA) and established an FBB consultation area. In June 2020 and again in 2022, the USFWS established areas proposed to be considered designated critical habitat for the species. The project is within the FBB consultation area but outside the areas proposed to be designated critical habitat. The USFWS published the most recent FBB Consultation Guidelines in October 2019 (Guidelines). The Guidelines summarize what USFWS considers potential roosting habitat for the species. No structures that contain suitable roosting characteristics were observed within the project area.

In September 2021, Johnson Engineering, Inc. conducted an FBB Acoustic Survey for the Alico Road Widening project from Airport Haul Road to the Green Meadow Wellfield which crosses the proposed project area. During this survey, a total of 76,522 recordings were collected, of which none were identified as FBB calls.

The USFWS developed a 2019 "Florida Bonneted Bat Consultation Key" (Key) to assist regulatory agencies in making effect determinations for projects located in the FBB consultation area. The key relies on characteristics such as project location, size, habitat types, and FBB calls recorded to evaluate the potential effects the project may have on the FBB. The September 2021 acoustic survey and lack of suitable roosting structures onsite indicates the project area is not being utilized by FBB. Applying the Key to the project leads through couplets 1a, 2a, 3b, 6b, which results in a determination of "*No Effect*". **Appendix C** provides the Key with the path taken to arrive at couplet 6b highlighted.

Burrowing owl (*Athene cunicularia*)

Burrowing owls are listed as Threatened by the FWC and utilize open areas to feed on insects, frogs, lizards, and other small animals. Burrowing owls typically dig burrows in low growing herbaceous areas where they generally nest between February 15 through July 10. No burrowing owls or their burrows were observed on or within 33' of the project area. In the future, if a burrowing owl burrow is located within 33' of the development area, the appropriate FWC permit will be obtained, mitigation provided, and the burrow(s) collapsed outside of nesting season when the nest is inactive (i.e., no eggs or flightless young are present).

Florida panther (*Puma concolor coryi*)

The proposed project is located within the USFWS Panther Primary Zone. A Panther Habitat Unit Analysis will occur, in accordance with USFWS guidelines, during the environmental permitting process to determine the appropriate amount of compensatory mitigation required to offset the potential habitat impacts associated with the development.

Additionally, a wildlife crossing associated with the Alico Road Widening Project will be located directly south of the western portion of the project. This wildlife crossing is currently in permitting with the road widening project and will be constructed with the roadway project. Its approximate location is shown on the map in Appendix B.

Big Cypress fox squirrel (*Sciurus niger avicennia*)

The Big Cypress fox squirrel (BCFS) is listed by FWC as Threatened; it is not listed by the USFWS. Preferred BCFS habitat consists of pine flatwoods, mixed hardwood-pine forest, and cypress swamp, with low ground cover. BCFS are known to use several habitat types for foraging, including golf courses, pastures with scattered trees and rural residential areas with wooded lots (Florida Committee on Rare and Endangered Plants and Animals – FCREPA 1992). BCFS build platform nests in slash pines and hardwoods (i.e., oak) and moss and stick nests in cypress and tops of cabbage palms.

During the PSS, ecologists searched for BCFS, their nests, or other signs. No nests or other signs of potential BCFS were observed during the survey within the anticipated development area. A pre-construction survey may be conducted to determine whether any new nest structures have been constructed. Any nest structures located will be inspected using an IBWO wireless camera to

determine their status. Should dependent young, or evidence of listed species utilization be observed in the nest(s), an appropriate buffer will be implemented in coordination with FWC, and no construction will occur within the buffer until the nest is deemed no longer active by a qualified biologist and the appropriate FWC approvals have been obtained.

Red-cockaded woodpecker (*Picoides borealis*)

The red-cockaded woodpecker (RCW) is about seven inches long with a wingspan of ±15 inches and is listed as Endangered by USFWS. This black and white striped woodpecker has a black cap and nape that encircle large white cheek patches. RCWs typically inhabit open pine forests and are the only woodpeckers that excavate cavities exclusively in living pine trees. RCWs typically choose large, mature pines to excavate their cavity. The PSS revealed no live cavity trees and no indications the property was being used by RCWs. Additionally, the property lacks the open mature pine trees preferred by RCWs. Therefore, no adverse effects to RCWs are anticipated as a result of this project.

Eastern indigo snake (*Drymarchon corais couperi*)

The eastern indigo snake is listed as Threatened by both USFWS and FWC. Eastern indigo snakes utilize a variety of habitat types to complete their life cycles including pine flatwoods, scrub areas, hydric pine flatwoods, wet and dry prairies, agricultural fields, coastal hardwood hammocks, mangrove areas and even human altered areas can be considered habitat for the species (USFWS, 1999). In south Florida, the species is not as dependent on gopher tortoise burrows for over-wintering. However, they will use gopher tortoise burrows as underground refugia. In addition, the species will use armadillo burrows, natural ground holes, hollows at the base of trees, ground litter, and debris piles. Steiner et al. (1983) suggest that eastern indigo snakes in south Florida prefer hammock type environments and pine forests.

No eastern indigo snakes were observed during the PSS. However, based on the habitat types referenced in the USFWS "South Florida Multi-Species Recovery Plan", vegetation communities within the project area could provide potential habitat for this species. The proposed project will comply with the USFWS eastern indigo snake protection measures during construction to ensure this species is not directly impacted by the project.

Crested Caracara (*Caracara cheriway*)

The crested caracara is a resident, nonmigratory species that is found in the south-central region of Florida. It is federally listed as Threatened because much of its dry prairie habitat has been developed or modified for agriculture and residential uses. The USFWS recommends a 300-meter primary protection zone and 1,500-meter secondary protection zone outward from any caracara nest tree. The subject site is just within the secondary protection zone of a caracara nest located south of the project area (approximate location is shown in **Appendix B**). Recommended Management Practices for Caracaras (Morrison, 2001) will be implemented, and concurrence sought with the FWC and USFWS during the permitting process for the development.

6.0 REFERENCES

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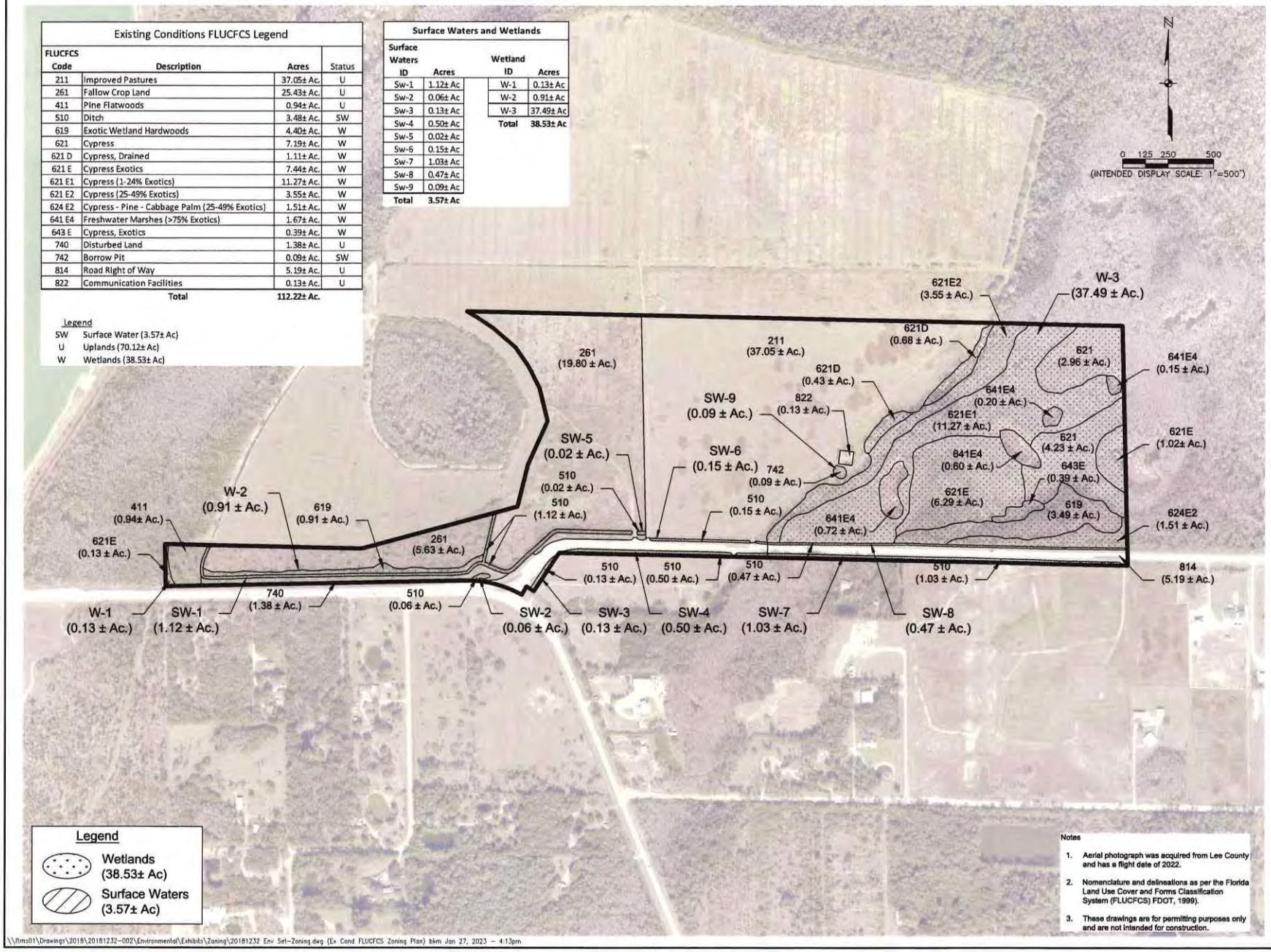
APPENDIX A

FLUCFCS and
PROTECTED SPECIES SURVEY MAP



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Jacobs Engineering Group

Southeast Advanced Water Reclamation Facility
Lee County, Florida

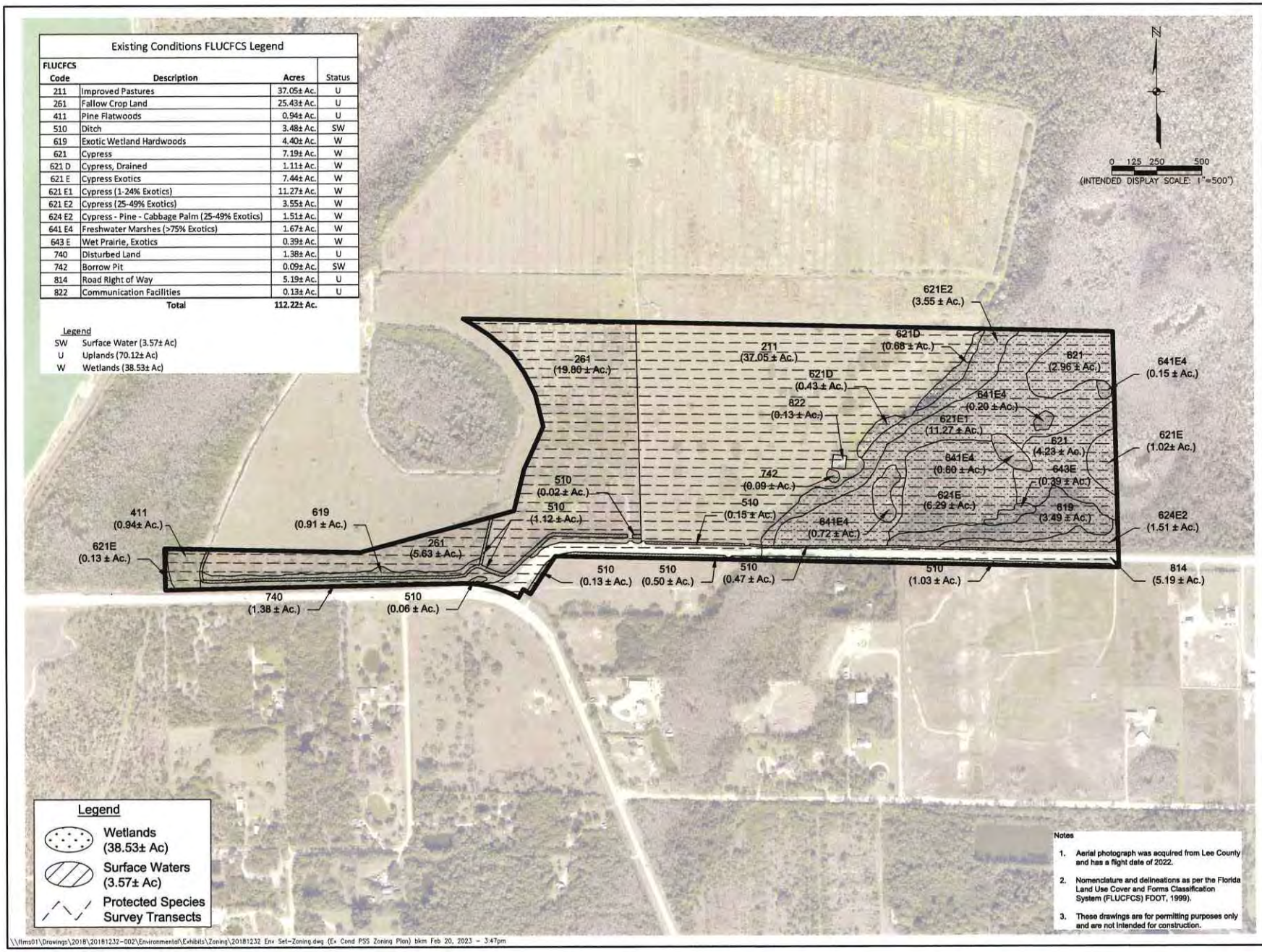
REVISIONS
NO. | DESCRIPTION | DATE

DATE: February 2023
PROJECT NO. 20181232-002
FILE NO. 04-46-26
SCALE: As Shown

Existing Conditions

Zoning

SHEET NUMBER
05



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Jacobs Engineering Group

Southeast Advanced Water Reclamation Facility
Lee County, Florida

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	February 2023
PROJECT NO.	20181232-002
FILE NO.	04-46-26
SCALE:	As Shown

Protected Species Survey

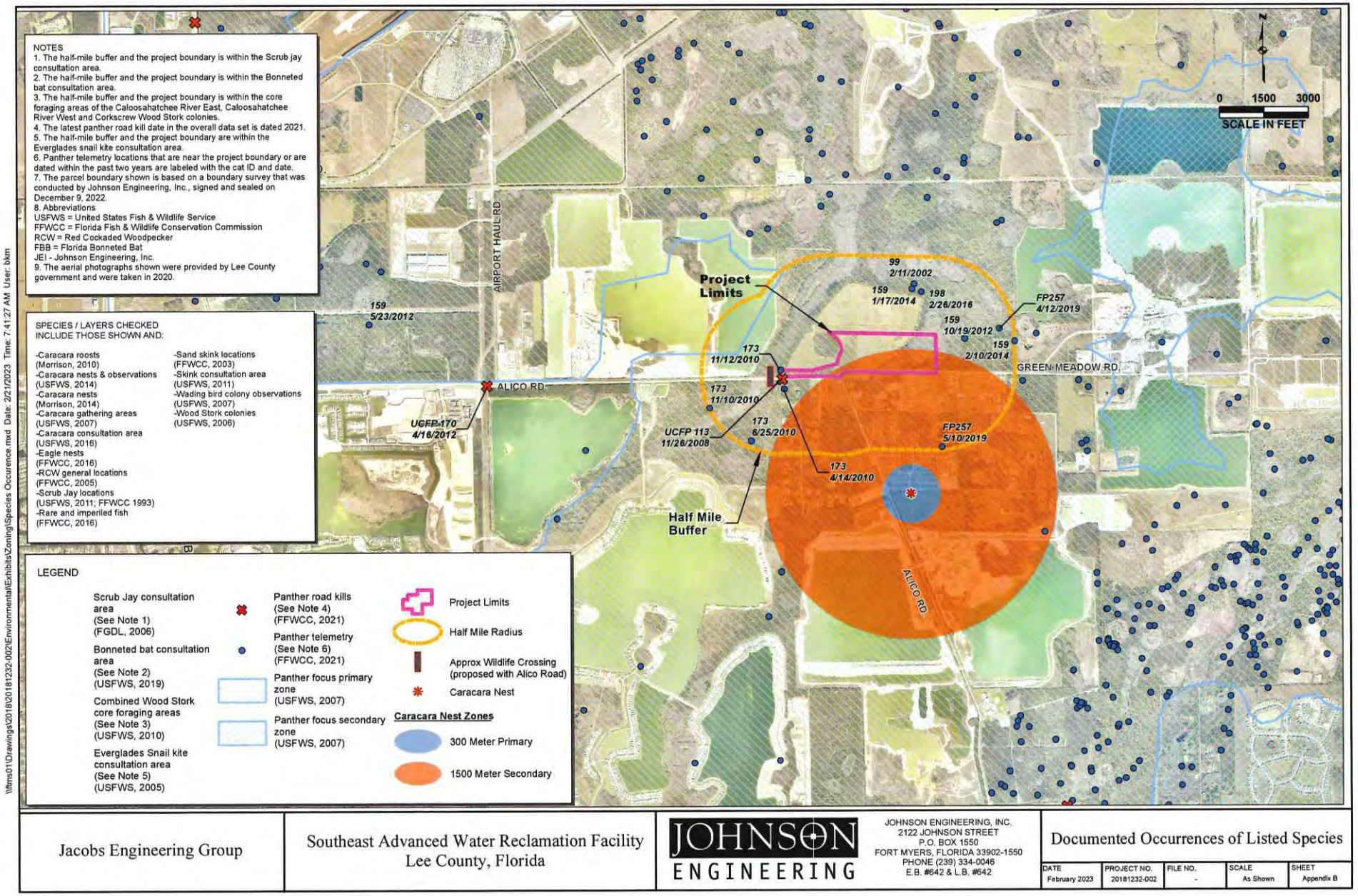
Zoning

SHEET NUMBER

07

APPENDIX B

Listed Species Occurrence Map



\\tfms01\Drawings\2018\20181232-002\Environmental\Exhibits\Zoning\Species Occurence.mxd Date: 2/21/2023 Time: 7:41:27 AM User: bkm

Jacobs Engineering Group	Southeast Advanced Water Reclamation Facility Lee County, Florida	JOHNSON ENGINEERING	JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550 PHONE (239) 334-0046 E.B. #642 & L.B. #642	Documented Occurrences of Listed Species		
				DATE February 2023	PROJECT NO. 20181232-002	FILE NO. -	SCALE As Shown	SHEET Appendix B

APPENDIX C

FBB Consultation Key

Florida Bonneted Bat Consultation Key#

Use the following key to evaluate potential effects to the Florida bonneted bat (FBB) from the proposed project. Refer to the Glossary as needed.

1a. Proposed project or land use change is partially or wholly within the Consultation Area (Figure 1)..... **Go to 2**
1b. Proposed project or land use change is wholly outside of the Consultation Area (Figure 1)..... **No Effect**

2a. Potential FBB roosting habitat exists within the project area..... **Go to 3**
2b. No potential FBB roosting habitat exists within the project area..... **Go to 13**

3a. Project size/footprint* ≤ 5 acres (2 hectares)..... **Conduct Limited Roost Survey (Appendix C)** then **Go to 4**
3b. Project size/footprint* > 5 acres (2 hectares)..... **Conduct Full Acoustic/Roost Surveys (Appendix B)** then **Go to 6**

4a. Results show FBB roosting is likely ..... **Go to 5**
4b. Results do not show FBB roosting is likely..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence.**

5a. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**
5b. Project will not affect roosting habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

6a. Results show some FBB activity..... **Go to 7**
6b. Results show no FBB activity..... **No Effect**

7a. Results show FBB roosting is likely..... **Go to 8**
7b. Results do not show FBB roosting is likely..... **Go to 10**

8a. Project will not affect roosting habitat..... **Go to 9**
8b. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**

9a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **LAA+ Further consultation with the Service required.**
9b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

10a. Results show high FBB activity/use..... **Go to 11**
10b. Results do not show high FBB activity/use..... **Go to 12**

11a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **LAA+ Further consultation with the Service required.**
11b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

12a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **LAA+ Further consultation with the Service required.**
12b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence.**

13a. FBB foraging habitat exists within the project area and foraging habitat will be affected.....**Go to 14**

13b. FBB foraging habitat exists within the project area and foraging habitat will not be affected **OR** no FBB foraging habitat exists within the project area.....**No Effect**

14a. Project size* > 50 acres (20 hectares) (wetlands and uplands) .....**Go to 15**

14b. Project size* ≤ 50 acres (20 hectares) (wetlands and uplands) ..... **MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

15a. Project is within 8 miles (12.9 kilometers) of high quality potential roosting areas^.....**Conduct Full Acoustic Survey (Appendix B) and Go to 16**

15b. Project is not within 8 miles (12.9 kilometers) of high quality potential roosting area^.....**MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

16a. Results show some FBB activity.....**Go to 17**

16b. Results show no FBB activity.....**No Effect**

17a. Results show high FBB activity/use.....**LAA⁺ Further consultation with the Service required.**

17b. Results do not show high FBB activity/use..... **MANLAA-P if BMPs (Appendix D) used and survey reports submitted. Programmatic concurrence.**

If you are within the urban environment and you are renovating an existing artificial structure (with or without additional ground disturbing activities), these Guidelines do not apply. The Service is developing separate guidelines for consultation in these situations. Until the urban guidelines are complete, please contact the Service for additional guidance

*Includes wetlands and uplands that are going to be altered along with a 250- foot (76.2- meter) buffer around these areas if the parcel is larger than the altered area.

⁺Project modifications could change the **LAA** determinations in numbers 5, 8, 9, 11, 12, and 17 to **MANLAA** determinations.

^Determining if **high quality potential roosting areas** are within 8 mi (12.9 km) of a project is intended to be a desk-top exercise looking at most recent aerial imagery, not a field exercise.

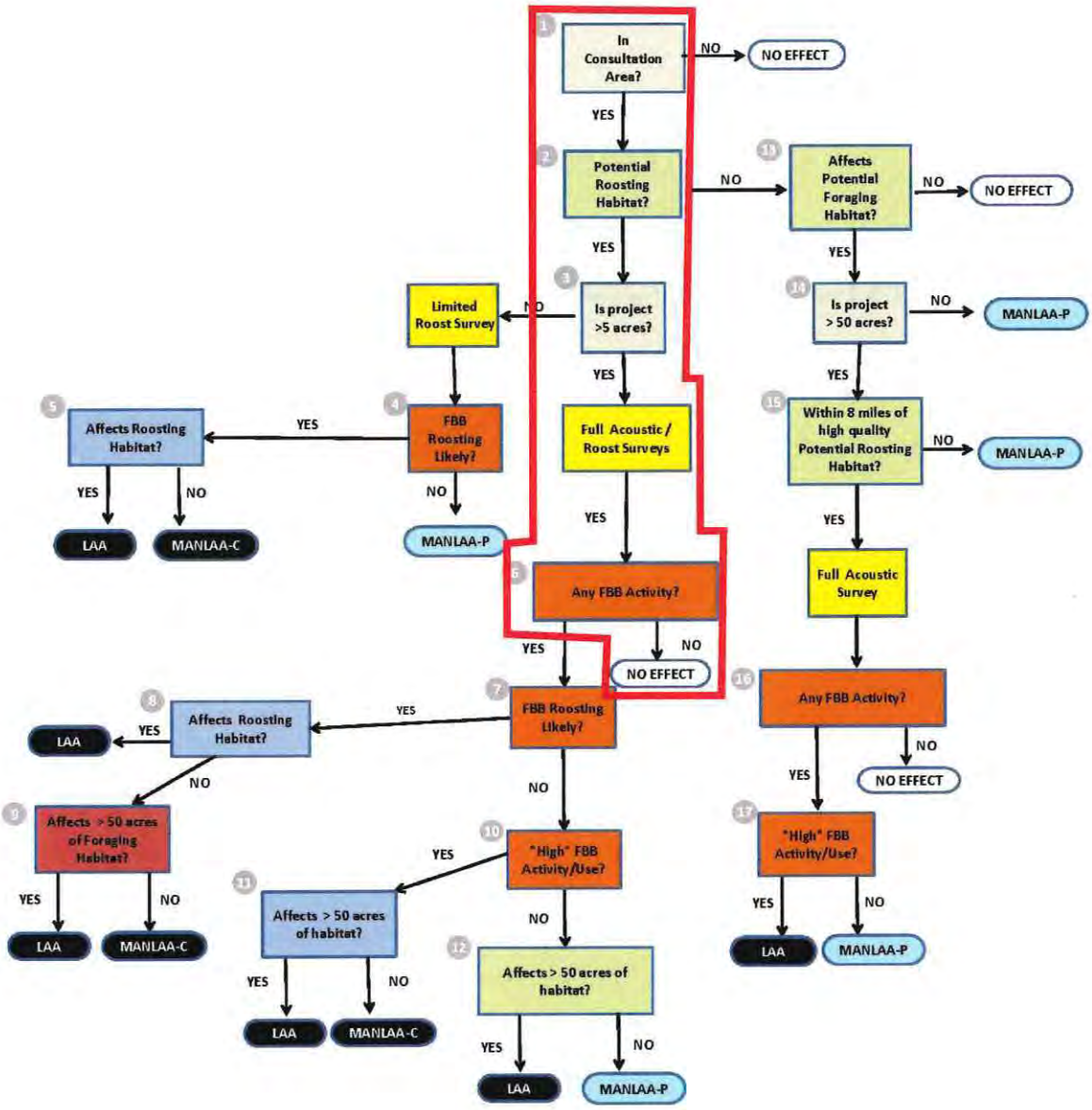


Figure 3. Florida bonneted bat Consultation Flowchart. "**No effect**" determinations do not need Service concurrence. "May affect, but not likely to adversely affect", **MANLAA-P,** in blue have programmatic concurrence through the transmittal letter of these Guidelines, and therefore no further consultation with the Service is necessary unless assistance is needed in interpreting survey results. **MANLAA-C** determinations in black require further consultation with the Service. Applicants are expected to incorporate the appropriate **BMPs** to reach a **MANLAA** determination. "May affect, and is likely to adversely affect", **LAA, (**also in black) determinations require consultation with the Service. Further consultation with the Service may identify project modifications that could change the **LAA** determinations in numbers 5, 8, 9, 11, 12, and 17 to **MANLAA** determinations. The Service requests Florida bonneted bat survey reports for all determinations.

HISTORIC RESOURCES (EXHIBIT M13)

This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at CompliancePermits@dos.MyFlorida.com for project review information.

September 13, 2022

Josephine Medina, AICP
Project Manager
RVi Planning + Landscape Architecture
28100 Bonita Grande Dr, Suite 305 •
Bonita Springs, FL 34135
954.376.0378 Mobile • 239.908.3421

In response to your request on September 13, 2022, the Florida Master Site File lists no cultural resources for the subject property located at 18940 Green Meadow Road, Township 46S, Range 26E and Sections 04 & 09 in the following parcels:

1. 04-46-26-00-00001.0010
2. 04-46-26-00-00001.1010
3. 09-46-26-00-00001.0170

#

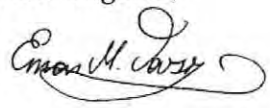
When interpreting the results of this search, please consider the following information:

- **This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.**
- **Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.**
- **While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.**
- **Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at** CompliancePermits@dos.MyFlorida.com

#

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Kind Regards,



Eman M. Vovsi, Ph.D.
Sr. Data Base Analyst
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com


subject property
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239 405 7777

Southeast Advanced Water Reclamation Facility• **Archaeological Sensitivity Map**

- Fort Myers, FL
- Date: 8/30/2022
- 22000368
- Lee County Utilities

0 500
FEET

PUBLIC FACILITIES IMPACTS ANALYSIS (M14 & M16)

SOUTHEAST WATER RECLAMATION FACILITY (SEAWRF)
EXHIBIT M14 & 16 - PUBLIC FACILITIES IMPACT ANALYSIS

I. POTABLE WATER

Existing Future Land Use – DR/GR
4 dwelling units @ 250 GPD = 1,000 GPD

TOTAL EXISTING DEMAND: 1,000 GPD

Proposed Future Land Use – Public Facilities (Maximum 25,000 sq. ft. of office)
25,000 sq.ft. Office @ 15 GPD / 100 sq. ft. = 3,750 GPD

TOTAL MAXIMUM PROPOSED DEMAND: 3,750 GPD

The proposed comprehensive plan amendment results in an increased potable water demand of 2,750 GPD. The Property will be serviced by Lee County Utilities for potable water. Please refer to the enclosed availability letter from LCU confirming availability and capacity.

II. SANITARY SEWER

Existing Future Land Use – DR/GR
4 dwelling units @ 250 GPD = 1,000 GPD

TOTAL EXISTING DEMAND: 1,000 GPD

Proposed Future Land Use – Public Facilities (Maximum 25,000 sq. ft. of office)
25,000 sq.ft. Office @ 15 GPD / 100 sq. ft. = 3,750 GPD

TOTAL MAXIMUM PROPOSED DEMAND: 3,750 GPD

The proposed comprehensive plan amendment results in an increased sanitary sewer demand of 2,750 GPD. Sanitary waste will be serviced on-site by the proposed SEAWRF. Please refer to the enclosed availability letter from LCU confirming availability and capacity.

III. TRANSPORTATION

Impacts to the surrounding roadway network are addressed in the Traffic Circulation Analysis provided as part of this Comprehensive Plan Amendment application. According to the Traffic Circulation Analysis provided by Johnson Engineering the Level of Service analysis conducted concluded that all roadways will operate within

the minimum adopted Level of Service in 2028 and 2045 with or without the proposed amendment and roadway capacity improvement will not be warranted as a result of additional traffic.

IV. DRAINAGE

Roads and Parking Lot minimum elevation = 5 year, 1 hour duration
Minimum Berm Elevation = 25 year, 72 hour peak stage
Water Quality = The greater of 1" over the site (less building, open tanks, and treatment area) or 2.5" multiplied by impervious area.
Water Quantity = 25 year – 3-day duration
Discharge Rate for Estero River Basin = 42 CSM

The Applicant will obtain an Environmental Resource Permit (ERP) from the South Florida Water Management District (SFWMD) or the Florida Department of Environmental Protection (FDEP) prior to Development Order approval to be deemed concurrent.

V. PARKS AND RECREATION, OPEN SPACE

The Applicant's proposed amendment will not impact the existing parks, recreation or open space but provides enhanced open space at 60% of the total development.

VI. PUBLIC SCHOOLS

The Applicant's proposed amendment will not increase the need for public schools as no residential development is proposed as part of this amendment.

TRAFFIC CIRCULATION ANALYSIS (EXHIBIT M15)

TRAFFIC CIRCULATION ANALYSIS

FOR

LEE COUNTY UTILITIES

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY (SEAWRF)

JUNE 2023

Prepared for:

Lee County
Southwest Florida

Post Office Box 398
Fort Myers, Florida 33902-0398

Prepared by:

JOHNSON ENGINEERING

2122 Johnson Street
Fort Myers, Florida 33901
(239) 334-0046
EB 642

Joshua J. Hildebrand, P.E., PTOE
Florida License No. 73952

Date

20181232-002

TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

The purpose of this traffic circulation analysis is to assess the potential transportation impacts associated with the addition of a future Water Reclamation Facility in Lee County. The current zoning of the proposed site is Agricultural (AG-2) and is being requested to be rezoned to Community Facilities Planned Development (CFPD). This traffic circulation analysis is in accordance with Lee County Administrative Code (AC) 13-17 and determines the short range 5-year (2025) horizon and long range 20-year (2040) horizon roadway impacts associated with the change in Future Land Use designation from DR/GR to Public Facilities.

2.0 SITE ACCESS

The project site is located on Green Meadow Road, which is currently a two-lane undivided roadway that begins at the eastern end of Alico Road in Lee County (see **Figure 2-1**).

This segment is currently under design for the future extension and widening of Alico Road to a four-lane divided collector from Alico Road to S.R. 82, replacing the current segment of Green Meadow Road in front of the proposed project site. Alico Road is anticipated to have a posted speed limit and design speed of 45-mph within the project vicinity. Construction of the extension and widening is anticipated to occur in two phases. Phase 1 includes the widening of Alico Road from Airport Haul Road through Green Meadow Road, approximately 1-mile east of the Alico Road intersection. Phase 2 includes the extension of Alico Road from Green Meadow Road to S.R. 82. While both are currently under design, Phase 1 construction is anticipated to occur within 5 years and Phase 2 occurring shortly afterwards.

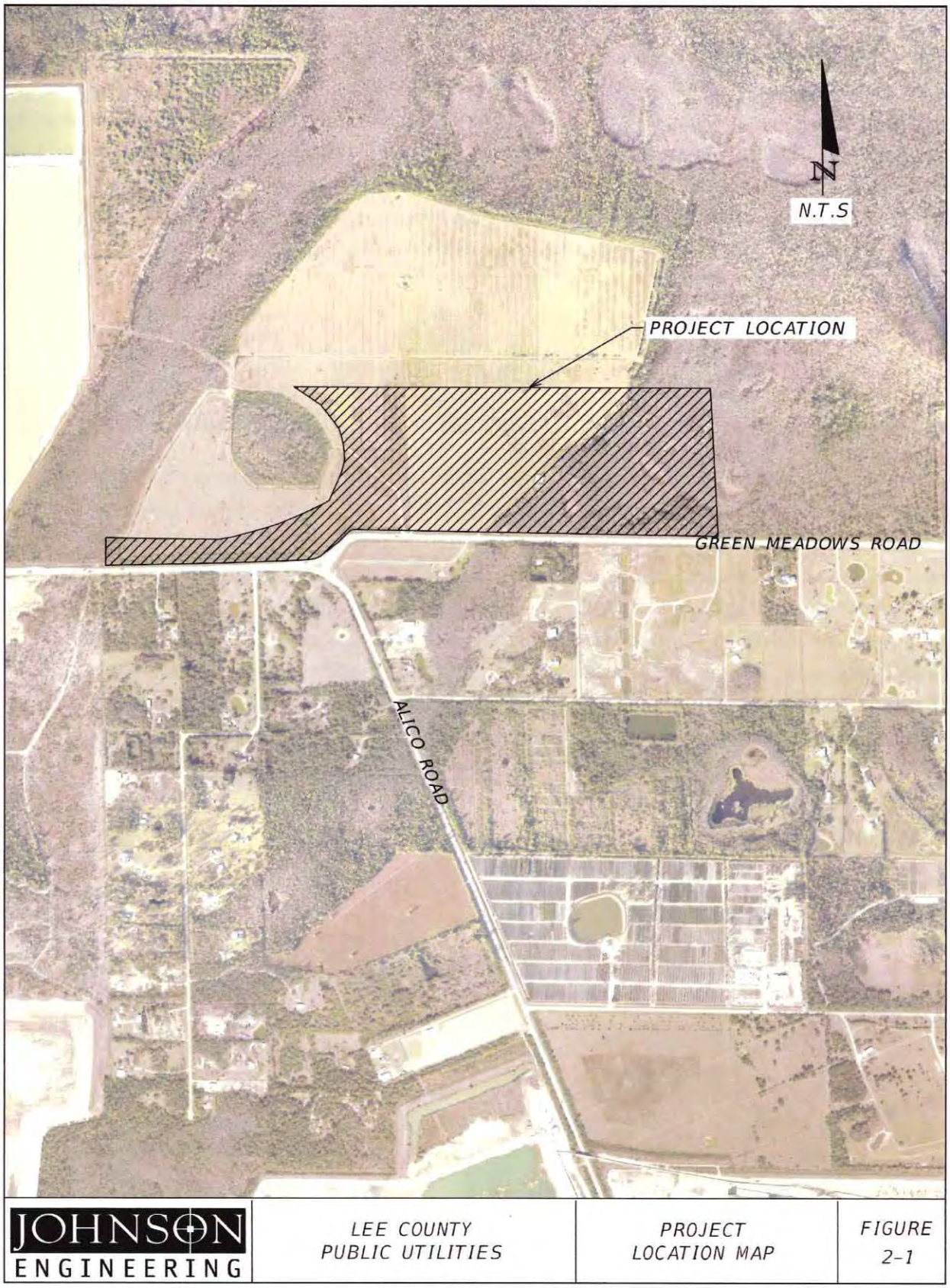


Figure 2-1: Project Location Map

3.0 TRIP GENERATION

The A.M. peak hour, P.M. peak hour, and daily trip generations for the project were estimated using trip generation rates and equations from the Institute of Transportation Engineers (ITE) *Trip Generation (11th Edition)* for the Wastewater Treatment Buildings.

The ITE trip generation estimates are summarized in **Table 3-1** and included in **Appendix A**.

Table 3-1: ITE Trip Generation Summary

Land Use	Size (sqft)	Trip Generation[1]	A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Wastewater Treatment Facility (LUC 170 - Utility)	25,000	AM: 2.33 PM: Ln(T)=0.81Ln(X)+0.86 Weekday: Ln(T)=0.74Ln(X)+2.73	51	7	58	6	26	32	166
		Total	**51**	**7**	**58**	**6**	**26**	**32**	**166**

Footnote:
(1) ITE Trip Generation (11th Edition)

4.0 DATA COLLECTION

To establish base traffic conditions and existing trip distributions, data was obtained from the sources listed herein (see **Figure 4-1** for the data collection map).

4.1 Roadway Directional Volumes

Twenty-four-hour machine traffic data collection counts were recorded during peak season beginning on Thursday, January 26, 2023 through Wednesday, February 1, 2023 at one location on Alico Road (see **Appendix B**). The counts were collected to serve as a base traffic condition for the roadway traffic analysis.

4.2 Turning Movement Counts

Turning movement counts were recorded on Thursday, January 26, 2023 from 7:00 A.M. to 9:00 A.M and 4:00 P.M. to 6:00 P.M. at the intersection of Alico Road and Green Meadow Road (see **Appendix C**) to help establish traffic patterns. A summary of the A.M. and P.M. peak hour turning movement counts are shown in **Figure 4-2** and **Figure 4-3**, respectively.

Figure 4-1: Data Collection Map

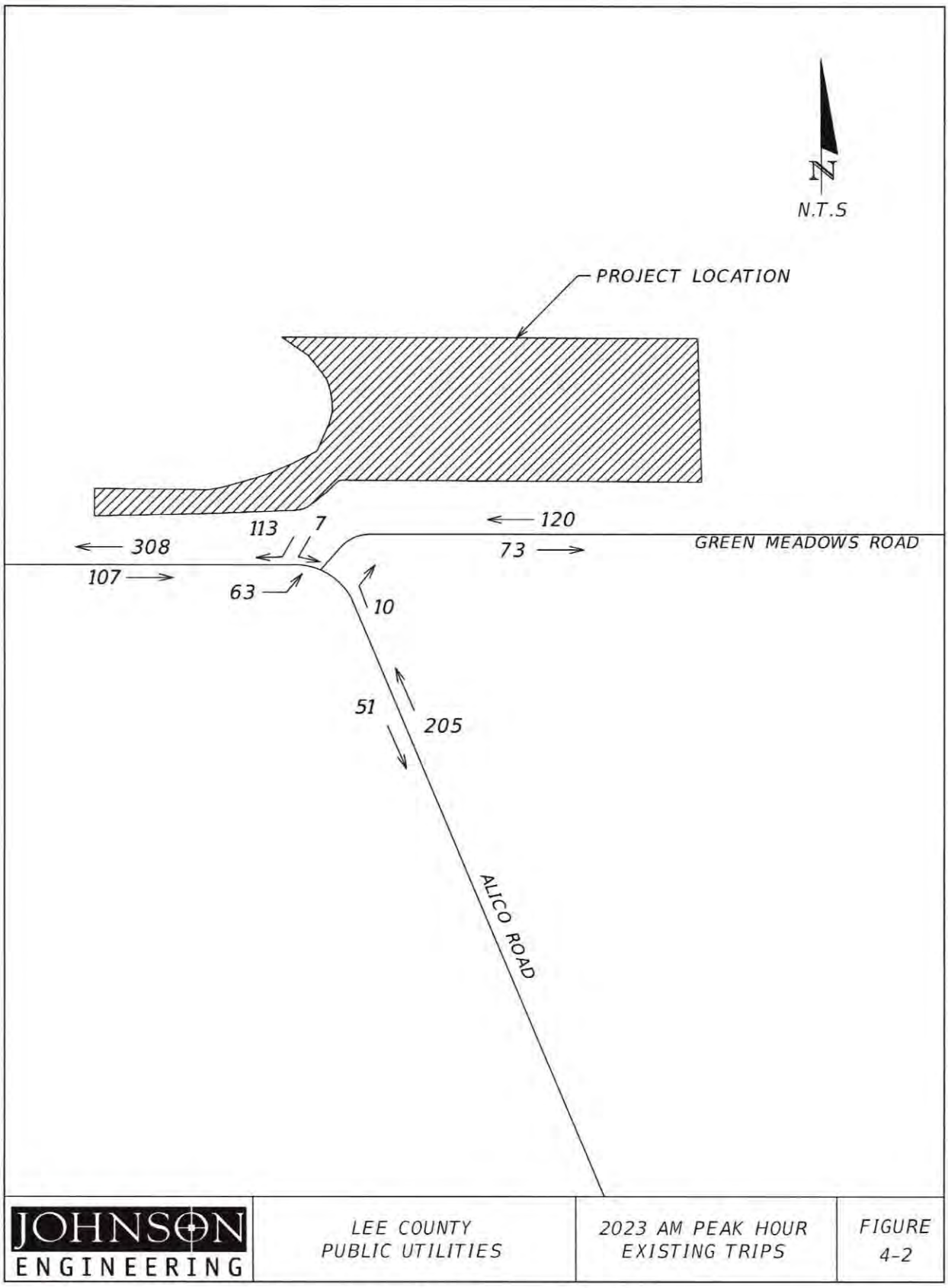


Figure 4-2: 2023 A.M. Peak Hour Existing Trips

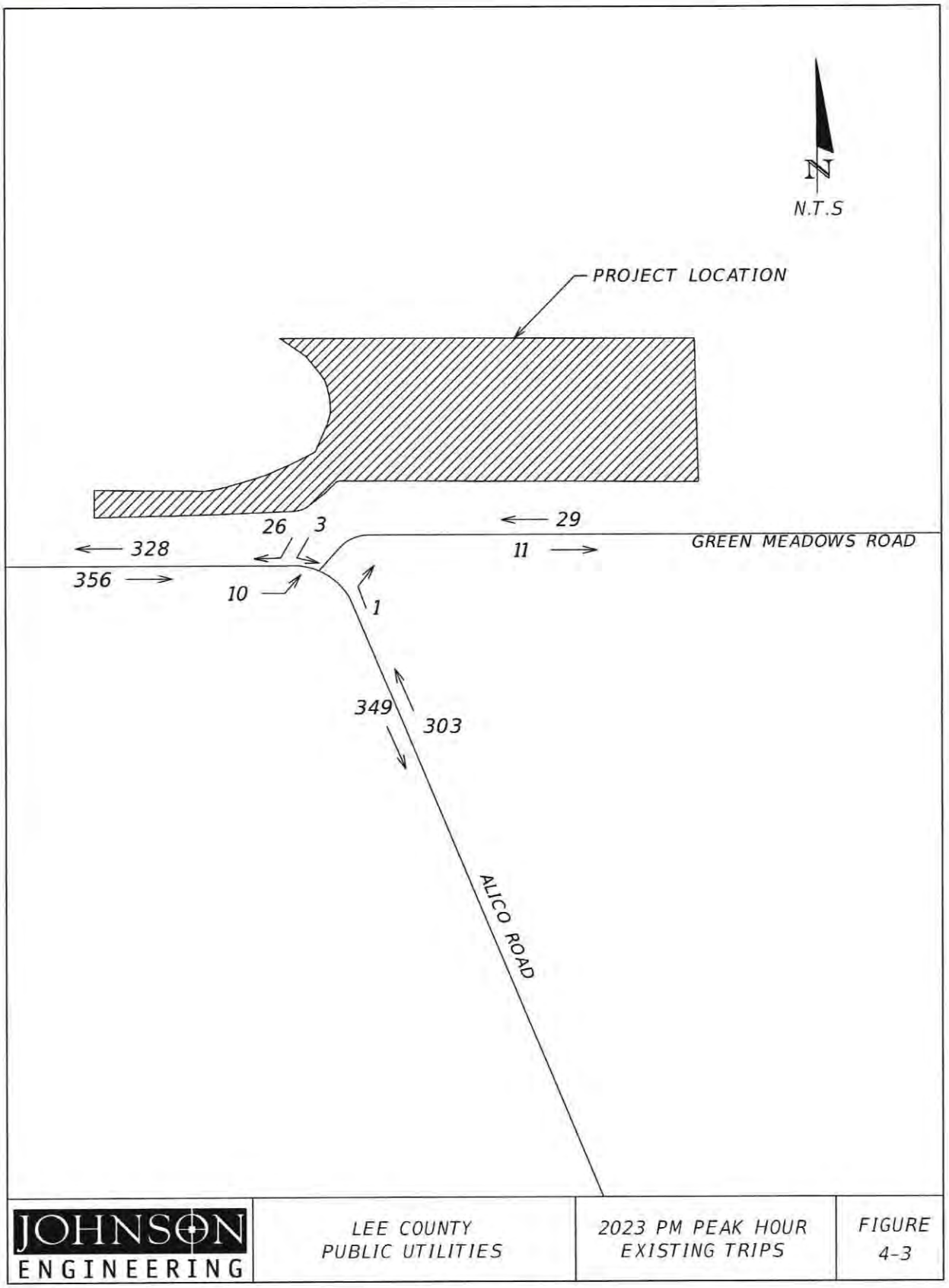


Figure 4-3: 2023 P.M. Peak Hour Existing Trips

5.0 TRIP DISTRIBUTION AND TRIP ASSIGNMENT

The project A.M. and P.M. peak hour turning movements were estimated from the collected traffic data (see Section 4.0). **Figure 5-1** depicts the estimated percent distributions for the project traffic. Based on the estimated percent distributions of project traffic, the estimated project trips for the A.M. peak hour and P.M. peak hour are depicted in **Figure 5-2** and **Figure 5-3**. Anticipated distributions assume the Alico Road Extension Phase 2 has not been completed.

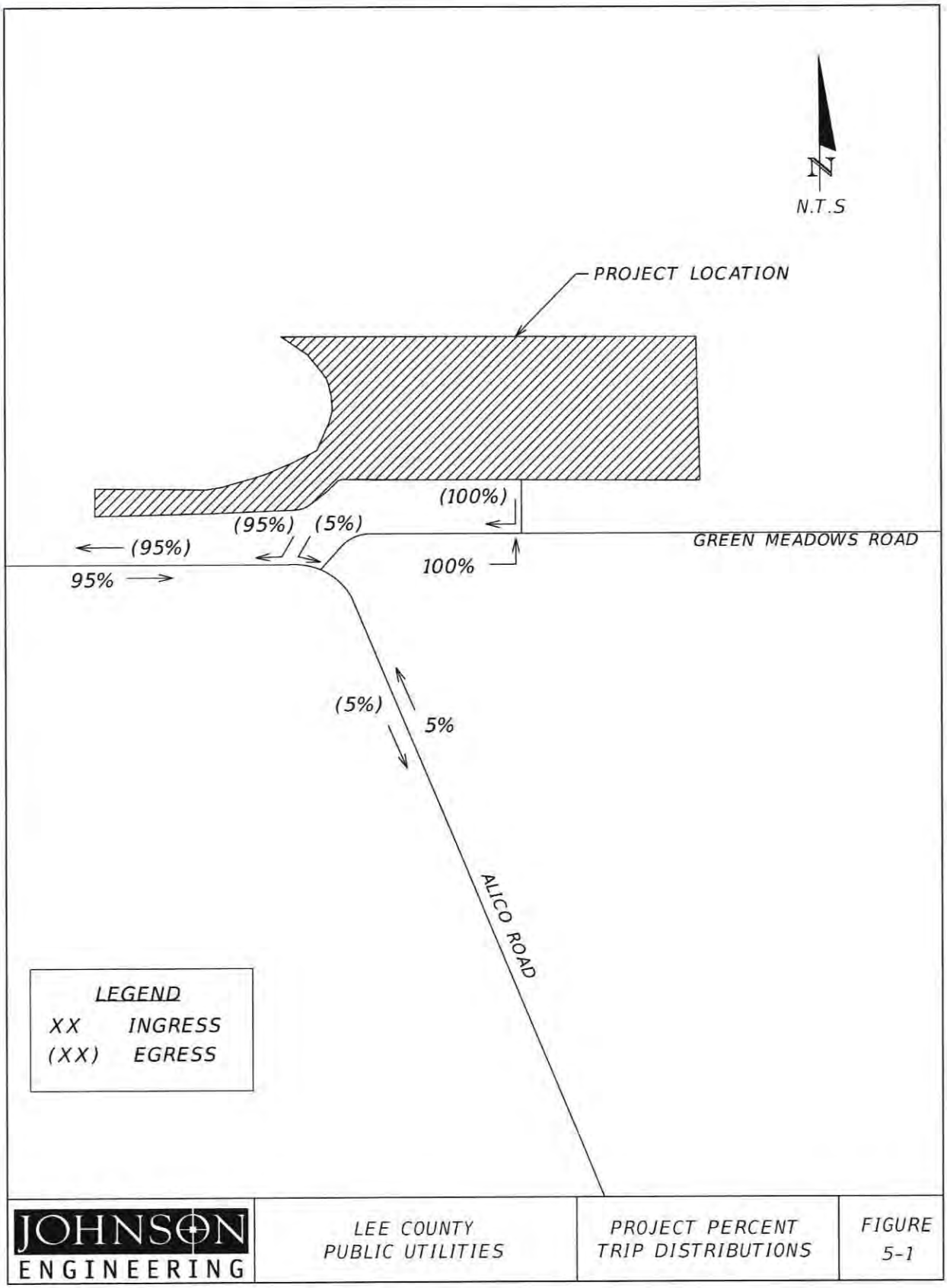


Figure 5-1: Project Percent Trip Distributions

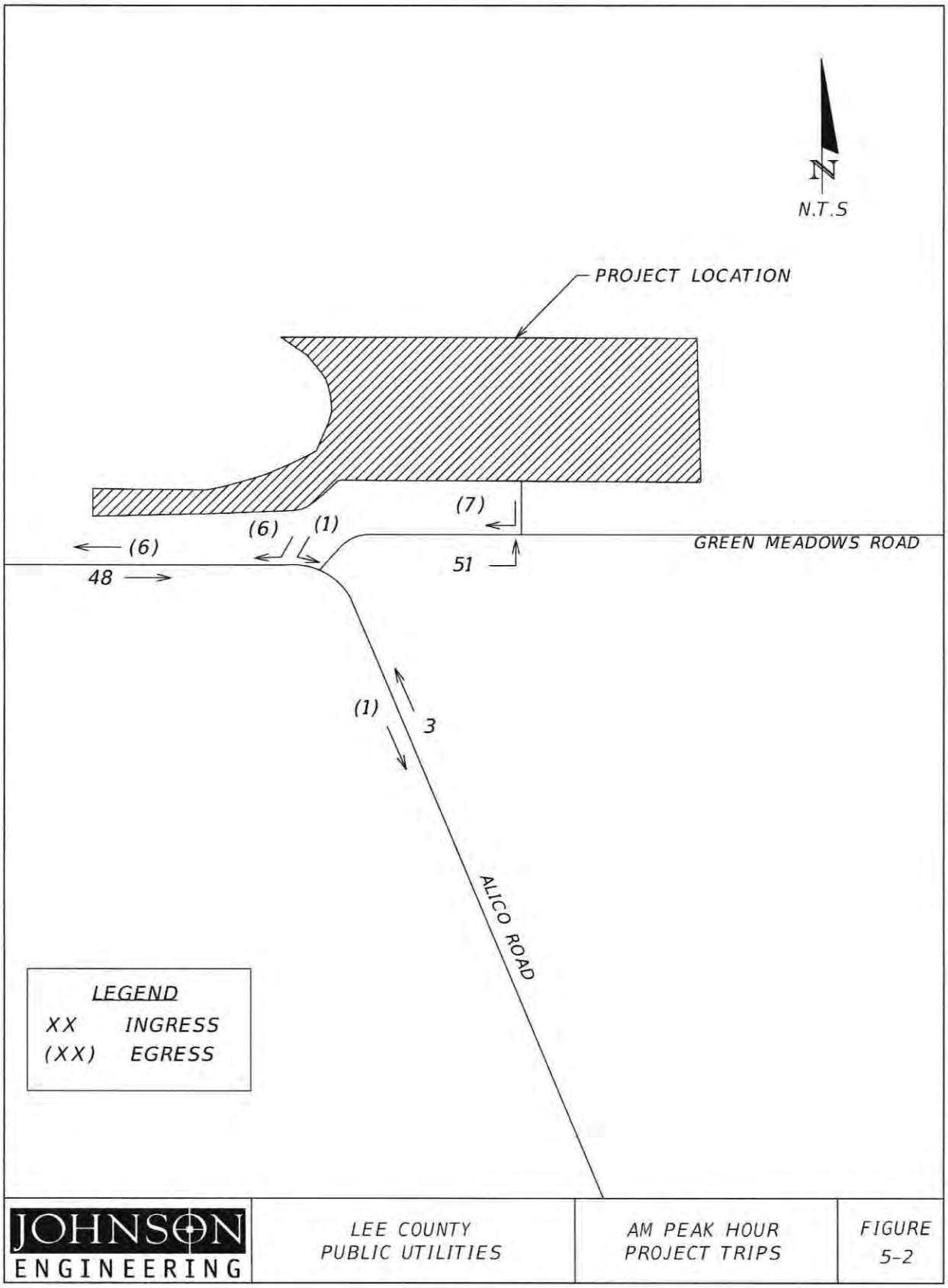


Figure 5-2: A.M. Peak Hour Project Trips

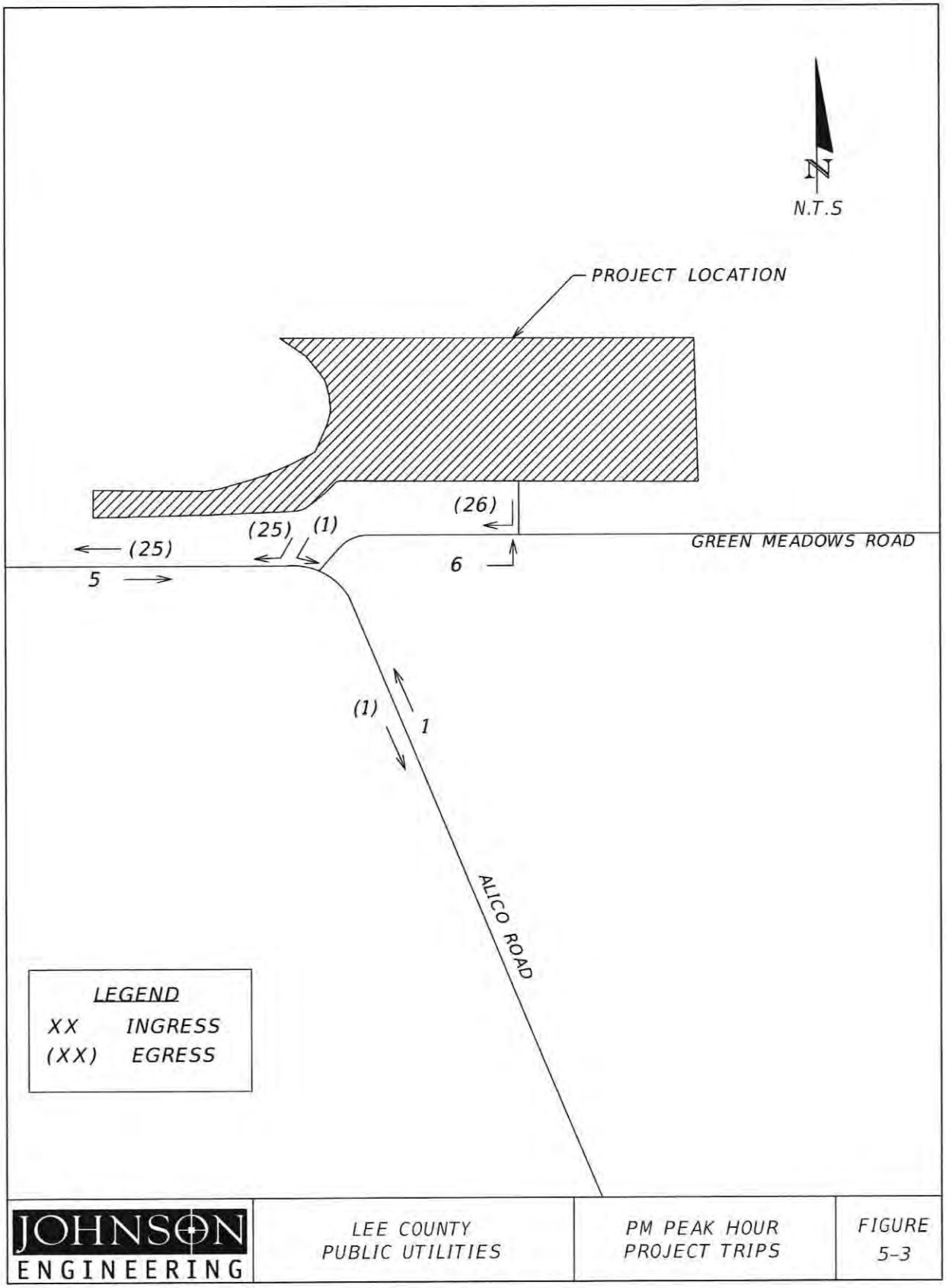


Figure 5-3: P.M. Peak Hour Project Trips

6.0 AREA OF INFLUENCE

The area of influence analyzed was based on the 25,000-sqft of wastewater treatment facility. The area of influence includes all county and state-maintained arterials and collectors within a 3-mile radius of the project site. Additionally, after the distribution of project trips, any roadway segment that is outside of the 3-mile radius, with 10% impact or more, was analyzed, consistent with Lee County requirements. Lee County maintained arterials and collectors and state arterials within the area of influence, according to the Lee County 2022 Concurrency Report (excerpt available in **Appendix D**) and the Lee County Level of Service Tables (**Appendix E**), are provided in **Table 6-1**.

Table 6-1: Area of Influence

Roadway	Segment	Performance Standard (Peak Hour Directional Volume)[1]		Estimated Project Trips Peak Hour Peak Direction	Percent Impact (%)
		LOS	Capacity		
Alico Road	Ben Hill Griffin Boulevard to Green Meadow Road	E	3,180	48	1.5%
Alico Road	Green Meadow Road to Corkscrew Road	E	860	3	0.3%

Footnotes:
(1) Estimated from Lee County Level of Service Tables

7.0 LEVEL OF SERVICE (LOS) ANALYSIS

A link LOS analysis was conducted for all county and state-maintained arterials and collectors within a 3-mile radius of the project site for the short term 5-year horizon (2028) and long term (2045) horizon at project maximum build-out. Additionally, any roadway segment that is outside of the 3-mile radius, that has a 10% impact or more, was also analyzed for the short term 5-year horizon (2028) and long term (2045) horizon at project maximum build-out. The project trips were applied to the 5-year horizon (2028) conditions and the long-term horizon (2045) conditions.

The 5-year horizon was based on current Lee County Concurrency standards assuming the construction of the Alico Road project has not been completed. The 2028 traffic volumes were estimated using a 2% growth rate from the Lee County Concurrency 2026 volumes, see **Table 7-1**. The 2045 long term horizon roadway capacity was estimated from the Lee County Level of Service Tables (**Appendix E**) based on the ultimate build-out of Alico Road Phase 1 and Phase 2. The 2045 directional volumes were estimated from the Alico Road Extension Traffic Technical Memorandum, prepared by Kisinger Campo & Associates dated March 2022 (see **Appendix F** for excerpts and **Table 7-2**).

Table 7-1: Summary of 2028 Level of Service Analysis

Roadway	Segment	Performance Standard (Peak Hour Directional Volume)[2]		2026 Peak Hour Peak Direction from Lee County Concurrency[1]		2028 Estimated Roadway Peak Hour Peak Direction		2028 Estimated Roadway Peak Hour Peak Direction + Project	
		LOS	Capacity	LOS	Volume	LOS	Volume	LOS	Volume
Alico Road	Ben Hill Griffin Boulevard to Green Meadow Drive	E	3,180	C	808	C	841	C	889
Alico Road	Green Meadow Drive to Corkscrew Road	E	860	B	224	B	233	B	236

Footnote:
(1) Obtained from 2022 Lee County Concurrency Report
(2) Estimated from Lee County Level of Service Tables

Table 7-2: Summary of 2045 Level of Service Analysis

Roadway	Segment	Performance Standard (Peak Hour Directional Volume)[1]		2045 Peak Hour Peak Direction[2]		2045 Peak Hour Peak Direction + Project	
		LOS	Capacity	LOS	Volume	LOS	Volume
Alico Road	Ben Hill Griffin Boulevard to Green Meadow Drive	E	3,180	E	2,400	E	2,448
Alico Road	Green Meadow Drive to Corkscrew Road	E	860	B	610	B	613

Footnotes:
(1) Estimated from Lee County Level of Service Tables
(2) Estimated from Alico Road Extension Traffic Technical Memorandum

8.0 CONCLUSIONS

Based on the link LOS analysis for 2028 and 2045 traffic within the area of study, Alico Road is anticipated to operate within the LOS performance standards with the addition of project trips.

APPENDIX A

ITE TRIP GENERATION

Land Use: 170
Utility

Description

A utility is a free-standing building that can house office space, a storage area, and electromechanical or industrial equipment that support a local electrical, communication, water supply or control, or sewage treatment utility.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Delaware, Oregon, and Texas.

Source Numbers

422, 443, 538, 876

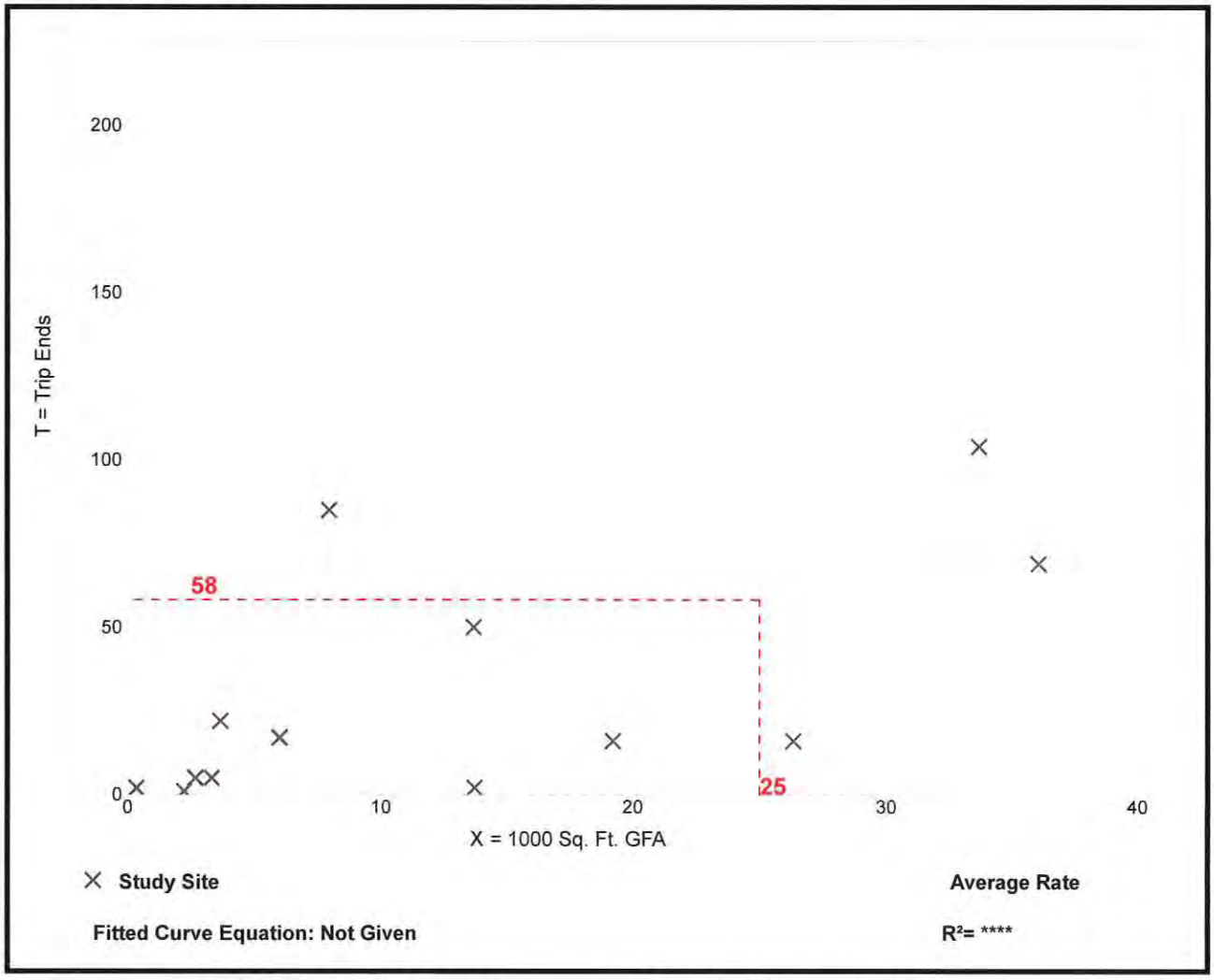
Utility
(170)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 13
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.33	0.15 - 10.67	2.34

Data Plot and Equation



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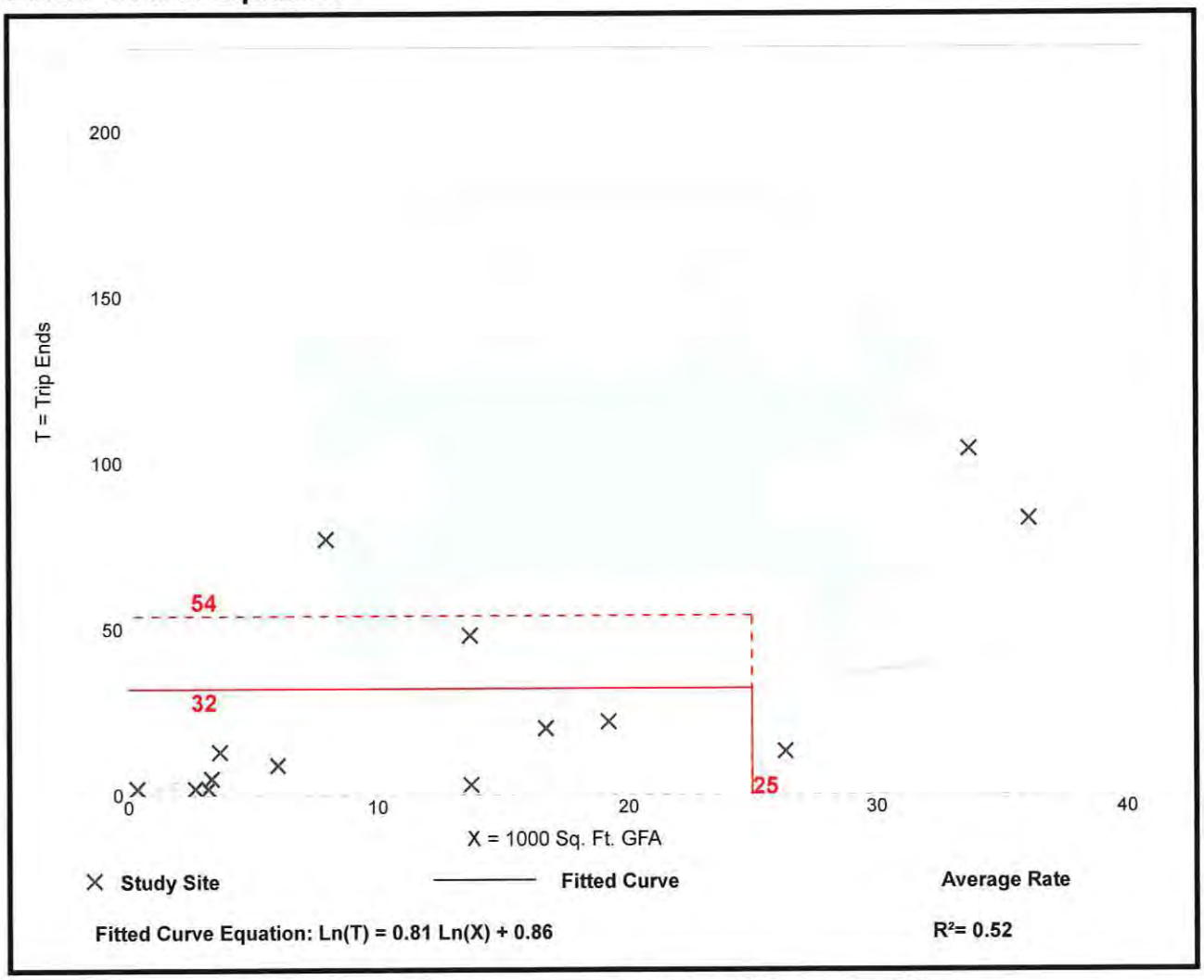
Utility
(170)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 14
Avg. 1000 Sq. Ft. GFA: 13
Directional Distribution: 18% entering, 82% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.22 - 9.67	2.00

Data Plot and Equation



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Utility
(170)

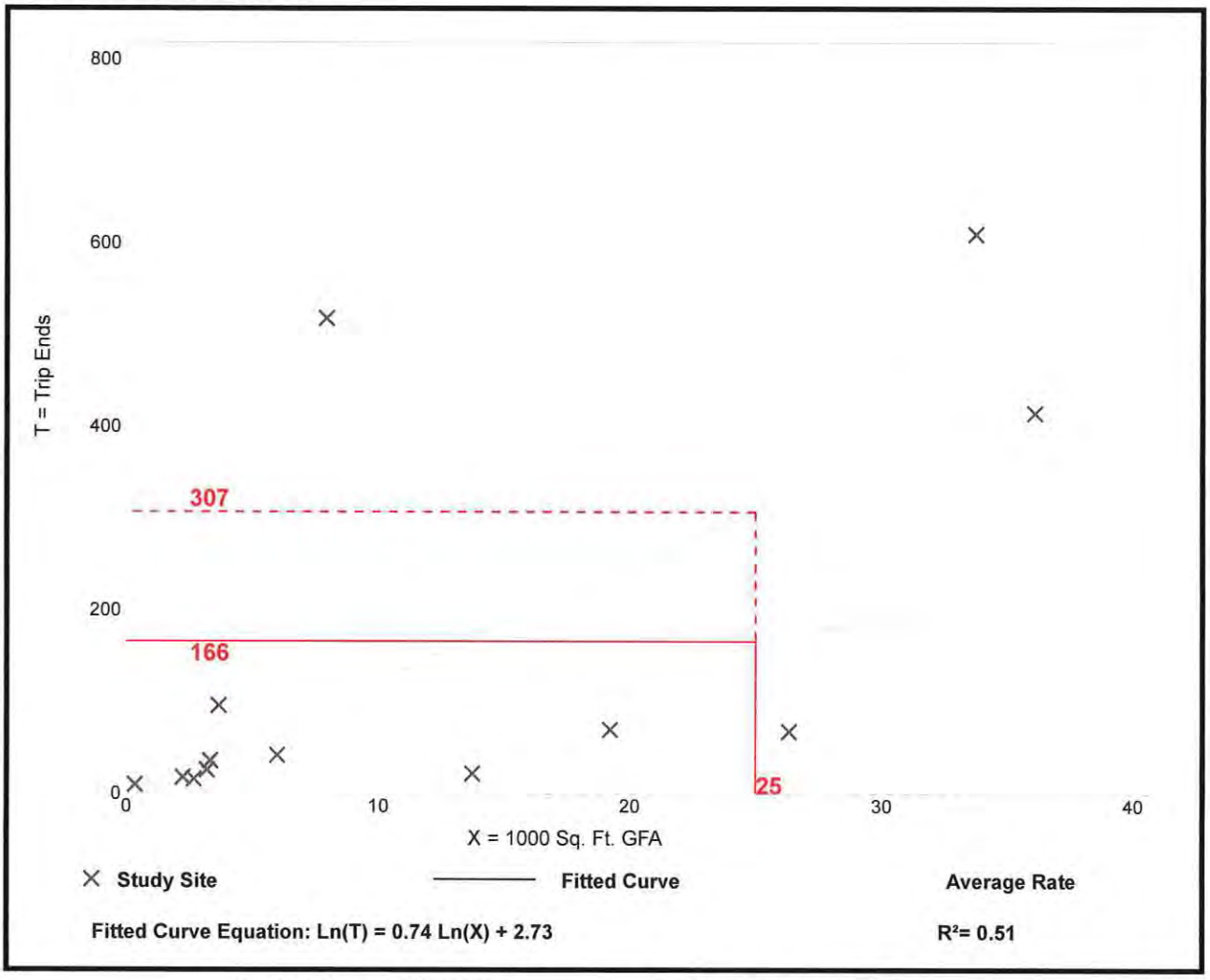
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 12
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
12.29	1.60 - 65.03	14.32

Data Plot and Equation



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APPENDIX B

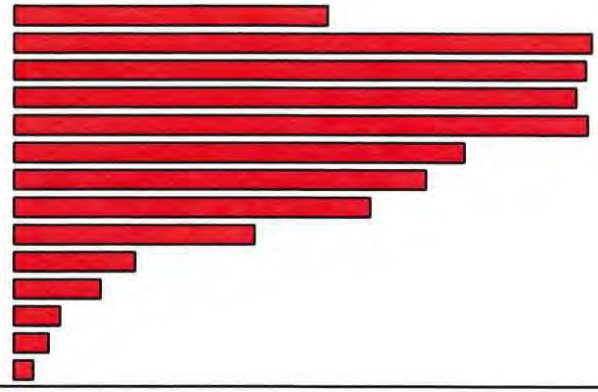
24-HOUR BI-DIRECTIONAL TRAFFIC COUNTS

L C
L A R d

JOHNSON
ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/25/2023 W d d	E d	W d	C d T
12 00 AM				0
01 00				0
02 00				0
03 00				0
04 00				0
05 00				0
06 00				0
07 00				0
08 00				0
09 00				0
10 00		492	84	576
11 00		676	382	1058
12 00 PM		510	537	1047
01 00		535	496	1031
02 00		495	555	1050
03 00		438	388	826
04 00		392	364	756
05 00		379	274	653
06 00		256	186	442
07 00		166	56	222
08 00		100	60	160
09 00		58	28	86
10 00		42	20	62
11 00		19	16	35
T		4558	3446	8004
P r		56.9	43.1	

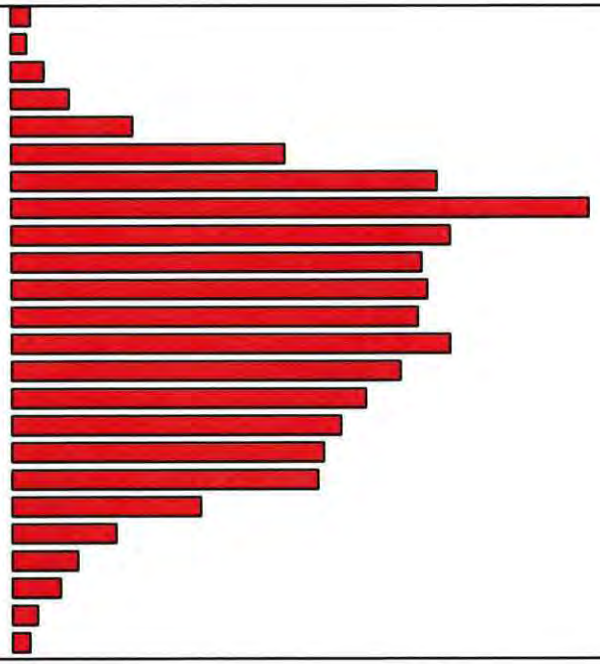


L C
L A R d

JOHNSON
ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/26/2023 T r d	E d	W d	C d T
12 00 AM		34	10	44
01 00		16	18	34
02 00		31	47	78
03 00		78	57	135
04 00		178	107	285
05 00		355	285	640
06 00		374	622	996
07 00		379	976	1355
08 00		406	624	1030
09 00		478	484	962
10 00		463	512	975
11 00		444	510	954
12 00 PM		500	532	1032
01 00		448	466	914
02 00		387	443	830
03 00		420	353	773
04 00		401	332	733
05 00		400	318	718
06 00		276	166	442
07 00		169	76	245
08 00		105	48	153
09 00		80	32	112
10 00		46	11	57
11 00		24	16	40
T		6492	7045	13537
P r		48.0	52.0	

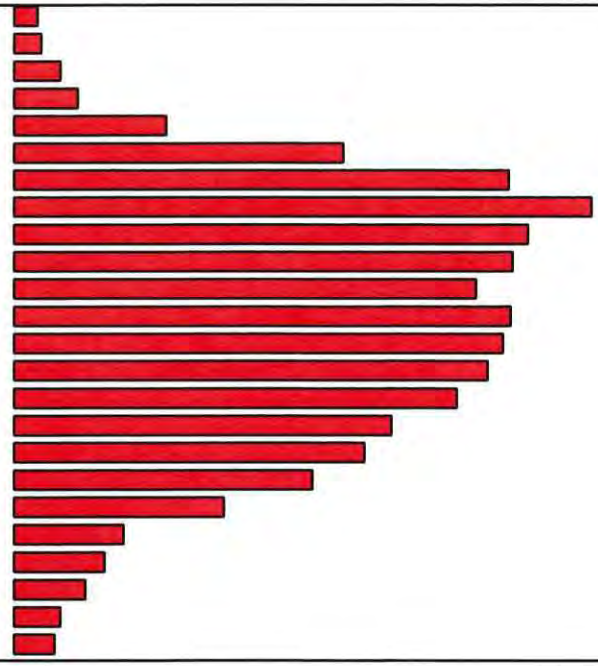


L C
L A R d

JOHNSON
ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/27/2023 Fr d	E d	W d	C d T
12 00 AM		31	16	47
01 00		20	33	53
02 00		50	42	92
03 00		75	52	127
04 00		185	116	301
05 00		350	304	654
06 00		348	634	982
07 00		361	786	1147
08 00		413	606	1019
09 00		433	558	991
10 00		410	508	918
11 00		509	478	987
12 00 PM		430	542	972
01 00		472	468	940
02 00		398	480	878
03 00		382	368	750
04 00		402	294	696
05 00		340	254	594
06 00		247	169	416
07 00		144	74	218
08 00		129	51	180
09 00		87	56	143
10 00		57	34	91
11 00		48	31	79
T		6321	6954	13275
P r		47.6	52.4	

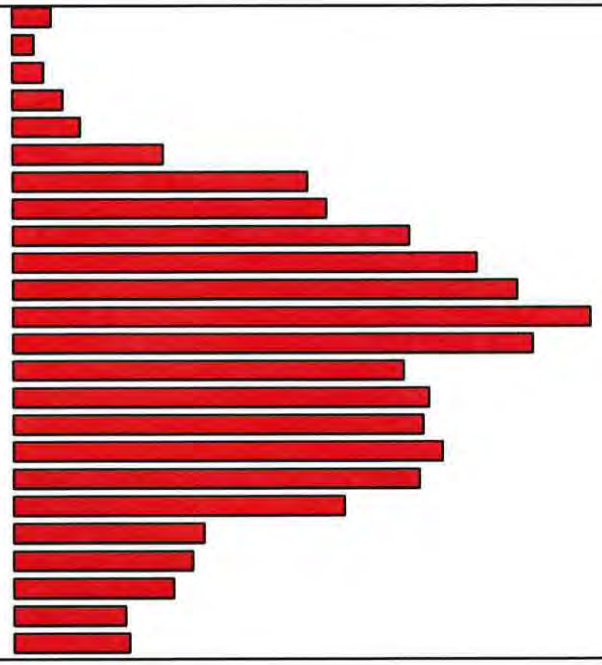


L C
L A R d

JOHNSON ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/28/2023 S rd	E d	W d	C d T
12 00 AM		26	9	35
01 00		14	5	19
02 00		17	11	28
03 00		19	26	45
04 00		28	34	62
05 00		90	46	136
06 00		104	164	268
07 00		111	174	285
08 00		144	218	362
09 00		166	256	422
10 00		202	258	460
11 00		242	284	526
12 00 PM		240	234	474
01 00		188	168	356
02 00		208	170	378
03 00		220	154	374
04 00		229	162	391
05 00		196	174	370
06 00		187	114	301
07 00		108	66	174
08 00		106	57	163
09 00		92	54	146
10 00		58	43	101
11 00		58	48	106
T		3053	2929	5982
P r		51.0	49.0	

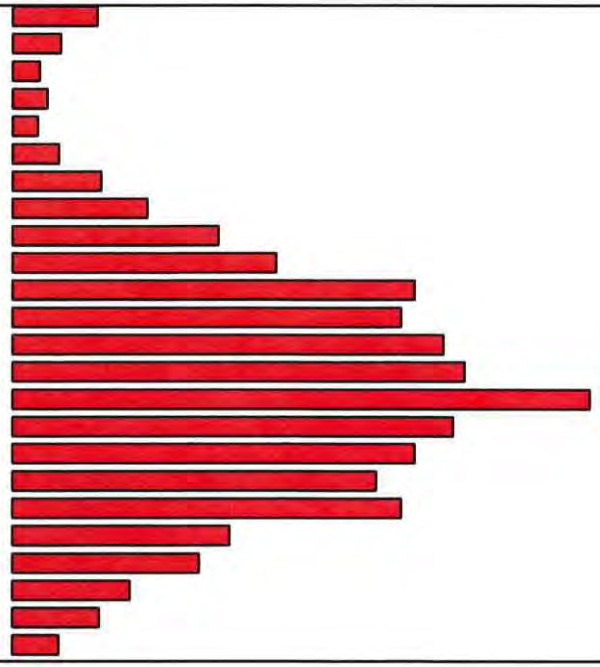


L C
L A R d

JOHNSON
ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/29/2023 S d	E d	W d	C d T
12 00 AM		22	34	56
01 00		17	15	32
02 00		14	4	18
03 00		11	12	23
04 00		7	10	17
05 00		14	16	30
06 00		16	43	59
07 00		32	57	89
08 00		52	84	136
09 00		78	96	174
10 00		112	154	266
11 00		126	130	256
12 00 PM		132	152	284
01 00		158	141	299
02 00		240	141	381
03 00		167	124	291
04 00		159	106	265
05 00		124	116	240
06 00		155	102	257
07 00		93	50	143
08 00		79	44	123
09 00		52	25	77
10 00		32	25	57
11 00		18	12	30
T		1910	1693	3603
P r		53.0	47.0	

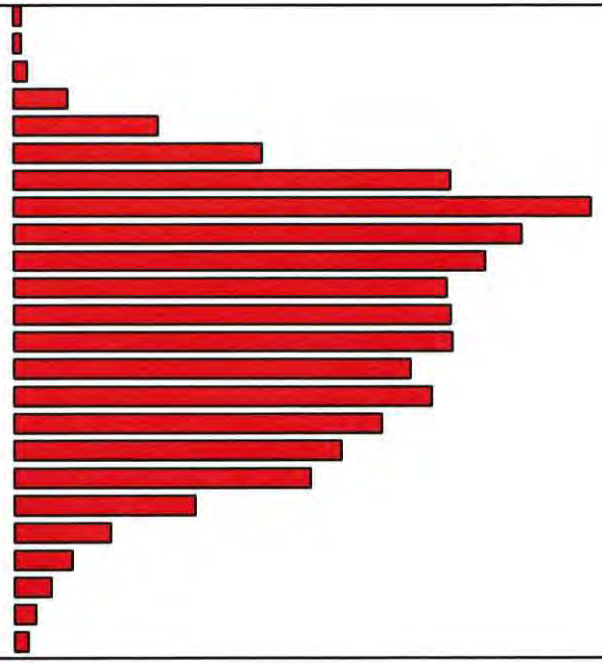


L C
L A R d

JOHNSON ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/30/2023 M d	E d	W d	C d T
12 00 AM		9	9	18
01 00		12	6	18
02 00		24	8	32
03 00		77	46	123
04 00		197	132	329
05 00		317	246	563
06 00		408	582	990
07 00		351	958	1309
08 00		514	638	1152
09 00		488	580	1068
10 00		446	536	982
11 00		472	517	989
12 00 PM		450	544	994
01 00		446	455	901
02 00		452	495	947
03 00		416	417	833
04 00		412	331	743
05 00		354	316	670
06 00		260	149	409
07 00		155	62	217
08 00		85	44	129
09 00		64	20	84
10 00		35	12	47
11 00		23	6	29
T		6467	7109	13576
P r		47.6	52.4	

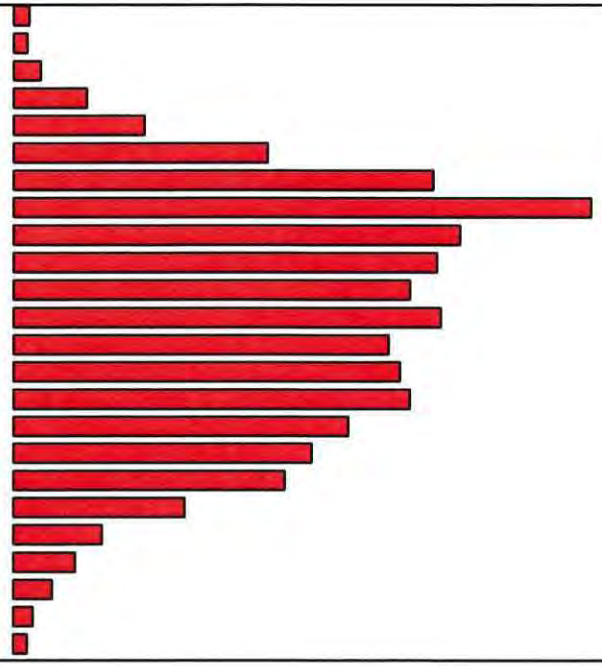


L C
L A R d

JOHNSON ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	1/31/2023 T d	E d	W d	C d T
12 00 AM		22	15	37
01 00		18	18	36
02 00		32	34	66
03 00		103	80	183
04 00		195	130	325
05 00		364	268	632
06 00		419	628	1047
07 00		410	1031	1441
08 00		446	668	1114
09 00		508	550	1058
10 00		466	523	989
11 00		470	596	1066
12 00 PM		462	473	935
01 00		438	528	966
02 00		466	524	990
03 00		399	436	835
04 00		416	330	746
05 00		397	282	679
06 00		290	138	428
07 00		150	73	223
08 00		107	46	153
09 00		81	15	96
10 00		32	14	46
11 00		25	9	34
T		6716	7409	14125
P r		47.5	52.5	

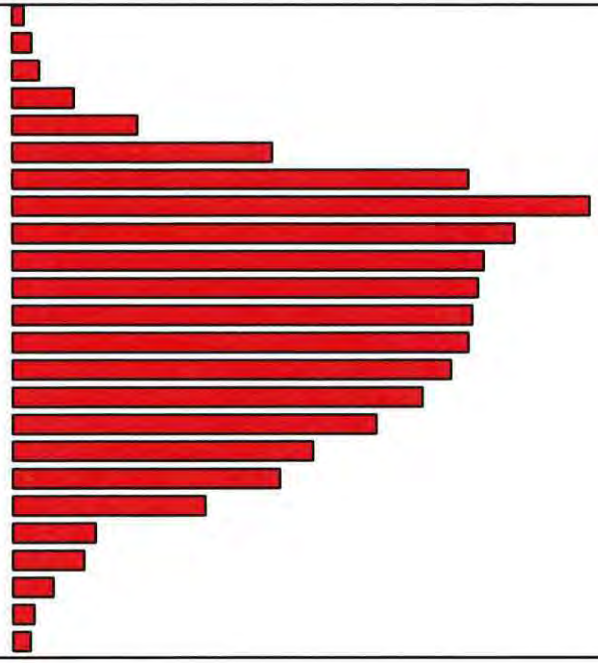


L C
L A R d

JOHNSON
ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	2/1/2023 W d d	E d	W d	C d T
12 00 AM		14	13	27
01 00		26	20	46
02 00		29	36	65
03 00		87	64	151
04 00		190	120	310
05 00		386	252	638
06 00		402	720	1122
07 00		457	964	1421
08 00		517	717	1234
09 00		540	622	1162
10 00		524	620	1144
11 00		531	600	1131
12 00 PM		566	555	1121
01 00		496	582	1078
02 00		456	554	1010
03 00		422	475	897
04 00		409	332	741
05 00		370	288	658
06 00		292	182	474
07 00		142	64	206
08 00		114	62	176
09 00		68	31	99
10 00		37	14	51
11 00		32	12	44
T		7107	7899	15006
P r		47.4	52.6	

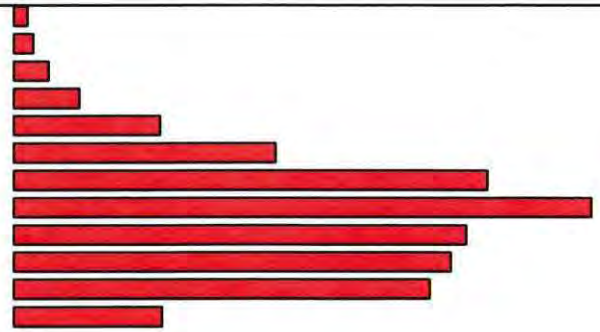


L C
L A R d

JOHNSON ENGINEERING

S r D 1/25/2023
E d D 2/2/2023

T	2/2/2023 T r d	E d	W d	C d T
12 00 AM		16	16	32
01 00		22	20	42
02 00		40	39	79
03 00		82	65	147
04 00		196	128	324
05 00		322	258	580
06 00		381	672	1053
07 00		350	933	1283
08 00		472	533	1005
09 00		440	532	972
10 00		413	510	923
11 00		150	179	329
12 00 PM				0
01 00				0
02 00				0
03 00				0
04 00				0
05 00				0
06 00				0
07 00				0
08 00				0
09 00				0
10 00				0
11 00				0
T		2884	3885	6769
P r		42.6	57.4	
Gr d T		45508	48369	93877
P r		48.5	51.5	
ADT		ADT 11,533		AADT 11,533



APPENDIX C

PEAK HOUR TURNING MOVEMENT COUNTS

JOHNSON ENGINEERING

SUMMARY OF VEHICLE MOVEMENTS

LOCATION: Alico Road & Green Meadow Road

1/26/2023

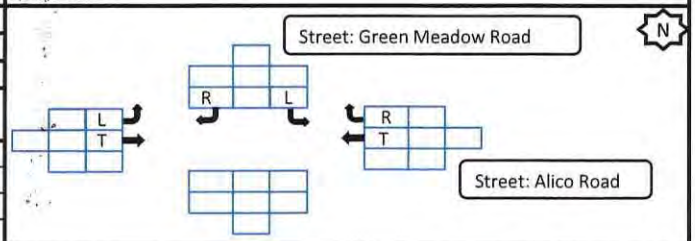
COUNTY: Lee

OBSERVER: Marina

WEATHER:

ROAD CONDITION:

REMARKS:



VEHICLE MOVEMENTS

TIME	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				Total
BEGIN	L	T	R	Ped.	L - TRUCK	L - CAR	R - TRUCK	R - CAR	L - TRUCK	L - CAR	T - TRUCK	T - CAR	T - TRUCK	T - CAR	R - TRUCK	R - CAR	
7:00 AM					0	0	30	3	16	2	9	2	24	9	6	0	**101**
7:15 AM					1	1	28	0	11	1	5	3	15	7	1	1	**74**
7:30 AM					3	0	30	3	11	2	9	3	15	3	0	1	**80**
7:45 AM					0	2	17	2	19	1	9	4	21	4	1	0	**80**
8:00 AM					0	0	8	4	10	3	13	2	22	13	1	0	76
8:15 AM					0	0	15	3	12	0	22	4	12	0	0	3	71
8:30 AM					0	0	11	1	12	0	6	5	7	4	0	0	46
8:45 AM					2	0	15	1	14	1	10	2	26	4	2	2	79
TOTAL	0	0	0	0	6	3	154	17	105	10	83	25	142	44	11	7	**607**
PK. HOUR TOTAL	0	0	0	0	4	3	105	8	57	6	32	12	75	23	8	2	**335**
P.H.F.	0	0	0	0	0.33	0.38	0.88	0.67	0.75	0.75	0.89	0.75	0.78	0.64	0.33	0.50	**0.83**

JOHNSON ENGINEERING

SUMMARY OF VEHICLE MOVEMENTS

LOCATION: Alico Road & Green Meadow Road

1/26/2023

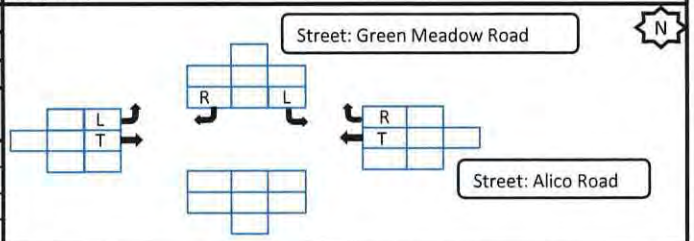
COUNTY: Lee

OBSERVER: JAB

WEATHER: 70 deg. and overcast

ROAD CONDITION: Dry

REMARKS: School bus stopped at 4:20pm



VEHICLE MOVEMENTS

TIME	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				Total
BEGIN	L	T	R	Ped.	L - TRUCK	L - CAR	R - TRUCK	R - CAR	L - TRUCK	L - CAR	T - TRUCK	T - CAR	T - TRUCK	T - CAR	R - TRUCK	R - CAR	
4:00 PM					2	1	3	8	1	1	8	79	6	72	0	1	182
4:15 PM					0	0	3	10	1	1	6	76	5	55	0	1	158
4:30 PM					0	1	0	9	1	5	11	79	10	44	0	0	**160**
4:45 PM					0	0	0	5	0	2	4	78	4	61	1	0	**155**
5:00 PM					0	2	0	11	0	0	4	72	3	108	0	0	**200**
5:15 PM					0	0	0	1	0	2	2	96	9	63	0	0	**173**
5:30 PM					0	1	0	2	0	2	1	95	3	52	0	0	156
5:45 PM					0	1	0	7	0	2	6	87	0	39	0	0	142
TOTAL	0	0	0	0	2	6	6	53	3	15	42	662	40	494	1	2	**1326**
PK. HOUR TOTAL	0	0	0	0	0	3	0	26	1	9	21	325	26	276	1	0	**688**
P.H.F.	0	0	0	0	0	0.38	0.00	0.59	0.25	0.45	0.48	0.85	0.65	0.64	0.25	0.00	**0.86**

APPENDIX D

2022 LEE COUNTY CONCURRENCY REPORT

Lee County
Southwest Florida

PUBLIC FACILITIES LEVEL OF SERVICE AND CONCURRENCY REPORT

2022 - INVENTORY AND PROJECTIONS

November, 2022

Infrastructure Planning Section
Department of Community Development

Table 21 b): Link-Level Service Volumes and LOS Table

Table 21 b) 1 of 7

LEE COUNTY ROAD LINK VOLUMES (County- and State-Maintained Roadways)														
Link No.	NAME	ROADWAY LINK		F. Class	ROAD TYPE	PERFORMANCE STANDARD		2021 100TH HIGHEST HOUR			FUTURE FORECAST (2026)			Notes
		FROM	TO			LOS	DIRECTIONAL CAPACITY	LOS	VOL	V/C	LOS	VOL	V/C	
00100	A & W BULB RD	GLADIOLUS DR	McGREGOR BLVD	Maj. Col	2LN	E	860	C	342	0.40	C	360	0.42	
00200	ALABAMA RD	SR 82	MILWAUKEE BLVD	M. Art	2LN	E	990	C	265	0.27	C	279	0.28	
00300	ALABAMA RD	MILWAUKEE BLVD	HOMESTEAD RD	M. Art	2LN	E	990	C	349	0.35	C	367	0.37	
00400	ALEXANDER BELL BLVD	SR 82	MILWAUKEE BLVD	M. Art	2LN	E	990	D	561	0.57	D	590	0.60	
00500	ALEXANDER BELL BLVD	MILWAUKEE BLVD	LEELAND HEIGHTS	M. Art	2LN	E	990	D	561	0.57	D	654	0.66	Shadow Lakes
00590	ALICO RD	US 41	DUSTY RD	P. Art	4LD	E	1,980	B	1,171	0.59	B	1,230	0.62	
00600	ALICO RD	DUSTY RD	LEE RD	P. Art	6LD	E	2,960	B	1,171	0.40	B	1,532	0.52	Alico Business Park
00700	ALICO RD	LEE RD	THREE OAKS PKWY	P. Art	6LD	E	2,960	B	1,171	0.40	B	1,419	0.48	Three Oaks Regional Center
00800	ALICO RD	THREE OAKS PKWY	I-75	P. Art	6LD	E	2,960	B	2,428	0.82	B	2,552	0.86	EEPCO Study
00900	ALICO RD	I-75	BEN HILL GRIFFIN BLVD	P. Art	6LD	E	2,960	B	1,278	0.43	B	1,425	0.48	EEPCO Study
01000	ALICO RD	BEN HILL GRIFFIN BLVD	GREEN MEADOW DR	Maj. Col	2LN	E	1,100	C	395	0.36	E	808	0.73	4 Ln constr 2018, EEPCO Study*
01050	ALICO RD	GREEN MEADOW DR	CORKSCREW RD	Maj. Col	2LN	E	1,100	B	131	0.12	B	224	0.20	EEPCO Study
01200	BABCOCK RD	US 41	ROCKEFELLER CIR	Min. Col	2LN	E	860	C	55	0.06	C	162	0.19	old count
01400	BARRETT RD	PONDELLA RD	PINE ISLAND RD (US 78)	Maj. Col	2LN	E	860	C	103	0.12	C	116	0.14	old count projection(2009)
01500	BASS RD	SUMMERLIN RD	GLADIOLUS DR	Maj. Col	4LN	E	1,790	C	564	0.32	C	822	0.46	
01600	BAYSHORE RD (SR 78)	BUS 41	NEW POST RD/HART RD	State	4LD	D	2,100	C	1,975	0.94	D	2,076	0.99	
01700	BAYSHORE RD (SR 78)	HART RD	SLATER RD	State	4LD	D	2,100	C	1,821	0.87	F	2,152	1.02	
01800	BAYSHORE RD (SR 78)	SLATER RD	I-75	State	4LD	D	2,100	C	1,222	0.58	C	1,441	0.69	
01900	BAYSHORE RD (SR 78)	I-75	NALLE RD	State	2LN	D	924	C	741	0.80	F	941	1.02	
02000	BAYSHORE RD (SR 78)	NALLE RD	SR 31	State	2LN	D	924	C	741	0.80	F	941	1.02	
02100	BEN HILL GRIFFIN PKWY	CORKSCREW RD	FGCU ENTRANCE	P. Art	4LD	E	2,000	B	1,361	0.68	B	1,763	0.88	
02200	BEN HILL GRIFFIN PKWY	FGCU BOULEVARD S	COLLEGE CLUB DR	P. Art	4LD	E	2,000	B	1,361	0.68	B	1,430	0.72	
02250	BEN HILL GRIFFIN PKWY	COLLEGE CLUB DR	ALICO RD	P. Art	6LD	E	3,000	A	1,123	0.37	A	1,215	0.41	
26950	BEN HILL GRIFFIN PKWY	ALICO RD	TERMINAL ACCESS RD	Controlled xs	4LD	E	1,980	A	980	0.49	A	1,030	0.52	
02300	BETH STACEY BLVD	23RD ST	HOMESTEAD RD	Maj. Col	2LN	E	860	C	340	0.40	C	565	0.66	
02400	BONITA BEACH RD	HICKORY BLVD	VANDERBILT DR	P. Art	4LD	E	1,900	C	736	0.39	C	774	0.41	Constrained In City Plan *
02500	BONITA BEACH RD	VANDERBILT DR	US 41	P. Art	4LD	E	1,900	C	1,433	0.75	C	1,506	0.79	Constrained In City Plan
02600	BONITA BEACH RD	US 41	OLD 41	P. Art	4LD	E	1,860	C	1,427	0.77	C	1,500	0.81	Constrained, old count projection(2010)
02700	BONITA BEACH RD	OLD 41	IMPERIAL ST	P. Art	6LD	E	2,800	C	1,908	0.68	C	2,005	0.72	Constrained In City Plan(2010)
02800	BONITA BEACH RD	IMPERIAL ST	W OF I-75	P. Art	6LD	E	2,800	C	2,091	0.75	C	2,197	0.78	Constrained In City Plan
02900	BONITA BEACH RD	E OF I-75	BONITA GRAND DR	M. Art	4LD	E	2,020	B	626	0.31	B	658	0.33	Constrained In City Plan
02950	BONITA BEACH RD	BONITA GRANDE DR	Logan Boulevard	M. Art	4LD	E	2,020	B	626	0.31	B	658	0.33	Constrained In City Plan
03100	BONITA GRANDE DR	BONITA BEACH RD	E TERRY ST	Maj. Col	2LN	E	860	D	692	0.80	E	782	0.91	old count projection(2009)
03200	BOYSCOUT RD	SUMMERLIN RD	US 41	P. Art	6LN	E	2,520	E	1,847	0.73	E	1,941	0.77	
03300	BRANTLEY RD	SUMMERLIN RD	US 41	Maj. Col	2LN	E	860	C	287	0.33	C	302	0.35	
03400	BRIARCLIFF RD	US 41	TRIPLE CROWN CT	Maj. Col	2LN	E	860	C	158	0.18	C	166	0.19	
03500	BROADWAY RD (ALVA)	SR 80	North RIVER RD	Maj. Col	2LN	E	860	C	280	0.33	C	294	0.34	old count projection(2009)
03700	BUCKINGHAM RD	SR 82	GUNNERY RD	P. Art	2LN	E	990	D	491	0.50	D	516	0.52	
03730	BUCKINGHAM RD	GUNNERY RD	ORANGE RIVER BLVD	P. Art	2LN	E	990	C	395	0.40	C	415	0.42	
03800	BUCKINGHAM RD	ORANGE RIVER BLVD	SR 80	P. Art	2LN	E	990	D	644	0.65	F	1,057	1.07	Buckingham 345 & Portico
03900	BURNT STORE RD	SR 78	VAN BUREN PKWY	Controlled xs	4LD	E	2,950	B	828	0.28	B	870	0.29	
04000	BURNT STORE RD	VAN BUREN PKWY	COUNTY LINE	Controlled xs	2LN	E	1,140	C	528	0.46	C	626	0.55	
04200	BUS 41 (N TAMIAMI TR, S	CITY LIMITS (N END EDISON BRG)	PONDELLA RD	State	6LD	D	3,171	C	1,715	0.54	C	2,082	0.66	
04300	BUS 41 (N TAMIAMI TR, S	PONDELLA RD	SR 78	State	6LD	D	3,171	C	1,715	0.54	C	2,082	0.66	
04400	BUS 41 (N TAMIAMI TR, S	SR 78	LITTLETON RD	State	4LD	D	2,100	C	994	0.47	C	1,245	0.59	
04500	BUS 41 (N TAMIAMI TR, S	LITTLETON RD	US 41	State	4LD	D	2,100	C	596	0.28	C	796	0.38	
04600	CAPE CORAL BRIDGE	DEL PRADO BLVD	McGREGOR BLVD	P. Art	4LB	E	4,000	D	3,097	0.77	D	3,255	0.81	
04700	CAPTIVA DR	BLIND PASS	SOUTH SEAS	Maj. Col	2LN	E	860	C	267	0.31	C	302	0.35	Constrained, old count(2010)

County-Maintained Collector Roadway - Unincorporated Lee County

County-Maintained Collector Roadway - Incorporated Lee County

County-Maintained Arterial Roadway - Unincorporated Lee County

County-Maintained Arterial Roadway - Incorporated Lee County

State-Maintained Arterial Roadway - Unincorporated Lee County

County Maintained Controlled Access Aterial Facility

County Maintained Expressway

APPENDIX E

LEE COUNTY LEVEL OF SERVICE TABLES

Lee County
Generalized Peak Hour Directional Service Volumes
Urbanized Areas

April 2016 c:\input5

Uninterrupted Flow Highway

Level of Service

Lane	Divided	A	B	C	D	E
1	Undivided	130	420	850	1,210	1,640
2	Divided	1,060	1,810	2,560	3,240	3,590
3	Divided	1,600	2,720	3,840	4,860	5,380

Arterials

Class I (40 mph or higher posted speed limit)

Level of Service

Lane	Divided	A	B	C	D	E
1	Undivided	*	140	800	860	860
2	Divided	*	250	1,840	1,960	1,960
3	Divided	*	400	2,840	2,940	2,940
4	Divided	*	540	3,830	3,940	3,940

Class II (35 mph or slower posted speed limit)

Level of Service

Lane	Divided	A	B	C	D	E
1	Undivided	*	*	330	710	780
2	Divided	*	*	710	1,590	1,660
3	Divided	*	*	1,150	2,450	2,500
4	Divided	*	*	1,580	3,310	3,340

Controlled Access Facilities

Level of Service

Lane	Divided	A	B	C	D	E
1	Undivided	*	160	880	940	940
2	Divided	*	270	1,970	2,100	2,100
3	Divided	*	430	3,050	3,180	3,180

Collectors

Level of Service

Lane	Divided	A	B	C	D	E
1	Undivided	*	*	310	660	740
1	Divided	*	*	330	700	780
2	Undivided	*	*	730	1,440	1,520
2	Divided	*	*	770	1,510	1,600

Note: the service volumes for I-75 (freeway), bicycle mode, pedestrian mode, and bus mode should be from FDOT's most current version of LOS Handbook.

APPENDIX F

ALICO ROAD EXTENSION TRAFFIC TECHNICAL MEMORANDUM, PREPARED BY KISINGER CAMPO & ASSOCIATES DATED MARCH 2022

Lee County
Southwest Florida

Alico Road Extension

Traffic Technical Memorandum

Prepared by:

KCA | KISINGER CAMPO & ASSOCIATES

201 N Franklin St Ste 400

March 2022

5.1. Future Year Turning Movement Volumes

The traffic design factors presented in **Section 2.3** were used to compute future year peak hour volumes. The FDOT TURNS5 tool was used to help in estimating future years turning movement counts. Output worksheets from TURNS5 can be found in **Appendix J.** The peak hour intersection turning movement volumes were checked for reasonableness and manually adjusted where necessary and appropriate. Directional AM peak hour volumes were obtained from the reciprocal movement PM peak hour volumes and vice versa. Intersection turning movement volumes were balanced with those of the adjacent intersections such that no addition or deletion of traffic volumes is needed to build the network simulation model. Figures 5.5, 5.6, and 5.7 depict the AM and PM turning movement volumes for the Design Year 2045 No-Build, Opening Year 2025, and Design Year 2045 Build, respectively, along Alico Road. Figures 5.8, 5.9, and 5.10 depict the AM and PM turning movement volumes for the Design Year 2045 No-Build, Opening Year 2025, and Design Year 2045 Build, respectively, along Sunshine Boulevard.

Figure 5.5 Alico Road Design Year 2045 No-Build Turning Movement Volumes

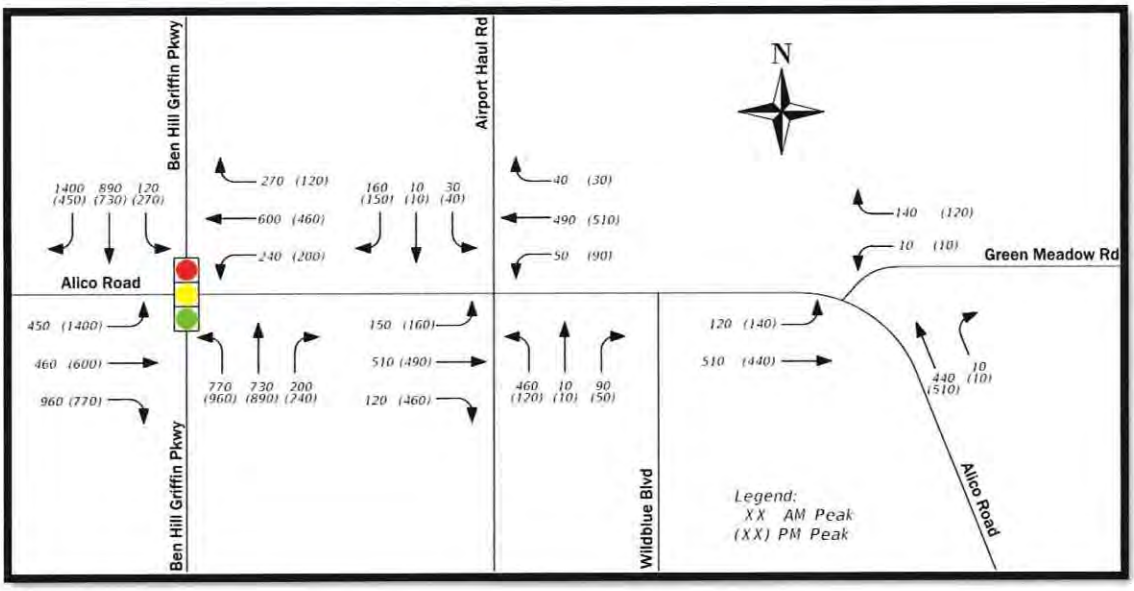


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Figure 5.6 Alico Road Opening Year 2025 Build Turning Movement Volumes

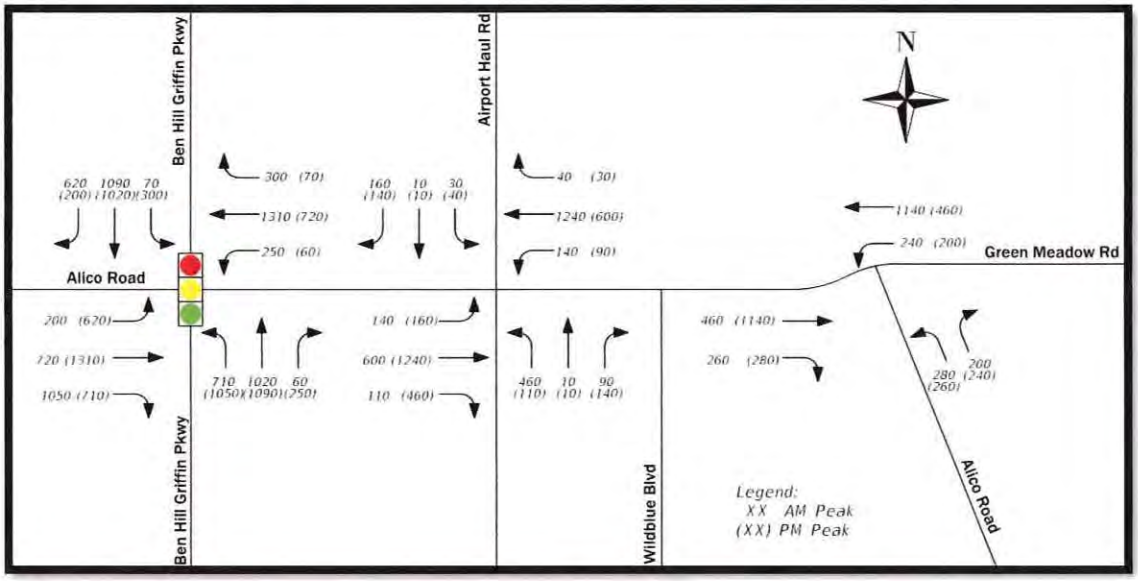

Figure 5.7 Alico Road Design Year 2045 Build Turning Movement Volumes

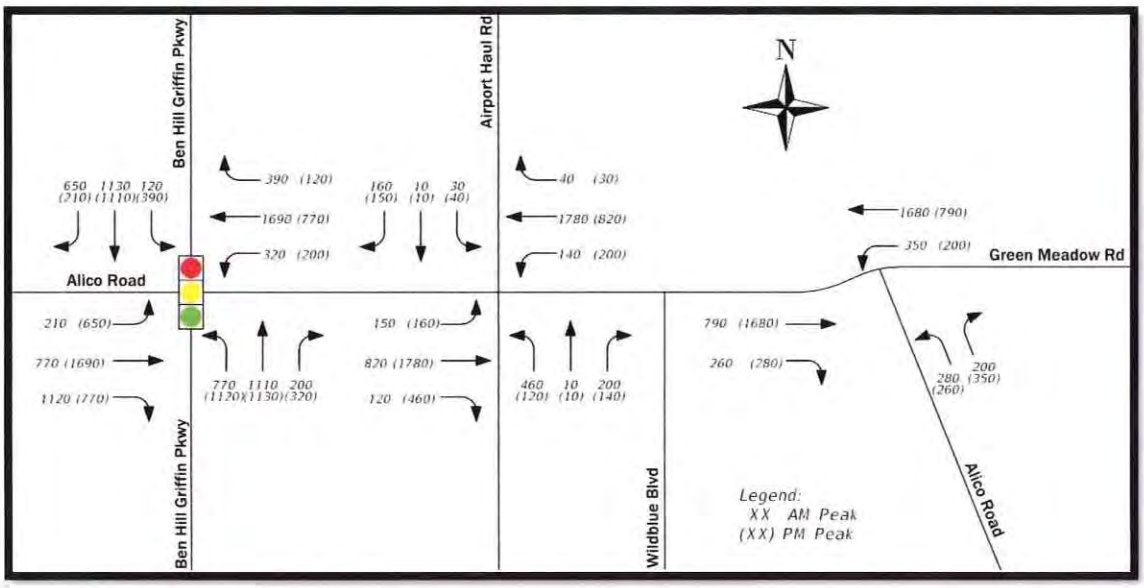

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Figure 5.8 Sunshine Blvd Design Year 2045 No-Build Turning Movement Volumes

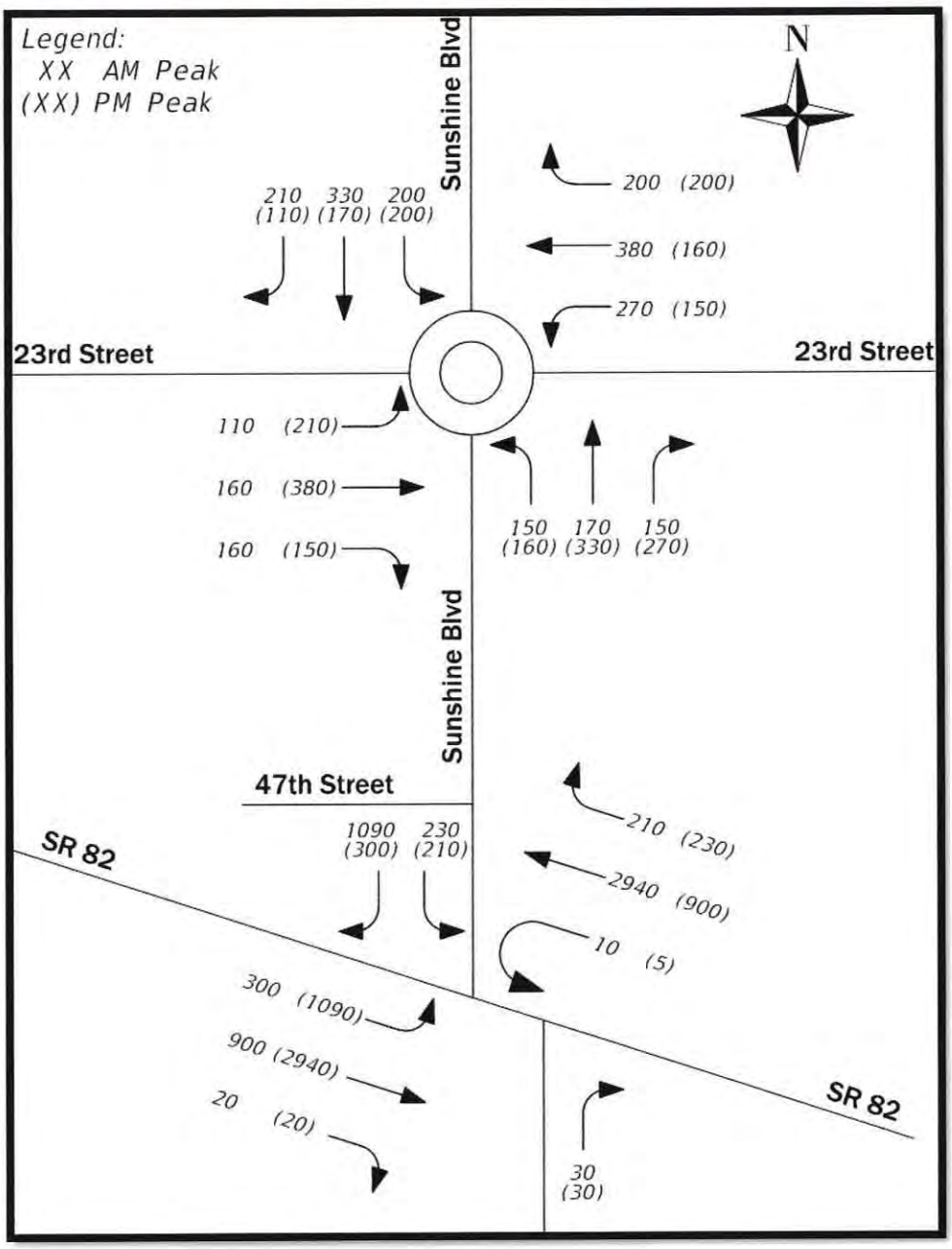

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Figure 5.9 Sunshine Blvd Opening Year 2025 Build Turning Movement Volumes

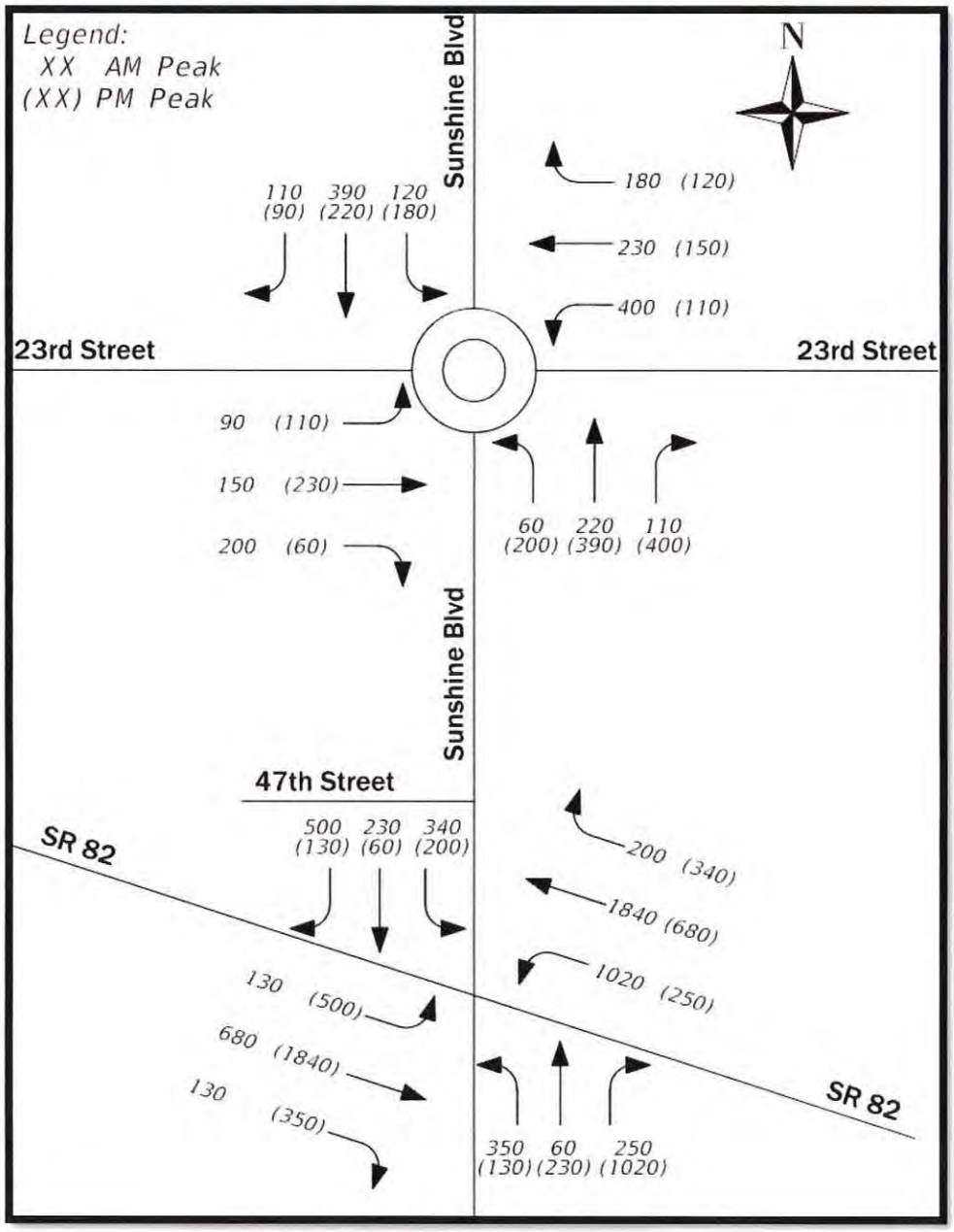

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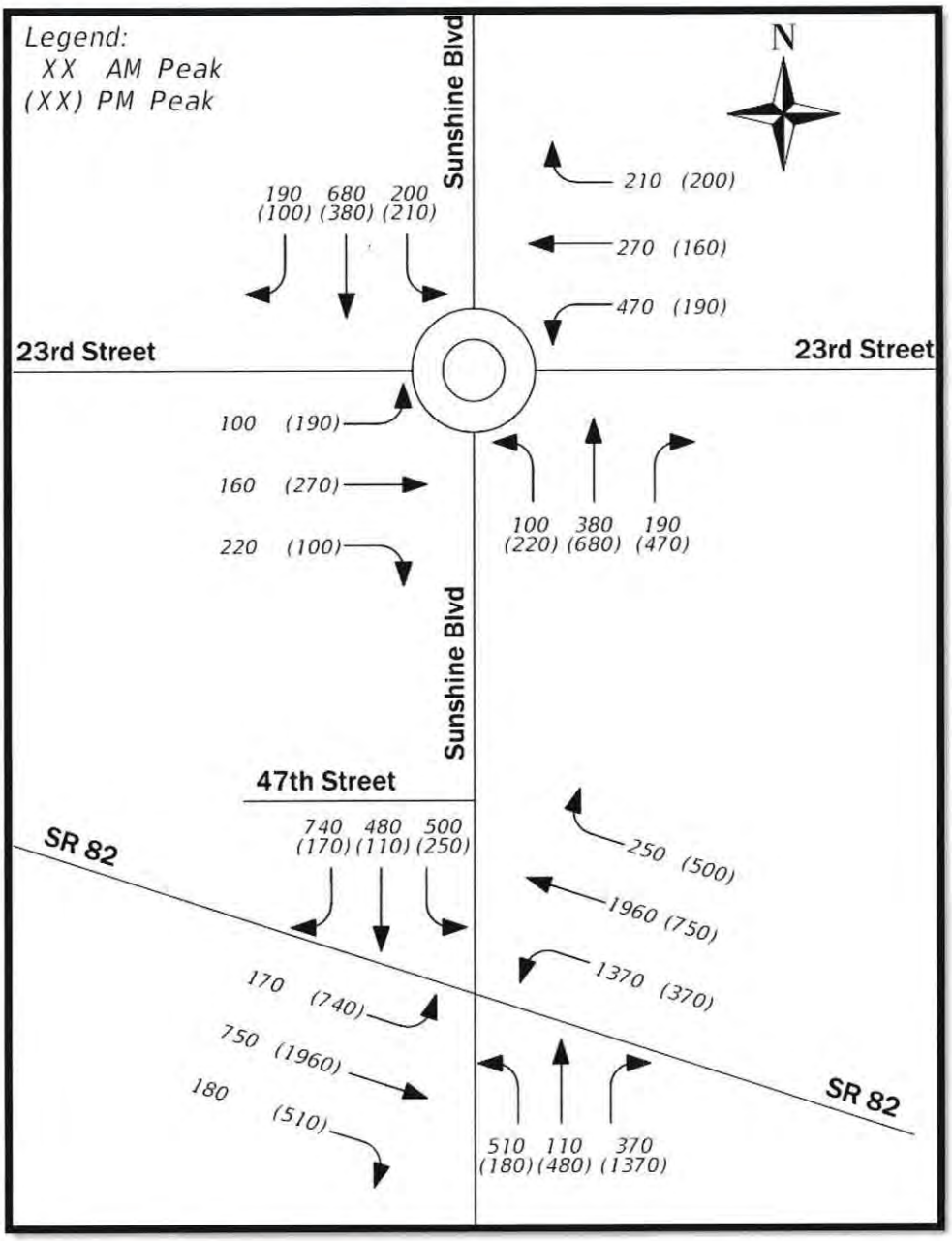
Figure 5.10 Sunshine Blvd Design Year 2045 Build Turning Movement Volumes



6. Design Year 2045 LOS Analysis

Design Year 2045 level of service (LOS) analysis was conducted based on the methodology outlined in the Highway Capacity Manual, 6th Edition using Synchro 11 and the Highway Capacity Software (HCS) for the signalized and unsignalized intersection LOS analysis. Delays and LOS for roundabout intersections were calculated using SIDRA INTERSECTION 8 software for the AM and PM peak hour volumes.

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Alternative One geometry is the No-Build scenario. The Alternative One Design Year 2045 arterial LOS for each segment of Alico Road and Sunshine Boulevard is shown in Table 6.1. The arterial analysis shows that all the segments are expected to operate at an acceptable LOS except Alico Road between the I-75 ramps and Sunshine Boulevard between SR 82 and 40th Street. The 2045 AM and PM peak hour LOS for the Alternative One geometry for each intersection is presented in Table 6.2. The Design Year 2045 analysis shows that the Ben Hill Griffin Parkway and Airport Haul Road intersections along Alico Road and the SR 82 and 23rd Street intersections along Sunshine Boulevard are expected to operate at an unacceptable LOS with the existing geometry. At the current two-way stop-controlled intersections at Airport Haul Road and SR 82, the minor road delay in the Design Year 2045 is too high that HCS cannot accurately depict the delay. Therefore, a maximum delay of 300 seconds was used. **Appendix D** includes copies of the Synchro, HCS, and SIDRA LOS output spreadsheets.

Table 6.1 Design Year 2045 Arterial LOS – Alternative One

Segment	Northbound/Eastbound				Southbound/Westbound			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Alico Road	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
West of I-75 SB Ramp	1230	C	2130	D	N/A			
I-75 SB Ramp to I-75 NB Ramp	1700	C	2480	D	3320	E	2510	E
I-75 NB Ramp to Ben Hill Griffin Pkwy	1870	D	2770	D	2770	C	1870	C
Ben Hill Griffin Pkwy to Airport Haul Rd	780	B	1110	B	1110	B	780	C
Airport Haul Rd to Green Meadow Rd	630	C	580	C	580	C	630	C
East of Green Meadow Rd	520	C	450	C	450	C	520	C
Sunshine Boulevard	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
SR 82 to 40th Street	510	E	1320	E	1320	E	510	E
40th Street to 23rd Street	470	D	760	D	760	D	470	D
North of 23rd Street	480	D	740	D	740	D	480	D

Signalized (Synchro Results)

Table 6.2 Design Year 2045 Intersection LOS – Alternative One

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alico Road at Ben Hill Griffin Parkway	E	66.9	F	114.4
Alico Road at Airport Haul Road	F	>300	F	>300
Alico Road at Green Meadow Road	B	12.2	B	12.5
Sunshine Boulevard at SR 82	F	>300	F	>300
Sunshine Boulevard at 23rd Street	F	166.6	F	115.8

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6.1. Proposed Geometry

Alternative Two geometry consists of the new four-lane Alico Road extension from the Alico Road at Green Meadow Road intersection to the SR 82 at Sunshine Boulevard intersection. Alternative Two also consists of widening Alico Road from two to four lanes from Airport Haul Road to Green Meadow Road and Sunshine Boulevard from two to four lanes from SR 82 to 40th Street. Figures 6.1 and 6.2 show the Alternative Two lane geometry along Alico Road and Sunshine Boulevard. Intersection improvements in Alternative Two include a T intersection with a continuous green westbound movement at Alico Road and Green Meadow Road (Figure 6.3) and a partial displaced left turn (continuous flow) intersection at SR 82 and Sunshine Boulevard (Figure 6.4).

Figure 6.1 Alico Road Alternative Two Geometry

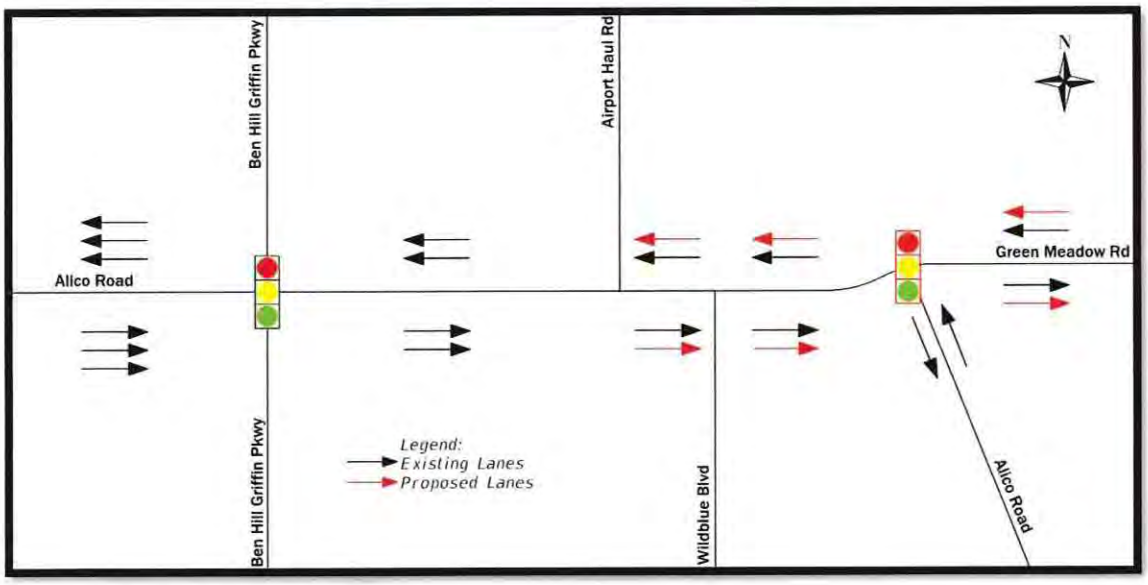

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Figure 6.2 Sunshine Boulevard Alternative Two Geometry

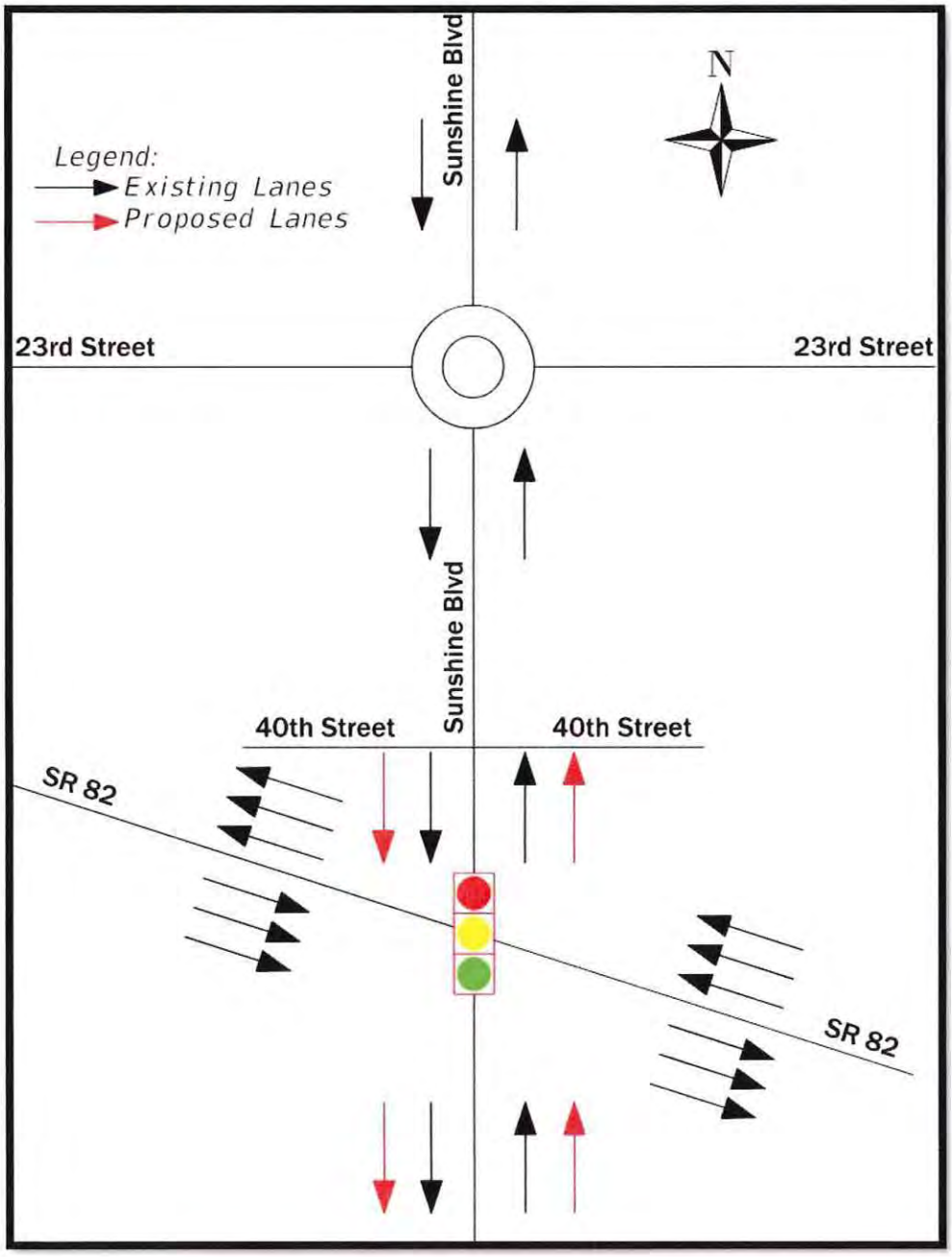

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Figure 6.3 Alico Road at Green Meadow Road Proposed Geometry

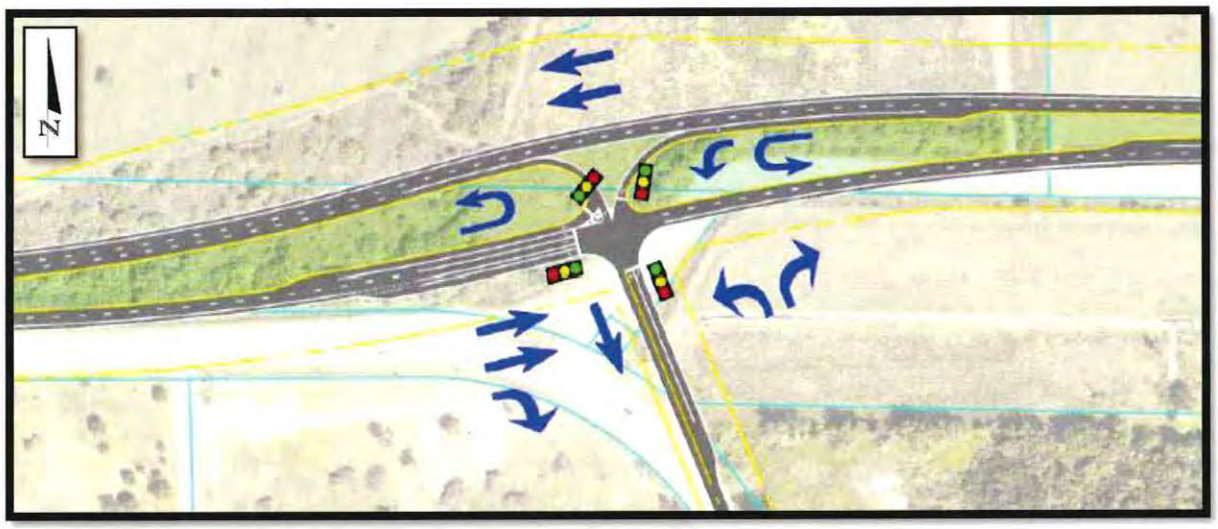

Figure 6.4 SR 82 at Sunshine Boulevard Proposed Geometry

The Alternative Two Opening Year 2025 arterial LOS for each segment of Alico Road and Sunshine Boulevard is shown in Table 6.3. The arterial analysis shows that all the segments except three in Alternative Two are expected to operate at an acceptable LOS. The Opening Year 2025 AM and PM peak hour LOS for the Alternative Two geometry for each intersection is presented in Table 6.4. The Opening Year 2025 analysis shows that the Ben Hill Griffin Parkway and Airport Haul Road intersections along Alico Road and the Sunshine Boulevard at 23rd Street intersection are expected to operate at an unacceptable LOS with the Alternative Two geometry. **Appendix D** includes copies of the Synchro, HCS, and SIDRA LOS output spreadsheets.

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Table 6.3 Opening Year 2025 Arterial LOS – Alternative Two

Segment	Northbound/Eastbound				Southbound/Westbound			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Alico Road	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
West of I-75 SB Ramp	1330	C	2000	D	N/A			
I-75 SB Ramp to I-75 NB Ramp	1800	C	2350	C	3190	E	2610	D
I-75 NB Ramp to Ben Hill Griffin Pkwy	1970	D	2640	F	2640	D	1970	C
Ben Hill Griffin Pkwy to Airport Haul Rd	850	B	1860	C	1860	B	850	B
Airport Haul Rd to Green Meadow Rd	720	A	1420	C	1420	C	720	A
East of Green Meadow Rd	N/A				480	C	500	C
Green Meadow Rd to SR 82 (Extension)	660	A	1380	B	1380	B	660	A
Sunshine Boulevard	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
SR 82 to 40th Street	390	A	1070	B	1070	B	390	A
40th Street to 23rd Street	390	E	990	E	990	E	390	E
North of 23rd Street	490	C	620	C	620	C	490	C

Signalized (Synchro Results)

Table 6.4 Opening Year 2025 Intersection LOS – Alternative Two

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alico Road at Ben Hill Griffin Parkway	F	88.7	F	101.6
Alico Road at Airport Haul Road	F	>300	F	>300
Alico Road at Green Meadow Road	B	16.1	C	27.5
Sunshine Boulevard at SR 82	D	36.3	D	45.6
Sunshine Boulevard at 23rd Street	F	109.2	F	122.6

The Alternative Two Design Year 2045 arterial LOS for each segment of Alico Road and Sunshine Boulevard is shown in Table 6.5. The arterial analysis shows that all the segments are expected to operate at an acceptable LOS except Alico Road between the I-75 ramps and Ben Hill Griffin Parkway and Sunshine Boulevard between 40th Street and north of 23rd Street. The Design Year 2045 AM and PM peak hour LOS for the Alternative Two geometry for each intersection is presented in Table 6.6. The Design Year 2045 analysis shows that the Ben Hill Griffin Parkway and Airport Haul Road intersections along Alico Road and the Sunshine Boulevard at 23rd Street intersection are expected to operate at an unacceptable LOS with the Alternative Two geometry. **Appendix D** includes copies of the Synchro, HCS, and SIDRA LOS output spreadsheets.

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Table 6.5 Design Year 2045 Arterial LOS – Alternative Two

Segment	Northbound/Eastbound				Southbound/Westbound			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Alico Road	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
West of I-75 SB Ramp	1460	C	2470	D	N/A			
I-75 SB Ramp to I-75 NB Ramp	1930	C	2820	D	3660	F	2740	D
I-75 NB Ramp to Ben Hill Griffin Pkwy	2100	D	3110	F	3110	D	2100	C
Ben Hill Griffin Pkwy to Airport Haul Rd	1090	B	2400	D	2400	C	1090	B
Airport Haul Rd to Green Meadow Rd	1050	B	1960	D	1960	D	1050	B
East of Green Meadow Rd	N/A				480	C	610	C
Green Meadow Rd to SR 82 (Extension)	990	B	2030	C	2030	C	990	B
Sunshine Boulevard	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
SR 82 to 40th Street	530	A	1720	C	1720	C	530	A
40th Street to 23rd Street	670	E	1370	E	1370	E	670	E
North of 23rd Street	690	E	1070	E	1070	E	690	E

Signalized (Synchro Results)

Table 6.6 Design Year 2045 Intersection LOS – Alternative Two

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alico Road at Ben Hill Griffin Parkway	F	124.8	F	167.5
Alico Road at Airport Haul Road	F	>300	F	>300
Alico Road at Green Meadow Road	B	19.1	D	34.9
Sunshine Boulevard at SR 82	D	42.6	D	46.8
Sunshine Boulevard at 23rd Street	F	>300	F	>300

Alternative Three consists of the improvements included in Alternative Two as well as additional widening along Alico Road and Sunshine Boulevard and lanes at the intersections of Alico Road at Ben Hill Griffin Parkway and Sunshine Boulevard at 23rd Street. Alternative Three consists of widening Alico Road from four to six lanes from Ben Hill Griffin Parkway to Airport Haul Road and Sunshine Boulevard from two to four lanes from SR 82 to north of 23rd Street. Figures 6.5 and 6.6 show the Alternative Three segment and intersection lane geometry along Alico Road. Figures 6.7 and 6.8 show the Alternative Three segment lane geometry along Sunshine Boulevard and intersection lane geometry at Sunshine Boulevard and 23rd Street.

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Figure 6.5 Alico Road Alternative Three Segment Geometry

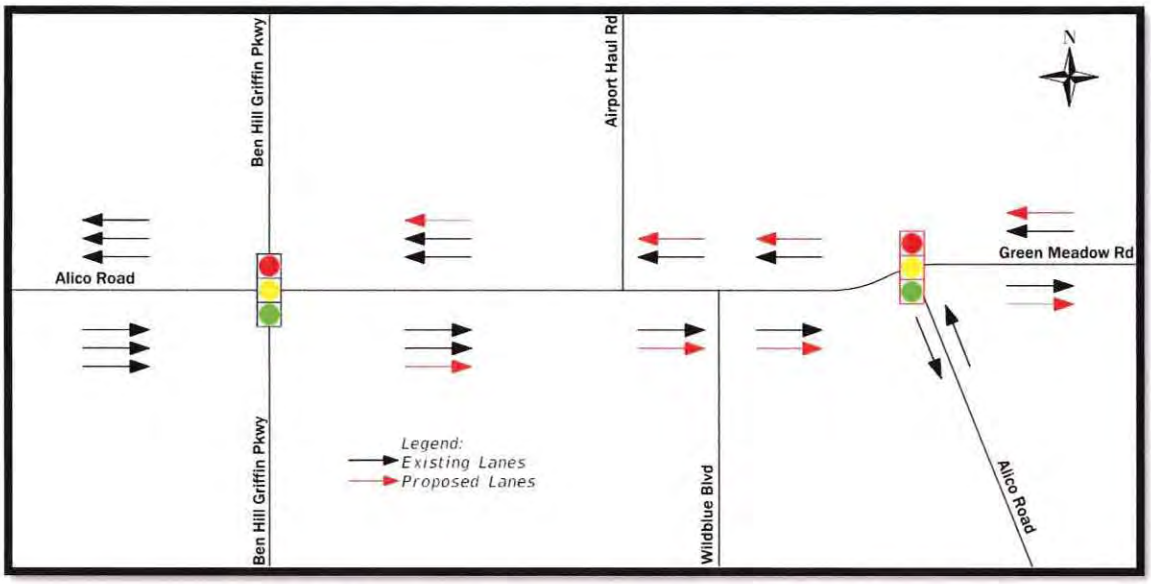

Figure 6.6 Alico Road Alternative Three Intersection Geometry

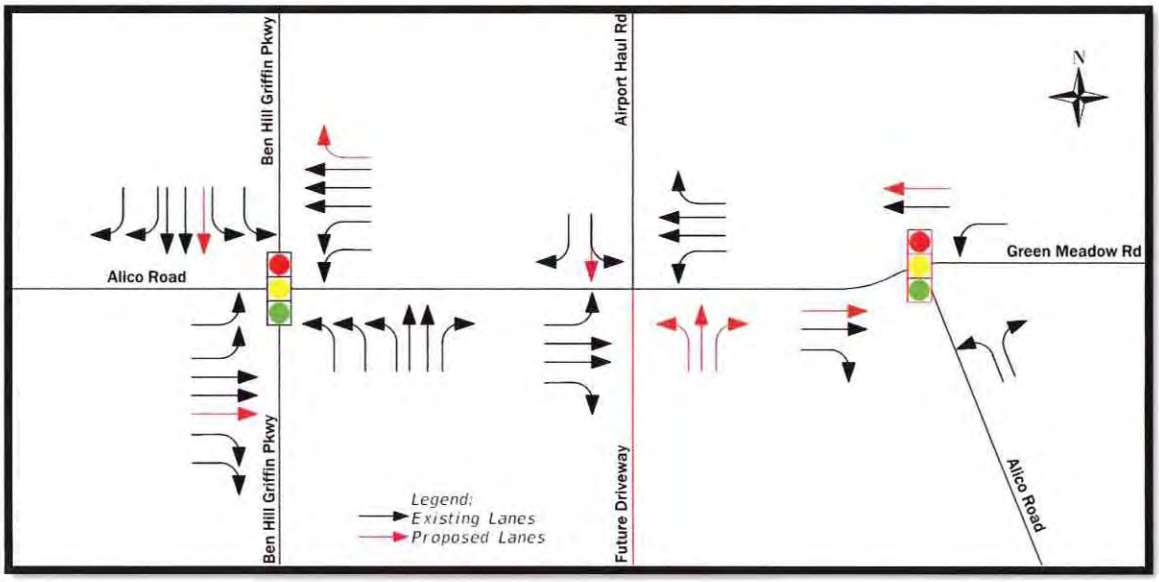

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Figure 6.7 Sunshine Boulevard Alternative Three Segment Geometry

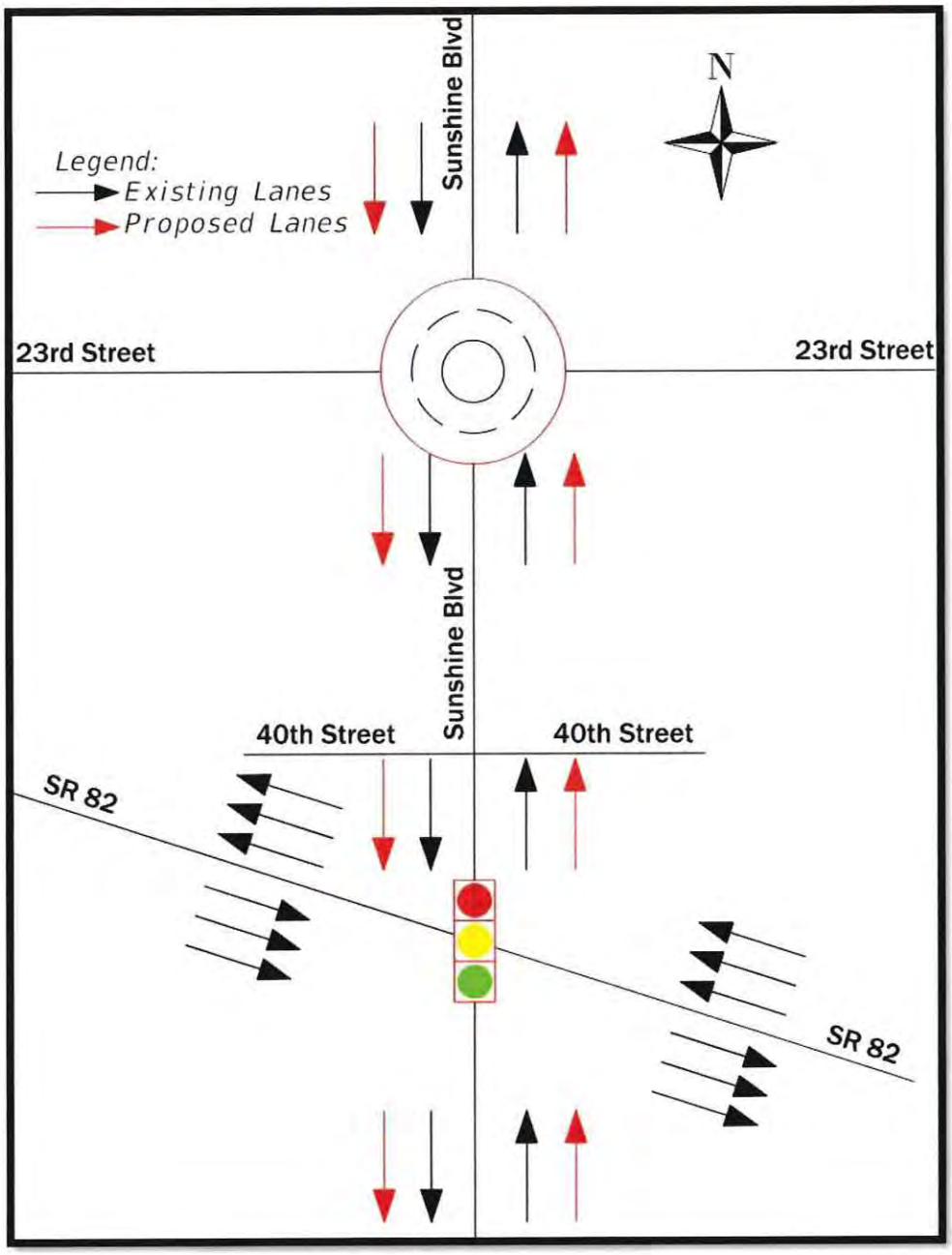

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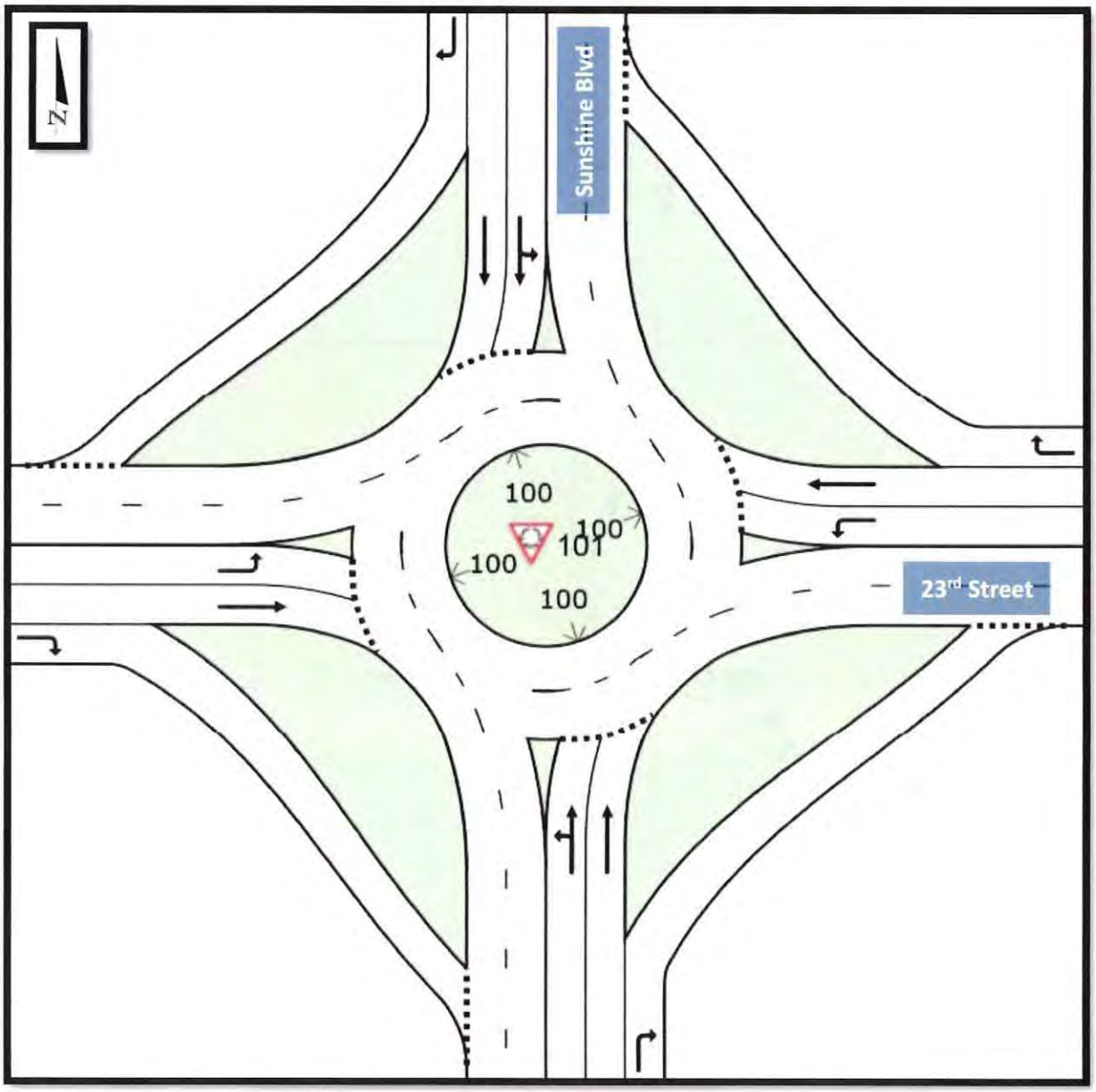
Figure 6.8 Sunshine Boulevard at 23rd Street Alternative Three Geometry



The Alternative Three Design Year 2045 arterial LOS for each segment of Alico Road and Sunshine Boulevard is shown in Table 6.7. The arterial analysis shows that all the segments are expected to operate at an acceptable LOS except Alico Road between the northbound I-75 ramp and Ben Hill Griffin Parkway. The Design Year 2045 AM and PM peak hour LOS for the Alternative Three geometry for each intersection is presented in Table 6.8. The Design Year 2045 analysis shows that the Ben Hill Griffin Parkway and Airport Haul Road intersections along Alico Road and the Sunshine Boulevard at 23rd Street intersection are expected to operate at an unacceptable LOS with the Alternative Three geometry. **Appendix D** includes copies of the Synchro, HCS, and SIDRA LOS output spreadsheets.

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Table 6.7 Design Year 2045 Arterial LOS – Alternative Three

Segment	Northbound/Eastbound				Southbound/Westbound			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Alico Road	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
West of I-75 SB Ramp	1460	C	2470	D	N/A			
I-75 SB Ramp to I-75 NB Ramp	1930	B	2820	D	3660	D	2740	D
I-75 NB Ramp to Ben Hill Griffin Pkwy	2100	D	3110	E	3110	D	2100	C
Ben Hill Griffin Pkwy to Airport Haul Rd	1090	A	2400	C	2400	C	1090	B
Airport Haul Rd to Green Meadow Rd	1050	B	1960	D	1960	D	1050	B
East of Green Meadow Rd	N/A				480	C	610	C
Green Meadow Rd to SR 82 (Extension)	990	B	2030	C	2030	C	990	B
Sunshine Boulevard	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
SR 82 to 40th Street	530	A	1720	C	1720	C	530	A
40th Street to 23rd Street	670	A	1370	C	1370	C	670	A
North of 23rd Street	690	A	1070	B	1070	B	690	A

Signalized (Synchro Results)

Table 6.8 Design Year 2045 Intersection LOS – Alternative Three

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alico Road at Ben Hill Griffin Parkway	E	65.9	F	85.5
Sunshine Boulevard at 23rd Street	E	37.5	C	18.5

Based on the traffic projections and LOS analysis, the extension of Alico Road from the Alico Road at Green Meadow Road intersection to the SR 82 at Sunshine Boulevard intersection is recommended to be a four-lane roadway in the Opening Year 2025. This segment is not expected to exceed the capacity of a four-lane roadway until the future year 2062 based on the known access point density and number of signalized intersections along the corridor. However, if more access points with signalized intersections are added along the roadway after the Opening Year 2025, this segment is expected to reach four-lane capacity sooner than the future year 2062.

With the extension of Alico Road from Green Meadow Road to SR 82, adjacent roadway segments and intersections are expected to exceed the existing capacity in the Design Year 2045. The segment of Alico Road from Airport Haul Road to Green Meadow Road is currently a two-lane roadway. This segment is expected to require widening from two to four lanes by the Opening Year 2025. The segment of Alico Road from Ben Hill Griffin Parkway to Airport Haul Road is currently a four-lane roadway. This segment is expected to require widening from four to six lanes by the future year 2048. However, similar to the new

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extension segment, if more access points with signalized intersections are added along the roadway after the Opening Year 2025, this segment is expected to reach four-lane capacity sooner than the future year 2048. Table 6.9 summarizes the existing, proposed, and future lanes along the project limits and the years widening is needed by.

The segment of Sunshine Boulevard from SR 82 to 23rd Street is currently a two-lane roadway. This segment is expected to require widening from two to four lanes by the Opening Year 2025. The segment of Sunshine Boulevard north of 23rd Street is currently a two-lane roadway. This segment is expected to require widening from two to four lanes by the future year 2036.

Table 6.9 Lane Geometry Summary

Segment	Existing Lanes	Proposed Lanes	Year Needed	Future Lanes	Year Needed
Alico Road					
West of I-75 SB Ramp	6-Lane	6-Lane	N/A	6-Lane	N/A
I-75 SB Ramp to I-75 NB Ramp	6-Lane	6-Lane	N/A	6-Lane	N/A
I-75 NB Ramp to Ben Hill Griffin Pkwy	6-Lane	6-Lane	N/A	6-Lane	N/A
Ben Hill Griffin Pkwy to Airport Haul Rd	4-Lane	4-Lane	N/A	6-Lane	2048
Airport Haul Rd to Green Meadow Rd	2-Lane	4-Lane	2025	4-Lane	N/A
East of Green Meadow Rd	2-Lane	2-Lane	N/A	2-Lane	N/A
Green Meadow Rd to SR 82 (Extension)	N/A	4-Lane	2025	6-Lane	2062
Sunshine Boulevard					
SR 82 to 40th Street	2-Lane	4-Lane	2025	4-Lane	N/A
40th Street to 23rd Street	2-Lane	4-Lane	2025	4-Lane	N/A
North of 23rd Street	2-Lane	4-Lane	2036	4-Lane	N/A

The intersections of Alico Road at Green Meadow Road and SR 82 at Sunshine Boulevard are expected to require significant improvements with the addition of the new roadway extension. The existing geometry at both intersections will no longer be feasible to serve the projected traffic volumes. Therefore, FDOT ICE analysis has been conducted for the intersections of Alico Road at Green Meadow Road and SR 82 at Sunshine Boulevard to determine the most preferred and feasible intersection alternative. The initial results include CAP-X analysis to determine the alternatives with the best traffic operations. Since traffic patterns change dramatically at the intersection with the new extension, the 2025 Opening Year turning movement volumes were used to analyze the intersection. The best two operating alternatives for the Alico Road at Green Meadow Road intersection were a Continuous Green T and a traffic signal. The best three operating alternatives for the SR 82 at Sunshine Boulevard intersection were a full Displaced Left Turn, a Quadrant Roadway N-W, and a Partial Displaced Left Turn E-W. These initial results are depicted in Figures 6.9 and 6.10 and included in **Appendix K**. The AM and PM peak hour LOS for the proposed intersection alternatives at both intersections is presented in Table 6.10.

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Figure 6.9 Alico Road at Green Meadow Road CAP-X Results

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Multimodal Score	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
Continuous Green T S	0.68	1	4.4	Fair	Fair	Excellent
Traffic Signal	0.74	2	7.2	Good	Good	Excellent
Signalized Restricted Crossing U-Turn E-W	0.85	3	9.4	Excellent	Excellent	Good
1NS X 2EW	1.11	4	8.3	Good	Excellent	Excellent
2 X 2	1.11	4	8.3	Good	Excellent	Excellent
2NS X 1EW	2.09	6	8.3	Good	Excellent	Excellent
Unsignalized Restricted Crossing U-Turn E-W	2.12	7	6.7	Good	Good	Good
1 X 1	2.27	8	10.0	Excellent	Excellent	Excellent
All-Way Stop Control	2.66	9	10.0	Excellent	Excellent	Excellent
Two-Way Stop Control E-W	453.20	10	5.6	Fair	Good	Excellent

Figure 6.10 SR 82 at Sunshine Boulevard CAP-X Results

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Multimodal Score	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
Displaced Left Turn	0.63	1	4.8	Fair	Fair	Good
Quadrant Roadway N-W	0.70	2	4.4	Fair	Fair	Fair
Partial Displaced Left Turn E-W	0.71	3	4.8	Fair	Fair	Good
Quadrant Roadway S-W	0.75	4	4.4	Fair	Fair	Fair
Quadrant Roadway S-E	0.79	5	4.4	Fair	Fair	Fair
Quadrant Roadway N-E	0.80	6	4.4	Fair	Fair	Fair
Signalized Restricted Crossing U-Turn E-W	0.86	7	6.3	Good	Good	Fair
Partial Median U-Turn E-W	0.94	8	6.3	Good	Good	Fair
Traffic Signal	0.95	9	4.8	Fair	Fair	Good
Median U-Turn E-W	0.96	10	6.3	Good	Good	Fair

The Alico Road at Green Meadow Road intersection is expected to require a traffic signal to provide an acceptable LOS at the intersection. Three alternatives were evaluated at this intersection including a traditional traffic signal, a Continuous Green T intersection, and a Continuous Green T intersection with a northbound left-turn flyover ramp. Each alternative is expected to provide an acceptable LOS at the intersection in the Design Year 2045.

The SR 82 at Sunshine Boulevard intersection is expected to exceed the capacity of a traditional signalized intersection with the Opening Year 2025 traffic volumes. Therefore, more innovative and unique intersection designs were evaluated to provide an acceptable LOS in the Design Year 2045 including a full

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and a partial displaced left turn (continuous flow) intersection. Both the partial and full displaced left turn intersection designs are expected to provide an acceptable LOS in the Design Year 2045. The full displaced left turn provides slightly less delays than the partial displaced left turn.

Table 6.10 Proposed Intersection LOS

Intersection	Year	Alternative	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alico Rd at Green Meadow Rd	2025	Traffic Signal	C	25.7	C	30.7
		NB Left-turn Flyover	A	6.3	A	9.7
		Continuous Green T	B	16.1	C	27.5
	2045	Traffic Signal	D	31.3	D	45.5
		NB Left-turn Flyover	A	6.6	B	17.2
		Continuous Green T	B	19.1	D	34.9
SR 82 at Sunshine Blvd	2025	Traffic Signal	E	62.0	E	61.6
		Partial Displaced Left Turn	D	36.3	D	45.6
		Full Displaced Left Turn	D	35.9	D	44.2
	2045	Traffic Signal	F	145.6	F	116.8
		Partial Displaced Left Turn	D	42.6	D	46.8
		Full Displaced Left Turn	D	39.6	D	45.7

6.2. Turn Lane Lengths

With the proposed intersection geometry along the Alico Road extension, new turn lanes are being added. According to the FDOT Design Manual Chapter 212.6, the total deceleration distance is based on the design speed. The design speed limit along Alico Road and Sunshine Boulevard is 45 mph and along SR 82 is 55 mph. The resulting distance is added to the queue length to result in the required turn-lane length. The queue lengths for each location were chosen from the highest length from the Synchro AM and PM models. The minimum queue length was determined to be 50 feet, two vehicle lengths. The total deceleration distances, queue lengths, and total required turn-lane lengths are presented in Table 6.11.

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Table 6.11 Turn Lane Lengths

Intersection	Approach	Total Deceleration Distance (Feet)	Queue Length (Feet)			Required Length (Feet)	
			Left Turn	Through	Right Turn	Left Turn	Right Turn
Alico Rd at Green Meadow Rd	Northbound	185	425	325		610	510
	Eastbound	185	N/A	850	200	N/A	385*
	Westbound	185	350	continuous green		535	N/A
SR 82 at Sunshine Blvd	Northbound	185	350	275	50	535	235*
	Southbound	185	325	475	50	510	235*
	Eastbound	350	400	525	125	750	475*
	Westbound	350	775	500	250	1125	600

*The left-turn and right-turn storage lanes lengths will need to exceed the through lane queue length for the turn lanes to remain accessible.

6.3. Safety (Crash) Analysis

The majority of the crashes along Alico Road occurred at the intersections of Airport Haul Road (about 34.62% of total) and Green Meadow Road (about 30.77% of total). Based on the five-year historical trends and crash types, the horizontal curve geometry at the Green Meadow Road intersection is determined to be the major resulting factor of the crashes. The lack of median east of Innovation Lane and excessive speeds leading to run off the road crashes are also determined to be resulting factors of many crashes. These crashes would be reduced with the proposed widening and intersection geometry improvements discussed in **Section 6.1**.

Tables 6.12 and 6.13 summarize the reduction of crashes using the crash modification factors (CMF) included in the proposed geometry. CMF from the USDOT/FHWA CMF Clearinghouse were applied for the appropriate improvements within the study area. **Appendix E** includes copies of the CMF details. The CMF were selected for the conversion of a two-lane roadway to a four-lane divided roadway and flattening a horizontal curve.

The total crashes along Alico Road east of Innovation Lane from the five-year study are expected to be reduced by 28.8% with the conversion of the two-lane roadway to four-lane divided roadway.

Table 6.12 Projected Number of Crashes in 5 Years along Alico Rd east of Innovation Ln

Segment	Existing Crashes	Two-Lane to Four-Lane	
		CMF	Projected Crashes
East of Innovation Lane	9	0.712	6.41

The total crashes for the intersection of Alico Road at Green Meadow Road from the five-year study are expected to be reduced by 68.5% by eliminating the horizontal curve.

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Table 6.13 Projected Number of Crashes in 5 Years for Alico Rd at Green Meadow Rd

Intersection	Existing Crashes	Flatten Horizontal Curve	
		CMF	Projected Crashes
Green Meadow Road	8	0.315	2.52

7. Conclusions and Recommendations

Below is a summary of recommended improvements within the study area.

The Alico Road Extension is recommended based on the future land use and growth in the project area. The extension will serve as a major southwest to northeast connector in the surrounding project area and is expected to provide considerable relief to the adjacent roadway segments. Currently, Ben Hill Griffin Parkway and Daniels Parkway are the only main arterials used to travel between Estero and Lehigh Acres. The extension will provide an alternative travel route to accommodate this significant traffic demand. Traffic volumes are expected to reduce along Daniels Parkway, Ben Hill Griffin Parkway, and SR 82 by approximately 27%, 18%, and 8%, respectively. This reduction in traffic volumes along these roadways are expected to delay any needed improvements to the roadways and intersections.

Based on the traffic projections and LOS analysis, the extension of Alico Road from the Alico Road at Green Meadow Road intersection to the SR 82 at Sunshine Boulevard intersection is recommended to be a four-lane roadway in the Opening Year 2025. This segment is not expected to exceed the capacity of a four-lane roadway until the future year 2062 based on the known access point density and number of signalized intersections along the corridor. However, if more access points with signalized intersections are added along the roadway after the Opening Year 2025, this segment is expected to reach four-lane capacity sooner than the future year 2062.

With the extension of Alico Road from Green Meadow Road to SR 82, adjacent roadway segments and intersections are expected to exceed the existing capacity in the Design Year 2045. The segment of Alico Road from Ben Hill Griffin Parkway to Airport Haul Road is currently a four-lane roadway. This segment is expected to require widening from four to six lanes by the future year 2048. However, similar to the new extension segment, if more access points with signalized intersections are added along the roadway after the Opening Year 2025, this segment is expected to reach four-lane capacity sooner than the future year 2048. The segment of Alico Road from Airport Haul Road to Green Meadow Road is currently a two-lane roadway. This segment is recommended to be widened from two to four lanes by the Opening Year 2025.

The segment of Sunshine Boulevard from SR 82 to 23rd Street is currently a two-lane roadway. This segment is recommended to be widened from two to four lanes by the Opening Year 2025. The segment of Sunshine Boulevard north of 23rd Street is currently a two-lane roadway. This segment is recommended to be widened from two to four lanes by the future year 2036. Further analysis of this segment is recommended in the future since the traffic volumes along this segment are very much dependent on the potential future extension of Sunshine Boulevard to SR 80.

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Table 7.1 provides a summary of the recommended lane geometry of each roadway segment.

Table 7.1 Lane Geometry Recommendations

Segment	Existing Lanes	Recommended Lanes	Year Needed
Alico Road			
West of I-75 SB Ramp	6-Lane	6-Lane	N/A
I-75 SB Ramp to I-75 NB Ramp	6-Lane	6-Lane	N/A
I-75 NB Ramp to Ben Hill Griffin Pkwy	6-Lane	6-Lane	N/A
Ben Hill Griffin Pkwy to Airport Haul Rd	4-Lane	4-Lane	N/A
Airport Haul Rd to Green Meadow Rd	2-Lane	4-Lane	2025
East of Green Meadow Rd	2-Lane	2-Lane	N/A
Green Meadow Rd to SR 82 (Extension)	N/A	4-Lane	2025
Sunshine Boulevard			
SR 82 to 40th Street	2-Lane	4-Lane	2025
40th Street to 23rd Street	2-Lane	4-Lane	2025
North of 23rd Street	2-Lane	4-Lane	2036

The intersections of Alico Road at Green Meadow Road and SR 82 at Sunshine Boulevard are expected to require significant improvements with the addition of the new roadway extension. The existing geometry at both intersections will no longer be feasible to serve the projected traffic volumes.

The Alico Road at Green Meadow Road intersection is expected to require a traffic signal to provide an acceptable LOS at the intersection. A Continuous Green T intersection is recommended based on the lower delays compared to the traffic signal alternative and lower cost compared to the flyover ramp alternative. Due to the high truck traffic expected to continue to travel east and west through this intersection, a Continuous Green T intersection is recommended to provide zero delays for vehicles traveling westbound through the intersection. A Continuous Green T intersection will also improve the safety at the intersection and the approaches.

The SR 82 at Sunshine Boulevard intersection is expected to exceed the capacity of a traditional signalized intersection with the Opening Year 2025 traffic volumes. Therefore, a partial displaced left turn (continuous flow) intersection is recommended to provide an acceptable LOS in the Design Year 2045. Although, the full displaced left turn alternative provides slightly less delays than the partial displaced left turn alternative, the partial displaced left turn alternative is recommended to reduce construction and right-of-way costs. The partial displaced left turn alternative will provide a highly efficient operating intersection similar to the one newly constructed at SR 82 and Daniels Parkway.

The intersections of Alico Road at Ben Hill Griffin Parkway and Sunshine Boulevard at 23rd Street are expected to require capacity improvements. Further evaluation of both intersections is recommended to provide acceptable LOS in the Design Year 2045.

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The additional westbound right-turn lane, eastbound through lane, and southbound through lane are recommended at the Alico Road and Ben Hill Griffin Parkway intersection to improve capacity.

At the intersection of Sunshine Boulevard and 23rd Street, further evaluation between a roundabout and signalization is recommended.

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LETTERS OF AVAILABLITY (EXHIBIT M17)

Lee County
Southwest Florida

Board of County Commissioners

February 6, 2023

Alexis Crespo, AICP
RVi Planning
28100 Bonita Grande Drive, Suite 305
Bonita Springs, FL 34135

Re: Letter of Service Availability – SEAWRF

Ms. Crespo,

I am in receipt of your letter requesting a Letter of Service Availability for a Small-Scale Comprehensive Plan Map Amendment. The property is on the north side of Alico Road and Green Meadow Road, south of the existing water treatment plant. The project is proposed to be an Advanced Water Reclamation Facility.

Lee County Emergency Medical Services is the primary EMS transport agency responsible for coverage at the location you have provided. Given the nature of the project, which is largely industrial, and the limited number of staff on site, the EMS impact is expected to be negligible.

It is our opinion that the EMS service availability for the proposed development of this property is adequate at this time. Should the plans change, a new analysis of this impact would be required.

Sincerely,

Benjamin Abes
Director, Public Safety

Lee County
Southwest Florida
BOARD OF COUNTY COMMISSIONERS

LeeTran Headquarters
Lee County Transit
3401 Metro Parkway
Fort Myers, FL 33901
Phone: (239) 533-0340

February 6, 2023

Josephine Medina, AICP, LEED Green Assoc.
Project Manager
RVi Planning + Landscape Architecture
28100 Bonita Grande Dr, Suite 305 • Bonita Springs, FL 34135

RE: **SEAWRF Southeast Advanced Water Reclamation Facility**
Request for Letter of Service Availability

Ms. Medina,

LeeTran has reviewed your request for service availability in regard to a proposed Comprehensive Plan Amendment. After reviewing the site and comparing the location with our existing and planned route locations according to the 2020 Transit Development Plan (TDP), the following has been determined:

- Subject area is not within one-quarter mile of a fixed-route corridor
- Closest bus stop is not within one-quarter mile of a bus stop
- The 2020 TDP does not identify the need for enhanced or additional transit services in the area

The proposed future development does not meet the applicability outlined in Lee County Transit Land Development Code Sec. 10-442 and Sec. 10-296 (4)(a). The developer will not be required to connect to and improve transit facilities because planning action does not trigger the relevant Lee County Land Development Code.

If transit services have been modified within one-quarter mile of the subject parcels at the time of a DO or LDO type D submittal, necessary improvements will be determined at that time.

If you have any questions or require further information, please do not hesitate to contact me at (239) 533-0340 or cmarinodiaz@leegov.com.

Sincerely,

Clarissa Marino Diaz

Clarissa Marino Diaz, Transit Service Planner

Lee County Transit

Lee County
Southwest Florida

BOARD OF COUNTY COMMISSIONERS

February 6, 2023 Via E-Mail

Alexis Crespo
RVI Planning
28100 Bonita Grande Drive
Bonita Springs, FL 34135

RE: **Potable Water and Wastewater Availability**
Southeast Advanced Water Reclamation Facility
18940 Green Meadows Road
STRAP # 04-46-26-00-00001.0010, 04-46-26-00-00001.1010 and 09-46-26-00-00001.0170

To whom this may concern:

The subject properties are located within Lee County Utilities Future Water Service Area as depicted on Map 4A, but not currently located within Lee County Utilities Future Wastewater Service Area as depicted on Map 4B of the Lee County Comprehensive Land Use Plan. Potable water lines are in operation adjacent to the property mentioned above. However, in order to provide service to the subject parcels, developer funded system enhancements such as line extensions and a comprehensive plan amendment (for wastewater) will be required.

Your firm has indicated that this project will consist of 1 commercial unit with an estimated flow demand of approximately 3,750 gallons per day. Lee County Utilities presently has sufficient capacity to provide potable water and sanitary sewer service as estimated above.

Availability of potable water and sanitary sewer service is contingent upon final acceptance of the infrastructure to be constructed by the developer. Upon completion and final acceptance of this project, potable water service will be provided through our Corkscrew Water Treatment Plant.

Once the comprehensive plan amendment is approved, the sanitary sewer service will be provided by the future Southeast Advanced Water Reclamation Facility (the subject project). The Lee County Utilities' Design Manual requires the project engineer to perform hydraulic computations to determine what impact this project will have on our existing system.

There are no reuse mains in the vicinity of these parcels.

Prior to beginning design work on this project, please meet with LCU Staff to determine

the best point of connection and discuss requirements for construction.

This letter should not be construed as a commitment to serve, but only as to the availability of service. Lee County Utilities will commit to serve only upon receipt of all appropriate connection fees, a signed request for service and/or an executed service agreement, and the approval of all State and local regulatory agencies.

Further, this letter of availability of potable water and sanitary sewer service is to be utilized for Zoning and Comprehensive Plan Amendment only. Individual letters of availability will be required for the purpose of obtaining building permits.

Sincerely,

LEE COUNTY UTILITIES

Mary McCormic
Technician Senior
239-533-8532
UTILITIES ENGINEERING

Lee County
Southwest Florida

Board of County Commissioners

February 6, 2023

RVI Planning + Landscape Architecture
Attn: Ms. Medina, Project Manager
28100 Bonita Grande Dr, Suite 305
Bonita Springs, FL 34135

RE: Southeast Advanced Water Reclamation Facility (SEAWRF) – Comprehensive Plan Amendment & PD Rezone Letter of Service Availability

Dear Ms. Medina:

The Lee County Solid Waste Department is capable of providing solid waste collection service for a future Community Facilities Planned Development (CFPD) on Green Meadow Road and Alico Road which will allow for the development of up to 25,000 SF of Utilities Office/Administration/Maintenance buildings through the franchised hauling contractors. Disposal of the solid waste from this development will be accomplished at the Lee County Resource Recovery Facility and the Lee-Hendry Regional Landfill. Plans have been made, allowing for growth, to maintain long-term disposal capacity at these facilities.

Please review Lee County Land Development Code, Chapter 10, Section 261, with requirements for on-site space for placement and servicing of solid waste containers. Please note that the property owner will be responsible for all future applicable solid waste assessments and fees.

If you have any questions, please call me at (239) 533-8007.

Sincerely,

Justin Lighthall

Justin Lighthall
Manager, Public Utilities
Lee County Solid Waste Department

Carmine Marceno
Sheriff

"Proud to Serve"

State of Florida
County of Lee

February 6, 2023

Alexis Crespo
RVi Planning + Landscape Architecture
28100 Bonita Grande Drive, St. 305
Bonita Springs, FL 34136

Ms. Crespo,

The Lee County Sheriff's Office has reviewed your Comprehensive Plan Amendment & Planned Development Rezone application request for the Southeast Advanced Water Reclamation Facility, a 112 +/- acre project located north of Green Meadow Road and Alico Road.

The request would change the Future Land Use Designation of a 38 +/- acre portion of the subject property from Density Reduction/Groundwater recharge to Public Facilities. The request also would rezone the entire 112 +/- acres from AG-2 to Community Facilities Planned Development, which will allow for the development of up to 25,000 SF of Utilities Office/ Administration/Maintenance buildings for an Advanced Water Reclamation Facility on the subject property. This Agency evaluated your request solely on its ability to provide law enforcement service to the project. Based on that criterion, these proposed changes would not affect our ability to provide law enforcement services to the project and surrounding area.

Law enforcement services will be provided from our South District offices in Bonita Springs. As this development builds out, we will factor its impact into our annual manpower review and make adjustments accordingly. At the time of application for a Development Order or building permit, we request that the applicant provide a Crime Prevention Through Environmental Design (CPTED) report done by the applicant and given to the Lee County Sheriff's Office for review and comment. Please contact Community Response Unit Crime Prevention Practitioner Beth Schell at (239) 477-1677 with any questions regarding the CPTED study.

Respectfully,

94094

Chris Reeves
Major, Patrol Bureau

San Carlos Park Fire Protection and Rescue Service District

19591 Ben Hill Griffin Parkway • Fort Myers, Florida 33913-8989

Emergency **911**
Office **239.267.7525**
Fax **239.267.7505**

February 27, 2023

RVI Planning & Landscape Architecture
Ms. Alexis Crespo, AICP
Vice President of Planning
28100 Bonita Grande Drive, Suite 305
Bonita Springs, FL 34135

Re: Southeast Advanced Water Reclamation Facility (SEAWRF)

Dear Ms. Crespo,

Thank you for this opportunity to inform you about our fire district. The San Carlos Park Fire Protection and Rescue Service District is one of 17 Special Fire Districts in Lee County. The Insurance Service Office (ISO) currently rates our department with a Property Protection Class (PPC) of 2/2x. The district consists of a 52 square mile area with 4 stations staffed 24/7 with 59 full time firefighters, which also provide non-transport Advanced Life Support (ALS) services and supported by an administrative staff.

The properties in question, SEAWRF, is within the jurisdiction of the San Carlos Park Fire District, and is located approximately 5.3 miles from our station 54 located at 16900 Oriole Road, Fort Myers and 6.4 miles from station 53 located at 19591 Ben Hill Griffin Pkwy. With a response time that varies between 8-10 minutes. Our district is working to acquire property on Alico Road east of Ben Hill Griffin Pkwy to locate a new station, which will improve our response time to your future facility. This new location has been contemplated for some time and we are currently in discussions with Lee County Lands on how to best site this station and satisfy County obligations in doing so.

We are able to provide fire suppression and emergency medical services to the proposed development, as well as fire prevention, and public education service. If you require additional information, please do not hesitate to contact my office at (239) 267.7525. Trusting this meets with your approval, I remain,

Yours in Service,

David Cambareri,
Fire Chief

COMMUNITY MEETING SUMMARY

Southeast Advanced Water Reclamation Facility

Design Project
Lee County, Florida

Technical Memorandum
Public Meeting – January 31, 2023

Submitted to:
Lee County Utilities

Submitted by:
Cella Molnar & Associates, Inc.

February 2023

Southeast Advanced Water Reclamation Facility
Design Project
Lee County, Florida

Public Meeting

Lee County Utilities held a public meeting on Tuesday, January 31, 2023 at the Hilton Garden Inn Fort Myers Airport/FGCU, 16410 Corporate Commerce Way, Fort Myers, Florida for the design of the Southeast Advanced Water Reclamation Facility Project.

A newsletter announcing the public meeting was mailed to property owners and tenants on Alico Road south to Corkscrew Road. An email with the newsletter as an attachment was sent to stakeholders, local agencies and interested parties to notify them about the public meeting. The newsletter, mailing list, mailing list map and email distribution list are provided in Appendix A. The meeting was advertised in the *News-Press* on Friday, January 13, 2023. A media release was sent to local media. The published legal advertisement and the media release are provided in Appendix B.

A total of 43 attendees signed in at the registration table. A Frequently Asked Questions handout and comment forms were available at the meeting. Display boards showing the location and design of the facility, zoning & permitting, environmental, general plant design and odor control, similar LCU facilities, deep injection wells, other beneficial uses for reclaimed water and nearby related projects were available for review. Project representatives answered questions and discussed the project with the public. The sign-in sheets, handout, comment sheet and meeting displays are provided in Appendix C.

Members of the public were provided comment forms at the meeting in order to have their opinion recorded as public record. The public was also able to submit their comments online or mail them in by the deadline of Tuesday, February 14, 2023, to the email address and mailing address provided on the comment forms. A total of 4 written comments were received at the meeting. Nine comments were received from the project website or via email. A combined total of 13 comments were received on the project. All written comments are contained in this memorandum and are a part of the public meeting record. A summary of the comments and copy of written comments are provided in Appendix D.

The public meeting was advertised consistent with federal and state requirements and was conducted consistent with the Americans with Disabilities Act of 1990.

This meeting was held to give all interested people the opportunity to understand the project and give their comments to Lee County Utilities. Public participation at the hearing was solicited without regard to race, color, religion, sex, age, national origin, disability or family status.

Table of Contents

APPENDIX A

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Please come join Lee County on January 31, 2023

Learn about the project and provide your input. Details about the meeting are shown on the back of this newsletter.

Water quality is a top priority of the Lee Board of County Commissioners and water-quality initiatives occur year-round. Water quality affects residents and visitors alike, and everyone has an opportunity to be a part of the solution. Responsible management of wastewater is key to maintaining the county's water quality overall.

Lee County Utilities is beginning the design phase for the Southeast Advanced Water Reclamation Facility (SEAWRF) Project. The SEAWRF project will provide the county with a 6 million gallons per day advanced water reclamation facility that can be expanded to 10 million gallons per day or greater, if needed. The project is needed to support existing and future population in the area.

The Lee Board of County Commissioners is strategically planning and preparing for a fulltime population of 1 million residents. Residential growth is anticipated in the southeast region of the county. The SEAWRF will ensure advanced wastewater treatment infrastructure is available to support the increasing population in this area. Lee County has expanded the wastewater treatment capacity of other existing treatment facilities and a new facility is now necessary.

The SEAWRF Project is proposed to be located at 14201 Alico Road in Fort Myers, Florida.

As service demands increase and existing assets age, the county must plan for and comply with regulatory treatment and discharge requirements that become stricter each year. Lee County remains committed to implementing measures that protect the local waterbodies, which are vital to the state's overall quality of life, health, and economy.

This is a modern-technology plant with measures in place to minimally impact surrounding flora and fauna and to ensure our site doesn't affect neighbors. Advanced Water Treatment (AWT) is a standard of treatment that exceeds required treatment levels, meaning cleaner water is being produced. AWT processes remove nutrients in addition to the normal components removed in biological wastewater treatment.

Wastewater treated to AWT standards:

- Is beneficial to the Lee County community as well as our waterways, bays and the Gulf of Mexico
- Preserves potable drinking water
- Can provide high-quality reuse water for irrigation
- Promotes economic benefits by maintaining healthy waterways, bays and the Gulf of Mexico

Lee County
Southwest Florida

c/o Cella Molnar & Associates, Inc.
1631 Hendry Street
Fort Myers, FL 33901

Newsletter 1

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

January 2023

Please join us for a Public Meeting about the Southeast Advanced Water Reclamation Facility Project.

Date: Tuesday, January 31, 2023
Time: 5:30 p.m. to 7:30 p.m. (Open House)
Location: Hilton Garden Inn
Fort Myers Airport/FGCU
16410 Corporate Commerce Way
Fort Myers, FL 33913

Lee County values community input on this project and invites you to:

- Learn the purpose and need for the project
- Provide input on the project
- Discuss specific aspects of the project one-on-one with the experts
- Meet the project team to get your ideas heard and your questions answered

Please visit the project website at **www.LCUSEwater.com** to sign up for periodic updates.

Questions may be submitted to **info@LCUSEwater.com**.

Lee County
Southwest Florida

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY
MAILING LIST

STRAP	SITE ADDRESS	SITE #	SITE STREET	NAME	OTHERS	ADDRESS	CITY	STATE	ZIP	LANDUSE
09462600000001001A	ACCESS UNDETERMINED		ACCESS UNDETERMINED	TRINITY ENTERPRISE HOLDINGS TR	FOR TRINITY REAL ESTATE TRUST	1000 PINEBROOK RD	VENICE	FL	34285	COMMERCIAL, VACANT
54626000000020000	14351 ALICO RD	14351	ALICO RD	ROMO EDUARDO PLASCENCIA +	ROMO JUAN MANUEL PLACENCIA	1014 ROSEMARY LN	NAPLES	FL	34103	VACANT RESIDENTIAL
09462600000001023A	18531 GREEN MEADOW RD	18531	GREEN MEADOW RD	MENDIOLA JOSEFINA		10361 CANAL BROOK LN	LEHIGH ACRES	FL	33936	VACANT RESIDENTIAL
074626L3100000170	19853 WILDBLUE BLVD	19853	WILDBLUE BLVD	LENNAR HOMES LLC		10481 SIX MILE CYPRESS PKWY	FORT MYERS	FL	33966	RIGHT OF WAY, ACREAGE, BUFFER - CONSERVATION, WATER RETENTION, LAKE
4462600000011010	ACCESS UNDETERMINED		ACCESS UNDETERMINED	FGCU BOARD OF TRUSTEES		10501 FGCU BLVD	FORT MYERS	FL	33965	GOVERNMENT OWNED, PARK
10462600000047000	14011 ALICO RD	14011	ALICO RD	FGCU FOUNDATION INC	C/O GERARD CARRINGTON VP	10501 FGCU BLVD S	FORT MYERS	FL	33965	RESOURCE PROTECT., WETLANDS, PRESERVE, CYPRESS HEAD
034626L1U29693159	14400 ALICO RD	14400	ALICO RD	BOCA HOLDINGS LLC		11345 GREAT BLUE TR	FISHERS	IN	46037	MARKET VALUE AGRICULTURAL
9462600000010190	14251 ALICO RD	14251	ALICO RD	FLORIDA ROCK INDUSTRIES INC	C/O FAS DEPT 1401-843	1200 URBAN CENTER DR	VESTAVIA	AL	35242	COMMERCIAL, VACANT
09462600000001024B	17341 QUAIL LN	17341	QUAIL LN	HARPER BROTHERS INC	C/O FAS DEPT 1401-843	1200 URBAN CENTER DR	VESTAVIA	AL	35242	MARKET VALUE AGRICULTURAL
9462600000010080	ACCESS UNDETERMINED		ACCESS UNDETERMINED	FLORIDA ROCK PROPERTIES INC		1200 URBAN CENTER DR	BIRMINGHAM	AL	35242	RESOURCE PROTECT., WETLANDS, PRESERVE, CYPRESS HEAD
9462600000010360	18851 GREEN MEADOW RD	18851	GREEN MEADOW RD	PELICAN HOME LLC		1217 CAPE CORAL PKWY E STE 176	CAPE CORAL	FL	33904	SINGLE FAMILY RESIDENTIAL
09462600000001024A	17801 DEVORE LN	17801	DEVORE LN	LANMAN LUKE MICHAEL +	LANMAN KEITH & SARAH ET AL	1303 NW 17TH ST	CAPE CORAL	FL	33993	MOBILE HOME, ACREAGE
10462600000018000	14120 ALICO RD	14120	ALICO RD	CANADA RONALD W & KAREN D		14120 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000045000	14451 ALICO RD	14451	ALICO RD	REGO GEORGE & SADY M		14451 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
9462600000010330	14761 N MALLARD LN	14761	N MALLARD LN	CRON DENNIS V & JOYCE A		14761 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010300	14850 ALICO RD	14850	ALICO RD	HUFFMAN JACOB R & WHITNEY M		14850 ALICO RD	FORT MYERS	FL	33913	VACANT RESIDENTIAL
9462600000010420	15031 N MALLARD LN	15031	N MALLARD LN	SCHALMO ROBERT & MICHELLE		15031 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010030	15140 N MALLARD LN	15140	N MALLARD LN	OEHMKE CHRISTOPHER H TR	FOR CHRISTOPHER H OEHMKE AND LENA W GOSSICK TRUST	15140 N MALLARD LN	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
10462600000050000	15170 N MALLARD LN	15170	N MALLARD LN	HEGI ULRICH & PETRA		15170 N MALLARD LN	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
4462600000010010	15290 N MALLARD LN	15290	N MALLARD LN	HALCOMB DEBRA C	DBA HALCOMB EXCAVATING	15290 N MALLARD LN	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
9462600000010410	18691 GREEN MEADOW RD	18691	GREEN MEADOW RD	ROBERTS JACK DAVID &	ROBERTS KATHY M	15291 NORTH MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000010000	15300 S MALLARD LN	15300	S MALLARD LN	HARVEY DARRELL & MARY K		15300 S MALLARD LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
09462600000001038A	15331 N MALLARD LN	15331	N MALLARD LN	DOWNARE RICHARD T & KAREN		15331 N MALLARD LN	FORT MYERS	FL	33967	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
9462600000010390	15421 N MALLARD LN	15421	N MALLARD LN	SWEAT CHRISTOPHER D		15421 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL
2246260000010000	15441 N MALLARD LN	15441	N MALLARD LN	KATROSHI ISMAIL		15441 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL
10462600000010000	15451 N MALLARD LN	15451	N MALLARD LN	MURPHY STEPHEN +	HANCOCK PAUL & ASHLEY	15451 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010260	14751 CORKSCREW RD	14751	CORKSCREW RD	ALICO ROAD LLC		15465 PINE RIDGE RD	FORT MYERS	FL	33908	MINING
9462600000010380	15520 N MALLARD LN	15520	N MALLARD LN	BRUNS MATTHEW & JENNIFER		15520 N MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000048000	15591 S MALLARD LN	15591	S MALLARD LN	LEWIS STEVEN G &	LEWIS ELIZABETH A	15591 S MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
1646260000011000	15600 N MALLARD LN	15600	N MALLARD LN	YARNELL GREGORY R &	YARNELL CARISSA L	15600 N MALLARD LN	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
10462600000011000	15650 S MALLARD LN	15650	S MALLARD LN	CAVAZOS RAUL & ANA M		15650 S MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010150	15651 S MALLARD LN	15651	S MALLARD LN	FREDRICKSON MATTHEW &	FREDRICKSON MERODIE	15651 S MALLARD LN	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
09462600000001038B	17420 DEVORE LN	17420	DEVORE LN	RODRIGUEZ CARLOS L & GLADYS		16001 SWALLOWTAIL LN	FORT MYERS	FL	33912	VACANT RESIDENTIAL
10462600000001006A	12251 ITEC PARK DR	12251	ITEC PARK DR	ITEC RETAIL REALTY LLC	ITEC REALTY LLC	16611 FIRENZE WAY	NAPLES	FL	34110	COMMERCIAL, VACANT
10462600000011000	14200 ALICO RD	14200	ALICO RD	ENN CO LLC		16677 BOBCAT DR	FORT MYERS	FL	33908	VACANT RESIDENTIAL
10462600000030000	17100 WOBEGON DR	17100	WOBEGON DR	SPAHN PETER J		17100 WOBEGON DR	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000016000	17201 DEVORE LN	17201	DEVORE LN	JENSEN SUSAN N +	JENSEN STEVEN ET AL	17201 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
4462600000010000	14401 ALICO RD	14401	ALICO RD	SILVA JENNIFER		17433 FUCHSIA RD	FORT MYERS	FL	33967	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
074626L2U25543039	17480 DEVORE LN	17480	DEVORE LN	MONROE LEWIS R & BELINDA		17480 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010320	17481 DEVORE LN	17481	DEVORE LN	MANLEY KAREN J		17481 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010020	17520 DEVORE LN	17520	DEVORE LN	WILLIAMS SHAWN M		17520 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
034626L4U3003090	17521 DEVORE LN	17521	DEVORE LN	FITZHERBERT VIRGINIA L L/E		17521 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010240	14250 ALICO RD	14250	ALICO RD	ISLAM NURUL & AKTER SHAMIMA		17540 LAUREL VALLEY RD	FORT MYERS	FL	33967	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000020000	17551 QUAIL LN	17551	QUAIL LN	GONZALEZ NABOR VELASCO +	CARRILLO ROCIO MATIAS	17551 QUAIL LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010490	14800 ALICO RD	14800	ALICO RD	KITZINGER SCOTT	KOLIAS MICHAEL	17581 QUAIL LN	FORT MYERS	FL	33913	VACANT RESIDENTIAL
9462600000010050	15700 N MALLARD LN	15700	N MALLARD LN	VAGHELA INDRASHINH +	EVERGLADES JACKS LLC	17595 S TAMIAMI TRL STE 120	FORT MYERS	FL	33908	MARKET VALUE AGRICULTURAL
9462600000010520	17600 DEVORE LN	17600	DEVORE LN	LACOMBE VIRGINIA CAROL		17600 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
074626L1100000200	17601 DEVORE LN	17601	DEVORE LN	COFFMAN SCOTT & NALENA PHAM		17601 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
074626L1100000140	17630 DEVORE LN	17630	DEVORE LN	SPRAGUE RICHARD A		17630 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000012018	17650 DEVORE LN	17650	DEVORE LN	TANIGAWA HEATHER &	TANIGAWA JAMES H III	17650 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010270	17651 DEVORE LN	17651	DEVORE LN	MEIXEL JASON E &	NAUMIEC SUSAN	17651 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010450	17750 DEVORE LN	17750	DEVORE LN	FOUSHEE LOREN & KAITLIN		17750 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010090	17800 DEVORE LN	17800	DEVORE LN	BROADHEAD JOHN		17800 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
1646260000011000	17850 DEVORE LN	17850	DEVORE LN	THOMAS SERGE		17850 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL
1546260000010000	17870 DEVORE LN	17870	DEVORE LN	LYNCH JAMES T +	STANCEL DONNA L	17870 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010220	17900 DEVORE LN	17900	DEVORE LN	DESROCHERS KAREN		17900 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000010000	17901 DEVORE LN	17901	DEVORE LN	TERRELL ROGER & CARMI		17901 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
074626L1100000150	17921 DEVORE LN	17921	DEVORE LN	BUEHLER NATHAN PHILLIP		17921 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL
9462600000010530	14890 ALICO RD	14890	ALICO RD	SMITH ROBERT E +	SMITH WENDY A	17921 DEVORE RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
074626L1100000230	17951 DEVORE LN	17951	DEVORE LN	DAO LY THI		17951 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010440	15501 S MALLARD LN	15501	S MALLARD LN	ATCHISON TROY		18423 FUCHSIA RD	FORT MYERS	FL	33967	MARKET VALUE AGRICULTURAL
2146260000010000	18501 GREEN MEADOW RD	18501	GREEN MEADOW RD	SACHS SCOTT P +	DEFRANK TAMRA	18501 GREEN MEADOW RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000030000	18521 GREEN MEADOW RD	18521	GREEN MEADOW RD	STEVENSON TAYLOR MARIE &	STEVENSON JOSHUA WILLIAM	18521 GREEN MEADOW RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
7462600000010060	18771 GREEN MEADOW RD	18771	GREEN MEADOW RD	SCOTT SANDRA ELAINE		18771 GREEN MEADOW RD	FORT MYERS	FL	33913	MARKET VALUE AGRICULTURAL
1646260000010000	18801 GREEN MEADOW RD	18801	GREEN MEADOW RD	GLADWELL BRITT & STACEY		18801 GREEN MEADOW RD	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
1546260000011000	17700 DEVORE LN	17700	DEVORE LN	SCHAFFER GLEN & TAMMY M		19150 ACORN RD #103	FORT MYERS	FL	33967	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS

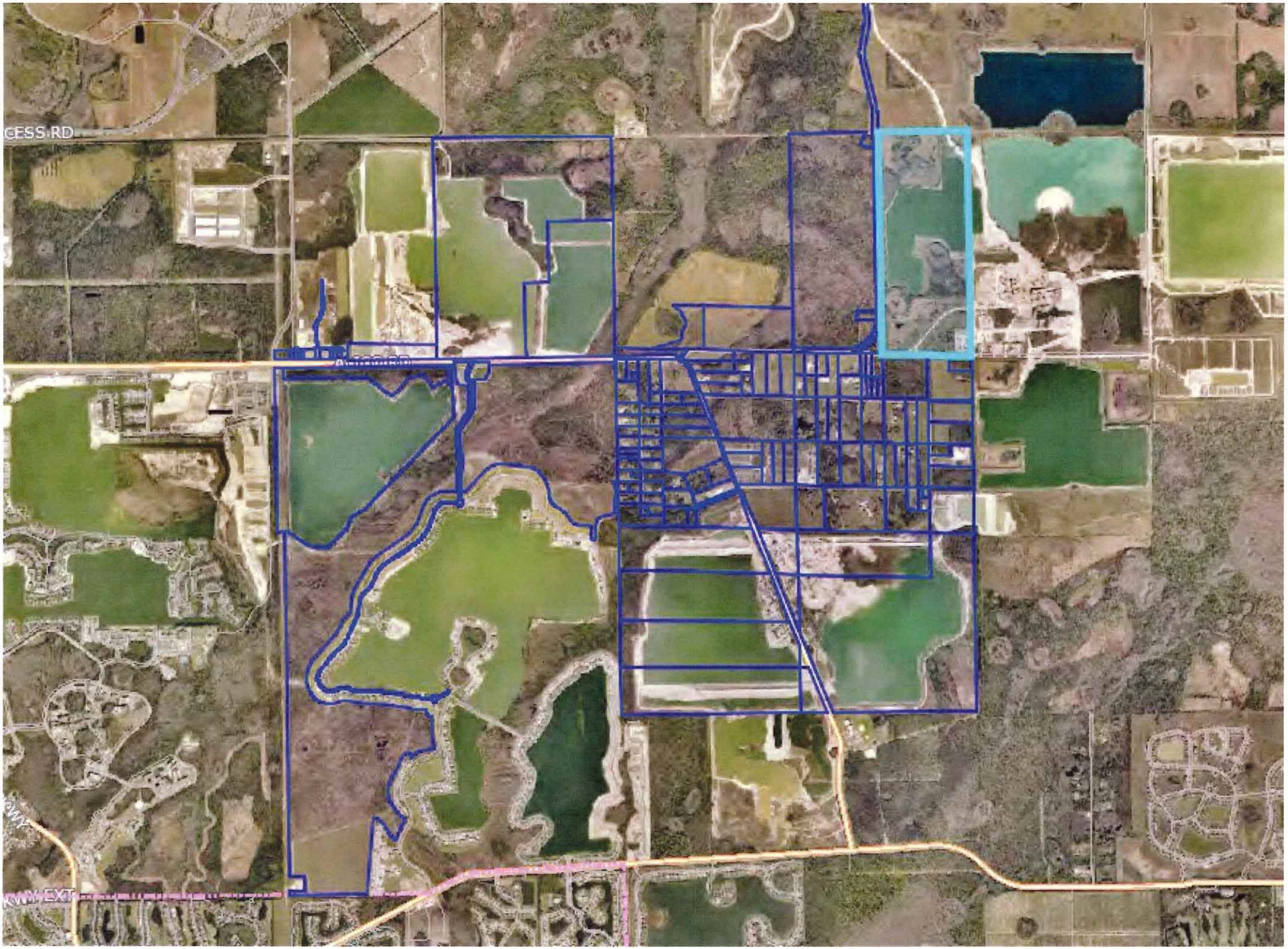
09462600000001016A	17200 DEVORE LN	17200	DEVORE LN	BOJARZIN ROBERT M &	BOJARZIN KATHERINE	19300 LA SERENA DR	ESTERO	FL	33967	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000010000	14700 ALICO RD	14700	ALICO RD	SAN CARLOS PARK FIRE PROTECTIO		19591 BEN HILL GRIFFIN PKWY	FORT MYERS	FL	33913	VACANT GOVERNMENTAL
9462600000010500	14650 ALICO RD	14650	ALICO RD	KALLIAINEN RICHARD A		2 CLEARVIEW BLVD	FORT MYERS BEACH	FL	33931	VACANT RESIDENTIAL
9462600000010040	14900 ALICO RD	14900	ALICO RD	SMITH ROBERT E +	SMITH WENDY A	20301 GRANDE OAKS BLVD STE 118 PMB 55	ESTERO	FL	33928	VACANT RESIDENTIAL
15462600000010000	15410 N MALLARD LN	15410	N MALLARD LN	GROW GREEN LLC		2170 LOGAN BLVD N	NAPLES	FL	34119	MARKET VALUE AGRICULTURAL
094626000000l004A	14870 ALICO RD	14870	ALICO RD	MAYHOOD SUE ANN +	MAYHOOD DAVID	24051 PRODUCTION CIR	BONITA SPRINGS	FL	34135	MOBILE HOME, ACREAGE
9462600000010130	12201 ITEC PARK DR	12201	ITEC PARK DR	J & R ACQUISITION GROUP LLC		2733 NE 215T ST	FORT LAUDERDALE	FL	33305	COMMERCIAL, VACANT
10462600000013000	17950 DEVORE LN	17950	DEVORE LN	JOHNSON JERI +	JOHNSON DANIEL	27591 HACIENDA BLVD E #327-A	BONITA SPRINGS	FL	34135	VACANT RESIDENTIAL
10462600000030000	14600 ALICO RD	14600	ALICO RD	ALICO CONNECTION INC		28056 EAST BROOK	BONITA SPRINGS	FL	34135	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000012000	17641 DEVORE LN	17641	DEVORE LN	MERCIER ROBERT		3811 LITTLE CREEK DR	FORT MYERS	FL	33905	VACANT RESIDENTIAL
9462600000010470	RIGHT OF WAY		RIGHT OF WAY	ITEC PROPERTY OWNERS ASSOCIATI		3845 BECK BLVD #807	NAPLES	FL	34114	RIGHT OF WAY
10462600000016000	12321 ITEC PARK DR	12321	ITEC PARK DR	MY ITEC PLACE LLC		3845 BECK BLVD STE 807	NAPLES	FL	34114	COMMERCIAL, VACANT
9462600000010000	17421 DEVORE LN	17421	DEVORE LN	REDENIUS RICHARD R &	REDENIUS NANCY G	5218 WILLIAMS DR	FORT MYERS BEACH	FL	33931	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
084626L2U27153050	14301 ALICO RD	14301	ALICO RD	HARPER PROPERTY HOLDINGS 3 LLC	MCNEW PROPERTY HOLDINGS 3 LLC	5571 HALIFAX AV	FORT MYERS	FL	33912	MARKET VALUE AGRICULTURAL
10462600000015000	14050 ALICO RD	14050	ALICO RD	LEE FAMILY TRUST		5621 HARBORAGE DR	FORT MYERS	FL	33908	VACANT RESIDENTIAL
094626000000102BA	ACCESS UNDETERMINED		ACCESS UNDETERMINED	MBW HOLDINGS LLC		7256 SWAN LAKE DR	FORT MYERS	FL	33919	VACANT RESIDENTIAL
21462600000011000	ACCESS UNDETERMINED		ACCESS UNDETERMINED	MSF AUSTIN I LLC +	ALICO VIII LLC ET AL	7978 COOPER CREEK BLVD #100	UNIVERSITY PARK	FL	34201	MARKET VALUE AGRICULTURAL
9462600000010160	15691 S MALLARD LN	15691	S MALLARD LN	FAIRCLOTH ROBEN		8024 MENDOZA DR	JACKSONVILLE	FL	32217	MARKET VALUE AGRICULTURAL
9462600000010480	15411 N MALLARD LN	15411	N MALLARD LN	GALINSKAS ANDRIUS		8065 CYPRESS DR S	FORT MYERS	FL	33967	VACANT RESIDENTIAL
9462600000010370	17350 DEVORE LN	17350	DEVORE LN	VOELLINGER RICHARD U +	VOELLINGER MILLA ET AL	821 SUNSET VISTA DR	FORT MYERS	FL	33919	MOBILE HOME, ACREAGE
9462600000010070	14500 ALICO RD	14500	ALICO RD	NEUHAUSER ROBERT & ANA L/E		8495 BUENA VISTA RD	FORT MYERS	FL	33967	VACANT RESIDENTIAL
10462600000020000	14651 ALICO RD	14651	ALICO RD	POTTINGERS NURSERY INC		900 SUNSET VISTA DR	FORT MYERS	FL	33919	MARKET VALUE AGRICULTURAL
9462600000010230	15070 S MALLARD LN	15070	S MALLARD LN	SANDS RAYMOND J JR +	SANDS MICHAEL D ET AL	900 SUNSET VISTA DR	FORT MYERS	FL	33919	MARKET VALUE AGRICULTURAL
9462600000010350	12291 ITEC PARK DR	12291	ITEC PARK DR	TWO WRIGHT LLC		9638 VIA LAGO WAY	FORT MYERS	FL	33912	COMMERCIAL, VACANT
344526L3U30293279	15441 S MALLARD LN	15441	S MALLARD LN	WEATHERBEE ROBERT J &	WEATHERBEE CAROLYN A	PO BOX 131	ESTERO	FL	33928	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000041000	13501 ALICO RD	13501	ALICO RD	CEMEX CONSTRUCTION MATERIALS F	PROPERTY TAX DEPT	PO BOX 2883	WEST PALM BEACH	FL	33402	MINING
084626L1090O200CE	14751 ALICO RD	14751	ALICO RD	MBW HOLDINGS LLC	C/O SUNNYGROVE LANDSCAPING +	PO BOX 347	ESTERO	FL	33928	MARKET VALUE AGRICULTURAL
21462600000010000	14100 ALICO RD	14100	ALICO RD	DAVEY BONNE M +	ANDERSON DANA	PO BOX 354	EVERGLADES CITY	FL	34139	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010140	17130 WOBEGON DR	17130	WOBEGON DR	THRASHER HAROLD K		PO BOX 367672	BONITA SPRINGS	FL	34136	VACANT RESIDENTIAL
9462600000010180	15381 S MALLARD LN	15381	S MALLARD LN	15381 RICHEL LLC		PO BOX 39	ESTERO	FL	33929	MOBILE HOME, ACREAGE
10462600000010000	14201 ALICO RD	14201	ALICO RD	LEE COUNTY		PO BOX 398	FORT MYERS	FL	33902	COUNTY OWNED, OFFICES, LIBRARY, GOVERNMENT BLDG
9462600000010290	17851 DEVORE LN	17851	DEVORE LN	RAMIREZ JUAN G & MARIA R		PO BOX 733	IMMOKALEE	FL	34143	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
16462600000010000	15121 S MALLARD LN	15121	S MALLARD LN	HINDERMAN DEAN V &	HINDERMAN CHERYL ROSS	PO BOX 986	ESTERO	FL	33929	ACREAGE, NON-AGRICULTURAL
10462600000018000	15111 S MALLARD LN	15111	S MALLARD LN	MALLARD-ALICO LLC		PO BOXZ 347	ESTERO	FL	33928	MARKET VALUE AGRICULTURAL
				CELLA MOLNAR & ASSOCIATES, INC.		1631 HENDRY STREET	FORT MYERS	FL	33901	
10462600000047000	14011 ALICO RD	14011	ALICO RD	POSTAL CUSTOMER		14011 ALICO RD	FORT MYERS	FL	33913	RESOURCE PROTECT., WETLANDS, PRESERVE, CYPRESS HEAD
21462600000010000	14100 ALICO RD	14100	ALICO RD	POSTAL CUSTOMER		14100 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
10462600000010000	14201 ALICO RD	14201	ALICO RD	POSTAL CUSTOMER		14201 ALICO RD	FORT MYERS	FL	33913	COUNTY OWNED, OFFICES, LIBRARY, GOVERNMENT BLDG
9462600000010240	14250 ALICO RD	14250	ALICO RD	POSTAL CUSTOMER		14250 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
4462600000010000	14401 ALICO RD	14401	ALICO RD	POSTAL CUSTOMER		14401 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000030000	14600 ALICO RD	14600	ALICO RD	POSTAL CUSTOMER		14600 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
094626000000l004A	14870 ALICO RD	14870	ALICO RD	POSTAL CUSTOMER		14870 ALICO RD	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010530	14890 ALICO RD	14890	ALICO RD	POSTAL CUSTOMER		14890 ALICO RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
9462600000010180	15381 S MALLARD LN	15381	S MALLARD LN	POSTAL CUSTOMER		15381 S MALLARD LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
344526L3U30293279	15441 S MALLARD LN	15441	S MALLARD LN	POSTAL CUSTOMER		15441 S MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, ACREAGE - 7 TO 19 ACRES
10462600000010000	15690 S MALLARD LN	15690	S MALLARD LN	POSTAL CUSTOMER		15690 S MALLARD LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
0746261L1100000130	16101 ALICO RD	16101	ALICO RD	POSTAL CUSTOMER		16101 ALICO RD	FORT MYERS	FL	33913	COUNTY OWNED, OFFICES, LIBRARY, GOVERNMENT BLDG
09462600000001016A	17200 DEVORE LN	17200	DEVORE LN	POSTAL CUSTOMER		17200 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010370	17350 DEVORE LN	17350	DEVORE LN	POSTAL CUSTOMER		17350 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010000	17421 DEVORE LN	17421	DEVORE LN	POSTAL CUSTOMER		17421 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
15462600000011000	17700 DEVORE LN	17700	DEVORE LN	POSTAL CUSTOMER		17700 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
094626000000l024A	17801 DEVORE LN	17801	DEVORE LN	POSTAL CUSTOMER		17801 DEVORE LN	FORT MYERS	FL	33913	MOBILE HOME, ACREAGE
9462600000010290	17851 DEVORE LN	17851	DEVORE LN	POSTAL CUSTOMER		17851 DEVORE LN	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL, RURAL - 6 ACRES OR LESS
9462600000010360	18851 GREEN MEADOW RD	18851	GREEN MEADOW RD	POSTAL CUSTOMER		18851 GREEN MEADOW RD	FORT MYERS	FL	33913	SINGLE FAMILY RESIDENTIAL
				Audubon of Southwest Florida		Post Office Box 61041	Fort Myers	FL	33906-1041	
				Cemex Fort Myers Alico Quarry North		12 Alico Road	Fort Myers	FL	33917	
				Conservancy of Southwest Florida		1495 Smith Preserve Way	Naples	FL	34102	
				Esplanade Lake Club		11621 Venetian Lagoon Drive	Fort Myers	FL	33913	
				ITEC – 16310 Innovation Lane	Paul Hardy	3845 Beck Blvd, Suite 807	Naples	FL	34114	
				ITEC – 16310 Innovation Lane	Chris Pisano	3846 Beck Blvd, Suite 807	Naples	FL	34115	
				ITEC – 16310 Innovation Lane	Robert Corbert	16310 Innovation Lane	Fort Myers	FL	33913	
				Miromar Development Corporation		10801 Corkscrew Road, Suite 305	Estero	FL	33928	
				Miromar Lakes Beach Club		18061 Miromar Lakes Parkway	Miromar Lakes	FL	33913	
				Miromar Lakes Golf Club		18520 Miromar Lakes Blvd	Miromar Lakes	FL	33913	
				Vulcan Materials Company	Jimmy Fleming	800 Mt. Vernon Hwy NE, Suite 200	Atlanta	GA	30328	
				Beach Area Civic Association	Charlie Whitehead	20 Emily Lane	Fort Myers Beach	FL	33931	
				Coastal Heartland NEP	Jennifer Hecker	326 West Marion Ave.	Punta Gorda	FL	33950	
				Corkscrew Regional Ecosystem Watershed	Brenda Brooks	23998 Corkscrew Rd	Estero	FL	33928	
				Florida Department of Environmental Protection- Estero Bay Aquatic Preserve	Stephanie Erickson	700-1 Fishermans Wharf	Fort Myers Beach	FL	33931	
				Florida Department of Environmental Protection- Estero Bay Aquatic Preserve	Heather Stafford	700-1 Fishermans Wharf	Fort Myers Beach	FL	33932	
				Eyes on Conservation 20/20	Pete Cangialosi	19501 Treeline Avenue South	Fort Myers	FL	33965	

				FGCU - College of Arts & Sciences	Win Everham	4548 Varsity Circle	Lehigh Acres	FL	33971	
				Individual	David W. Ceilley	1366 Oaklawn Court	Fort Myers	FL	33919	
				Johnson Engineering	John Curtis	P.O. Box 1550	Fort Myers	FL	33905-1550	
				League of Women Voters	Laura H. Miller	390 Washington Court	Fort Myers Beach	FL	33931	
				Lee County Port Authority		Terminal Access Rd, #8671	Fort Myers	FL	33913	
				Pelican Landing Community Association	Capt. Jon Hall	Coconut Point Marina, 5450 Coconut Rd.	Bonita Springs	FL	34134	
				South Florida Water Management District	Phil Flood	2301 McGregor Boulevard	Fort Myers	FL	33901	
				The Conservancy of SW Florida	Marisa Carrazzo	1450 Merrihue Drive	Naples	FL	34102	
				The Conservancy of SW Florida	Kelly M.	1451 Merrihue Drive	Naples	FL	34103	
				Stuart & Associates	Greg Stuart	7910 Summerlin Lakes Drive	Fort Myers	FL	33907	

Lee County
Southwest Florida

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY
STAKEHOLDERS LIST

STRAP	SITE ADDRESS	SITE #	SITE STREET	NAME	OTHERS	ADDRESS	CITY	STATE	ZIP	LANDUSE
SEAWRF STAKEHOLDERS										
				Audubon of Southwest Florida		Post Office Box 61041	Fort Myers	FL	33906-1041	
				Cemex Fort Myers Alico Quarry North		12 Alico Road	Fort Myers	FL	33917	
				Conservancy of Southwest Florida		1495 Smith Preserve Way	Naples	FL	34102	
				Esplanade Lake Club		11621 Venetian Lagoon Drive	Fort Myers	FL	33913	
				ITEC – 16310 Innovation Lane	Paul Hardy	3845 Beck Blvd, Suite 807	Naples	FL	34114	
				ITEC – 16310 Innovation Lane	Chris Pisano	3846 Beck Blvd, Suite 807	Naples	FL	34115	
				ITEC – 16310 Innovation Lane	Robert Corbert	16310 Innovation Lane	Fort Myers	FL	33913	
				Miromar Development Corporation		10801 Corkscrew Road, Suite 305	Estero	FL	33928	
				Miromar Lakes Beach Club		18061 Miromar Lakes Parkway	Miromar Lakes	FL	33913	
				Miromar Lakes Golf Club		18520 Miromar Lakes Blvd	Miromar Lakes	FL	33913	
				Vulcan Materials Company	Jimmy Fleming	800 Mt. Vernon Hwy NE, Suite 200	Atlanta	GA	30328	
ESTERO BAY AGENCY OF BAY MANAGEMENT MEMBERS										
				Beach Area Civic Association	Charlie Whitehead	20 Emily Lane	Fort Myers Beach	FL	33931	
				Coastal Heartland NEP	Jennifer Hecker	326 West Marion Ave,	Punta Gorda	FL	33950	
				Corkscrew Regional Ecosystem Watershed	Brenda Brooks	23998 Corkscrew Rd	Estero	FL	33928	
				Florida Department of Environmental Protection- Estero Bay Aquatic Preserve	Stephanie Erickson	700-1 Fishermans Wharf	Fort Myers Beach	FL	33931	
				Florida Department of Environmental Protection- Estero Bay Aquatic Preserve	Heather Stafford	700-1 Fishermans Wharf	Fort Myers Beach	FL	33932	
				Eyes on Conservation 20/20	Pete Cangialosi	19501 Treeline Avenue South	Fort Myers	FL	33965	
				FGCU - College of Arts & Sciences	Win Everham	4548 Varsity Circle	Lehigh Acres	FL	33971	
				Individual	David W. Ceilley	1366 Oaklawn Court	Fort Myers	FL	33919	
				Johnson Engineering	John Curtis	P.O. Box 1550	Fort Myers	FL	33905-1550	
				League of Women Voters	Laura H. Miller	390 Washington Court	Fort Myers Beach	FL	33931	
				Lee County Port Authority		Terminal Access Rd, #8671	Fort Myers	FL	33913	
				Pelican Landing Community Association	Capt. Jon Hall	Coconut Point Marina, 5450 Coconut Rd.	Bonita Springs	FL	34134	
				South Florida Water Management District	Phil Flood	2301 McGregor Boulevard	Fort Myers	FL	33901	
				The Conservancy of SW Florida	Marisa Carrazzo	1450 Merrihue Drive	Naples	FL	34102	
				The Conservancy of SW Florida	Kelly M.	1451 Merrihue Drive	Naples	FL	34103	
SPEAKERS FROM JUNE 28TH HEARING										
				Stuart & Associates	Greg Stuart	7910 Summerlin Lakes Drive	Fort Myers	FL	33907	


cESS RD
EXT

Lee County
Southwest Florida

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY
INTERESTED PARTIES CONTACT LIST

ORGANIZATION	FIRST NAME	LAST NAME	TITLE	ADDRESS	CITY	STATE	ZIP	PHONE #	ALT. #	EMAIL	EMAILS UNDELIVERABLE 1/26/2023
POSTAL SERVICES											
USPS											
DELIVERY SERVICES											
UPS											
Fedex											
Fedex											
DHL											
TRASH/RECYCLING/YARD -											
	Bill	Jones	Division Vice President							bjones@wasteprousa.com	
	Todd	Griglin	Customer Service Operations							tgriglin@wasteprousa.com	
	Keith	Banasaik	Regional Vice President SWF							kbanasaik@wasteprousa.com	
	Mike	Puchta	Lee County Operations							mpuchta@wasteprousa.com	
	Lesleann	Aponte								laponte@wasteprousa.com	
Customer Service										cs109@wasteprousa.com	
BUSINESSES											
GL Homes	Richard	Arkin								richard.arkin@glhomes.com	
GL Homes	Luke	Schulthels								luke.schulthels@glhomes.com	
HOA's											
OTHER INTERESTED PARTIES											
	Paul	Milford		17951/17921 Devore Lane	Fort Myers	FL	33913				
	Serge	Thomas		17850 Devore Lane	Fort Myers	FL	33913				
	Jason and Shonda	Jenks		18521 Green Meadow Rd.	Fort Myers	FL	33913			shonda@jenksbuilderswfl.com	
	Ray	Blacksmith		211101 Design Parc Lane, #103	Estero	FL	33928			rblacksmith@ameratta.com	
	Courtney	Dantone		1916 Briarwood Street						courtney.dantone@kiewit.com	
	Taylor	Stevenson		18521 Green Meadow Rd.	Fort Myers	FL	33913	803-847-2557		taylor955@gmail.com	
	Aaron	Holtz		400 N Tampa Street	Tampa	FL				atholtz@sundt.com	
	Patty	Whitehead		20791 Tanglewood Lane						pbackos@hotmail.com	
	Chuck	Avery		25071 Pennyroyal	Bonita Springs	FL	34134			caavery357@mail.com	
	Karen	Desrochers		17900 Devore Lane						karendesrochers@yahoo.com	
	Robert	Ferrell		17473 Elkgrove Ln						rlferrell@aol.com	
	Mark	Stefanacci		17323 Jean Street						mark.stefanacci@ferguson.com	
	Duke	Downey		26099 Fawnwood Court	Bonita Springs	FL	34134			duke2179@mac.com	
	Brandee	Velez		4722 NW Boca Raton Boulevard						brandee@florida-aquastore.com	
	Marsha	Ellis								marshaellis22@gmail.com	
	Mark	Novitski								markw21101@gmail.com	
	Chris	Calvert		3520 Investment Lane Unit #3						chris@pss-techinc.com	
	Jim	Harshbarger		21004 W 1st Street	Fort Myers	FL	33901			jwharshbarger@comcast.net	
	Robert	Himschoot		6482 Morgan La Fee Ln						robert@crewenvironmental.com	
	Noorman	Cannon		10 Iguana Ct						normancannon@embarqmail.com	
	Diana	Ferriter		21751, Palmetto Dunes Dr # 102						ferrit13@verizon.net	
	Marcus	Russo								mrusso@gaylordmerlin.com	
	Kurt	Alexander		9765 MarLargo Circle	Fort Myers	FL	33919			captalexander@gmail.com	
	John	Buchholz		19077 Aqua Shore Drive						jabuch@buchholzgroup.com	
	Kristi	Huston		19328 Aqua Shore	Fort Myers	FL	33913			kristi.huston@gmail.com	
	Richard	Sprague		17630 Devore Lane	Fort Myers	FL	33913			dicktater71@aol.com	
	Joanne	Cimorelli								joannedcimorelli@gmail.com	
SEAWRF STAKEHOLDERS											
Audubon of Florida	Julie	Wraithmell								julie.wraithmell@audubon.org	
Audubon of Southwest Florida				Post Office Box 61041	Fort Myers	FL	33906-1041			Audubon.southwest.florida@gmail.com	
Cemex Fort Myers Alico Quarry North				12 Alico Road	Fort Myers	FL	33917	239-267-8181			
Conservancy of Southwest Florida				1495 Smith Preserve Way	Naples	FL	34102				info@conservancy.org
Corkscrew Regional Ecosystem Watershed (CREW)	Ben	Nelson	Crew Trust Chairman					239-657-2253			
Corkscrew Regional Ecosystem Watershed (CREW)	Brenda	Brooks	Crew Trust Executive Director					239-657-2253			
Esplanade Lake Club				11621 Venetian Lagoon Drive	Fort Myers	FL	33913				
Estero Bay Agency on Bay Management											
Eyes on Conservation 20/20										eyesonc2020@gmail.com	
FDEP Estero Bay Aquatic Preserve	Stephanie	Erickson								stephanie.erickson@FloridaDEP.gov	
Friends of the Florida Panther										contact@floridapanther.org	
Inner Loop Working Group										innerloopworkinggroup@gmail.com	
ITEC – 16310 Innovation Lane	Paul	Hardy	Managing Partner	3845 Beck Blvd, Suite 807	Naples	FL	34114	239-777-8000		hinahardy@comcast.net	
ITEC – 16310 Innovation Lane	Chris	Pisano	Operations Manager	3846 Beck Blvd, Suite 807	Naples	FL	34115	239-770-5422		christophermpisano@gmail.com	
ITEC – 16310 Innovation Lane	Robert	Corbert	Construction Manager	16310 Innovation Lane	Fort Myers	FL	33913	239-821-5989		rcorbett130@hotmail.com	
Miromar Development Corporation				10801 Corkscrew Road, Suite 305	Estero	FL	33928	239-908-2384	239-287-1105		melise@miromar.com
Miromar Lakes Beach Club				18061 Miromar Lakes Parkway	Miromar Lakes	FL	33913				
Miromar Lakes Golf Club				18520 Miromar Lakes Blvd	Miromar Lakes	FL	33913				
Miromar Lakes Master Association, Inc.								239-415-7376			tkhanjian@miromarlakes.com
Responsible Growth Management Coalition, Inc.										RGMC@hotmail.com	
Vulcan Materials Company	Jimmy	Fleming		800 Mt. Vernon Hwy NE, Suite 200	Atlanta	GA	30328			fleming@vmcmail.com	
ESTERO BAY AGENCY OF BAY MANAGEMENT MEMBERS											
Beach Area Civic Association	Charlie	Whitehead		20 Emily Lane	Fort Myers Beach	FL	33931			charliedad239@hotmail.com	
Bonita Lions Club Green Team	Patty	Whitehead								pbackos@hotmail.com	
Coastal Heartland NEP	Jennifer	Hecker		326 West Marion Ave,	Punta Gorda	FL	33950			jhecker@chnep.org	
Corkscrew Regional Ecosystem Watershed	Brenda	Brooks		23998 Corkscrew Rd	Estero	FL	33928			brenda@crewtrust.org	
Florida Department of Environmental Protection-Estero Bay Aquatic Preserve	Stephanie	Erickson		700-1 Fishermans Wharf	Fort Myers Beach	FL	33931				stephanie.erickson@dep.state.fl.us

Lee County
Southwest Florida

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY
INTERESTED PARTIES CONTACT LIST

ORGANIZATION	FIRST NAME	LAST NAME	TITLE	ADDRESS	CITY	STATE	ZIP	PHONE #	ALT. #	EMAIL	EMAILS UNDELIVERABLE 1/26/2023
Florida Department of Environmental Protection-Estero Bay Aquatic Preserve	Heather	Stafford		700-1 Fishermans Wharf	Fort Myers Beach	FL	33932				heather.stafford@dep.state.fl.us;
Eyes on Conservation 20/20	Pete	Cangialosi		19501 Treeline Avenue South	Fort Myers	FL	33965			pcanaualosi@comcast.net	
FGCU - College of Arts & Sciences	Win	Everham		4548 Varsity Circle	Lehigh Acres	FL	33971			weverham@fgcu.edu;	
FGCU - College of Arts & Sciences	Margaret	Banyan								mbanyan@fgcu.edu	
FGCU Students	Benjamin	Marics								bmarics2289@eagle.fgcu.edu	
Friends of Matanzas Pass Preserve	Tom	Babcock			Fort Myers Beach	FL	33931			tmlstom@yahoo.com	
Individual	David W.	Ceilley		1366 Oaklawn Court	Fort Myers	FL	33919			dceilley@johnsoneng.com	
											dceilley@fgcu.edu
Johnson Engineering	John	Curtis		P.O. Box 1550	Fort Myers	FL	33905-1550			jcurtis@johnsoneng.com	
										agm@johnsoneng.com	
League of Women Voters	Laura H.	Miller		390 Washington Court	Fort Myers Beach	FL	33931			317ethmiller@gmail.com	
										lwvlee@lwvlee.org	
Lee County Port Authority				Terminal Access Rd, ft8671	Fort Myers	FL	33913				
	Emily	Underhill	Deputy Executive Director - Development							emunderhill@flylcpa.com	
	Mark	Fisher	Senior Deputy Executive Director of Capital Programs and Strategic Planning							mrfisher@flylcpa.com	
	Alicia	Dixon	Director, Planning & Environmental Complaince							addixon@flylcpa.com	
	Mark	Trank	Port Attorney							MTrank@leegov.com	
Pelican Landing Community Association	Capt. Jon	Hall		Coconut Point Marina, 5450 Coconut Rd.	Bonita Springs	FL	34134			port@pelicanlanding.com	
Responsible Growth Management Coalition	Nora	Demers								ndemers@fgcu.edu	
Responsible Growth Management Coalition										bhp9514@gmail.com	
South Florida Water Management District	Phil	Flood		2301 McGregor Boulevard	Fort Myers	FL	33901			pflood@sfwmd.gov	
The Conservancy of SW Florida	Marisa	Carrazzo		1450 Merrihue Drive	Naples	FL	34102				marinac@conservancy.org;
The Conservancy of SW Florida	Kelly	M.		1451 Merrihue Drive	Naples	FL	34103				kellym@conservancy.org
SPEAKERS FROM JUNE 28TH HEARING											
	Nathan	Buehler								nbuehler17@gmail.com	
	Rhonda	Brewer								rbrewer@lsicompanies.com	
	John	Broadhead								theblueads@gmail.com	
	Jennifer	Bruns								tucker177@yahoo.com	
	Ronald W.	Canada Sr									
	Joyce	Cron								joycejenna@aol.com	
	Karen	DesRochers								karendesrochers@yahoo.com	
	Don	Duke								hbduke@fgcu.edu	
	Barry	Ernst	Lennar Homes							barry.ernst@lennar.com	
	Marsha	Ellis								marshaellis27@gmail.com	
	Virginia	Fitzherbert								pennyfitzherbert@outlook.com	
	Britt	Gladwell									
	Stacy	Gladwell								staceygiad@hotmail.com	
	Beverly	Grady	with Roetzel on behalf of FRP Holdings, Inc.								bgrady@ralaw.com
	Chris	Halcomb									
	Christy	Harvey								cdharvey139@gmail.com	
	Dennis	Henderson								dlh@tricofmds.com	
	Shonda	Jenks								shonda.jenks@yahoo.com	
	Deborah	Leblanc								debby@peterlanbarnfloor.com	
	Elizabeth (And Steven)	Lewis								hzielew365@gmail.com	
	Jason	Meixel								jmeixel@mac.com	
	Paul	Millford								p.millford@hotmail.com	
	Karen	Precheau									
	Virginia	Prool Blackcomb									
	George	Rego									george.rego@attheat.com
	Jack	Roberts									
	Monica	Ross								monicakross7@gmail.com	
	Laurie	Sanville								sanvillel@vmcmail.com	
	Peter	Spahn		17100 Wobegon Drive	Fort Myers	FL	33913				
Stuart & Associates	Greg	Stuart		7910 Summerlin Lakes Drive	Fort Myers	FL	33907				greg@stuartanddesign.com
	Heather	Tanigawa								hl.lewis85@gmail.com	
	Serge	Thomas									scardenotus@gmail.com
	Amber	Todd								amberatodd@comcast.net	
	Ginny	Turboa - Fitzherbert									
	Debbie	Wack									
	Shawn	Williams									swilliams@naplesflpa.com
	Sally	Williamson								sallysw11@yahoo.com	

APPENDIX B

The News-Press
media group
news-press.com A GANNETT COMPANY

CELLA MOLNAR & ASSOCIATES
1631 HENDRY ST
FORT MYERS, FL 33901
ATTN

STATE OF WISCONSIN COUNTY OF BROWN:

Before the undersigned authority personally appeared said legal clerk, who on oath says that he or she is a Legal Assistant of the News-Press, a daily newspaper published at Fort Myers in Lee County, Florida; that the attached copy of advertisement, being a Legal Ad in the matter of

PUBLIC NOTICE

In the Twentieth Judicial Circuit Court was published in said newspaper in the issues of:

1/13/2023

Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida, and that the said newspaper has heretofore been continuously published in said Lee County, Florida each day and has been entered as periodicals matter at the post office in Fort Myers, in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has never paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and Subscribed before me this 13th of January, 2023

Legal Clerk

Notary Public State of Wisconsin County of Brown

5.15.23

My commission expires

Publication Cost: $1,358.00
Ad No: GCI1003451
Customer No: 161065
PO#: PUBLIC NOTICE
THIS IS NOT AN INVOICE

NANCY HEYRMAN
Notary Public
State of Wisconsin

Southeast Advanced Water Reclamation Facility Project

Lee County
Southwest Florida

Lee County, Florida

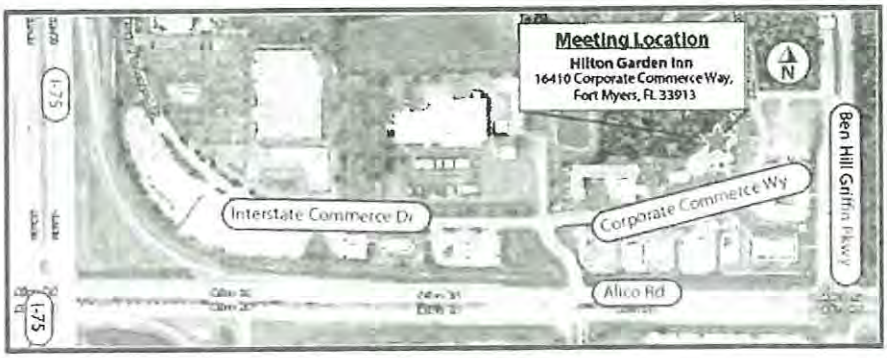
Lee County will hold a public meeting about the Southeast Advanced Water Reclamation Facility (SEAWRF) Project from 5:30 p.m. to 7:30 p.m. on Tuesday, January 31, 2023, at the Hilton Garden Inn Fort Myers Airport/FGCU located at 16410 Corporate Commerce Way, Fort Myers, FL 33913. The meeting is an open-house style so that residents can interact one-on-one with staff and drop in at whatever time is convenient to them.

Lee County Utilities is beginning the design phase for the SEAWRF Project, which is proposed to be located at 14201 Alico Road. The SEAWRF project will provide the county with a 6 million gallons per day advanced water reclamation facility that can be expanded to 10 million gallons per day or greater, if needed. The project is needed to support existing and future population in the area.

The meeting is an opportunity for the public to review and comment on the status of the project. The County will also provide information on the permitting of the project including rezoning the site to Community Facilities Planned Development zoning district. The meeting is an informal workshop that you may attend at any time between the referenced hours. No formal presentation will be given. Lee County staff will be available to answer your questions about the project.

In accordance with the Americans with Disabilities Act, Lee County will not discriminate against qualified individuals with disabilities in its services, programs, or activities. To request an auxiliary aid or service for effective communication or a reasonable modification to participate, contact Joan LaGuardia, (239) 533-2314, Florida Relay Service 711, or jlaguardia@leegov.com. Accommodations will be provided at no cost to the requestor. Requests should be made at least five business days in advance.

For more information about the project, please visit www.LCUSEwater.com. Questions may be submitted to info@LCUSEwater.com.



NP-GOI100451-01

FOR IMMEDIATE RELEASE

Contact: Betsy Clayton, APR/CPRC
Communications Director
Lee County Government
239-533-2221
LeeCountyPIO@leegov.com

Lee County to hold a public meeting about the Southeast Water Reclamation Facility Project

Fort Myers, FL, Jan. 10, 2023 — Lee County will hold a public meeting about the Southeast Advanced Water Reclamation Facility (SEAWRF) Project, a Lee County Utilities project that will be built in the southeast part of the county off Alico Road.

The meeting will be held from 5:30 to 7:30 p.m. Tuesday, Jan. 31, at the Hilton Garden Inn Fort Myers Airport/FGCU, 16410 Corporate Commerce Way, Fort Myers. The meeting is an open-house style so that residents can interact one-on-one with staff and drop in at whatever time is convenient to them.

Lee County Utilities is beginning the design phase for the SEAWRF Project, which is proposed to be located at 14201 Alico Road. The SEAWRF project will provide the county with a 6 million gallons per day advanced water reclamation facility that can be expanded to 10 million gallons per day or greater, if needed. The project is needed to support existing and future population in the area.

Water quality is a top priority of the Lee Board of County Commissioners and water-quality initiatives occur year-round. Water quality affects residents and visitors alike and is the driver behind the SEAWRF Project. Responsible management of wastewater is key to maintaining the county's water quality overall.

An advanced water reclamation facility produces a "higher quality" water by removing nutrients in addition to the normal components removed in a standard biological wastewater treatment facility. The resulting water would be safe for public reuse in landscape irrigation and other potential beneficial uses.

Advance Water Treatment (AWT) will help to further remove nutrients from the treated wastewater, or effluent. Removing nutrients from the effluent water and making it available for irrigation would help lessen the demand for potable drinking water and protect and improve Lee County's water quality.

For more information about the SEAWRF Project, visit www.LCUSEwater.com. For more information about the Board's commitment to water-quality initiatives, visit www.leegov.com/water.

To receive updates from Lee County Government, sign up for the newsletter here: www.leegov.com/resources/newsletters. Follow Lee County Government on Facebook, www.facebook.com/leecountyflbocc.

In accordance with the Americans with Disabilities Act, Lee County will not discriminate against qualified individuals with disabilities in its services, programs or activities. To request an auxiliary aid or service for effective communication or a reasonable modification to participate, contact Joan LaGuardia, 239-533-2314, Florida Relay Service 711, or jlaguardia@leegov.com. Accommodation will be provided at no cost to the requester. Requests should be made at least 5 business days in advance.

-30-

APPENDIX C

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Public Meeting

Tuesday, January 31, 2023

Hilton Garden Inn - Fort Myers Airport/FGCU

16410 Corporate Commerce Way, Fort Myers, FL 33913

SIGN-IN SHEET

NAME (Please Print)	ORGANIZATION (Please Print)	ADDRESS (Please Print)	EMAIL (Please Print)	PHONE
MARSHA ELLIS	R6M/PROP OWNER INNER LOOP WORKING GROUP	17850 DEVEREUX FMY 33913	imerloopworkinggroup.com marsha.ellis23@gmail.com	239.822.
PETER SPAHN	ADJACENT PROPERTY	17100 WORTHOOD LN	NONE	NONE
ADRIAN HOLTZ	SUNDT CONSTRUCTION	400 N TAMPA ST.	AHOLTZER@SUNDT.COM	904-657-9270
Richard Sprague	Adjacent property	17630 Devereux Lane Ft. Myers FL	Dicktater71@aol.com	239-994-9804
Kevin & Kristi Huston	Wild Blue	19328 Aqua Shore	Kristi.Huston@gmail.com	860-301-6291
Luke Schultheis	LC Homes		Luke.Schultheis@lennar.com	201-0375
Peter Cangialosi	eYes on Cons. 20/20		pcangialosi@comcast.net	
SANDRA SCOTT		18771 Green Meadow Rd	Sandiesath1962@gmail.com	239 243 6745
Stacey Blackwell		18801 Green Meadow Rd	staceyjack@hotmail.com	
Brett Blackwell		18801 Green Meadow Rd	sggcattle0716@gmail.com	239-229-3[illegible]
Polly Whitbeck	self			
RONNIE CANADA	self	14120 Alico Rd		706-892-7607
Scott Sachs / Tami DeFrank	self	18501 Green Meadow Rd FM	scottsachs@sbcglobal.net	530-574-2557
Cathy Alexander	self	9765 Mar Largo Cir, FM	Calexander@fgcu.edu	

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Public Meeting

Tuesday, January 31, 2023

Hilton Garden Inn - Fort Myers Airport/FGCU

16410 Corporate Commerce Way, Fort Myers, FL 33913

SIGN-IN SHEET

NAME (Please Print)	ORGANIZATION (Please Print)	ADDRESS (Please Print)	EMAIL (Please Print)	PHONE
Josh & Taylor Stevenson	resident	18521 Green Meadow Rd	TAYLORT955@gmail.com	803-847-2557
Karen Machol Spragle	resident	17630 Devon Ln	tazwomen@gmail	239-243-1949
John Asher	G.L. Homes		JOHN.ASHER@GLHomes.com	239-293-4220
Scott P. Sacks	Self	18501 Green Meadow Rd	SCOTTSACKS@BELLSOUTH.NET	530-574-2557
Natalia Nassar	J.R. Evans		nnassar@jreeng.com	
Kurt Alexander	resident	9765 Mar Largo Cir	ckwtalexander@gmail.com	7652150796

Southeast Advanced Water Reclamation Facility

Public Meeting

Tuesday, January 31, 2023

Hilton Garden Inn - Fort Myers Airport/FGCU

16410 Corporate Commerce Way, Fort Myers, FL 33913

SIGN-IN SHEET

NAME (Please Print)	ORGANIZATION (Please Print)	ADDRESS (Please Print)	EMAIL (Please Print)	PHONE
Zachary Liebetrau	Rocter's Andrew (FloridaRock)		zliebetrau@slslaw.com	
Billy Logan	R.J. HARTON-SMITH, INC.		BLOGAN@RJHARTONSMITH.COM	813-528-5678
TODD O'DONNELL	RJHARTON-SMITH, INC.		todonnell@RJHARTONSMITH.com	813-927-1780
PETER SIMMONS	WOODARD + CURRAN		PSIMMONS@WOODARDCURRAN.COM	(239) 222-7745
DAVID RIEKEN JR	SUNDT CONSTRUCTION INC		DMRIEKEN@SUNDT.com	602 614 0495
Sean Thomas	Resident	17850 Dewar Lane Ft Myers FL 33913	sthomas@fgcu.edu	305 705 4710
Ginny Fitzherbert	Home owner	17521 DeLorie Ln 33913	ginnyfitzherbert@outlook.com	239-222-6243
Pat Cingle	Home owner	19093 Wild Alee Blvd 33913	EthelCingle@gmail.com	724-766-5056
George Cingle	"	"		239-314-0578
BRANDON FLEY	JRC		BRANDON@JRCENG.COM	239 634 6660
Taylor (Wink News) + Crew + 1				

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Public Meeting

Tuesday, January 31, 2023

Hilton Garden Inn - Fort Myers Airport/FGCU

16410 Corporate Commerce Way, Fort Myers, FL 33913

SIGN-IN SHEET

NAME (Please Print)	ORGANIZATION (Please Print)	ADDRESS (Please Print)	EMAIL (Please Print)	PHONE
Mercedes Marthull	NBC 2			
Josh ~~Salazar~~ Salazar	NBC 2			
Ismael Santos	NBC 2			
Michael Flaga	WSI			
Karen DesRochers	Homeowner	17900 Devoee lane Ft. Myers 33913	Karenjdesrochers@yahoo	239-872-3282
John Buchholtz	Wildblue AquaShore HOA	19077 AQUA SHORE DRIVE Ft Myers	John b@ buchholtzgroup	973 464 3330
Jeff Breedlove	MANHATTAN ROAD & BRIDGE		jeff.breedlove@manhattanrb.com	908-684-4124

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Frequently Asked Questions

What is the Southeast Advanced Water Reclamation Facility (SEAWRF) Project?

Lee County Utilities is beginning the design phase for the Southeast Advanced Water Reclamation Facility (SEAWRF) Project, which is proposed to be located at 14201 Alico Road in Fort Myers, Florida. The SEAWRF project will provide the County with a 6 million gallons per day advanced water reclamation facility that can be expanded to 10 million gallons per day. The project is needed to support existing and future population in the area.

Why is Lee County planning the Southeast Advanced Water Reclamation Facility and why this location?

The Lee Board of County Commissioners is strategically planning and preparing for a fulltime population of 1 million residents. Residential growth is anticipated in the southeast region of the County. The SEAWRF will ensure advanced wastewater treatment infrastructure is available to support the increasing population in this area. Lee County has expanded the wastewater treatment capacity of other existing treatment facilities and a new facility is now necessary.

As service demands increase and existing assets age, the County must plan for and comply with regulatory treatment and discharge requirements that become stricter each year. Lee County remains committed to implementing measures that protect the local waterbodies, which are vital to the state's overall quality of life, health and economy.

What is an advanced water reclamation facility and how is it different from other facilities?

An advanced water reclamation facility produces a "higher quality" water by removing nutrients in addition to the normal components removed in a standard biological wastewater treatment facility. The resulting water will be safe for public reuse in landscape irrigation and other potential beneficial uses.

Why is advanced wastewater treatment (AWT) important?

Water quality is a top priority of the Lee Board of County Commissioners and water quality initiatives occur year-round. Water quality affects residents and visitors alike, and everyone has an opportunity to be a part of the solution. Water quality is the driver behind the SEAWRF Project. Responsible management of wastewater is key to maintaining the County's overall water quality.

AWT will help to further remove nutrients from the treated wastewater, or effluent. Removing nutrients from the effluent water and making it available for irrigation would help lessen the demand for potable drinking water and protect and improve Lee County's water quality.

Wastewater treated to AWT standards:

- Is beneficial to the Lee County community as well as our waterways, bays and the Gulf of Mexico
- Preserves potable drinking water
- Can provide high-quality reuse water for irrigation
- Promotes economic benefits by maintaining healthy waterways, bays and the Gulf of Mexico

Visit the Project Details page on our website to view the United States Environmental Protection Agency's Facts about Nutrient Pollution information.

How will the facility handle odor control?

The SEAWRF will be designed to operate in a neighbor-friendly way with engineering controls to treat odorous air prior to release. Odor abatement technology, such as scrubbers and activated carbon filters, will be incorporated into the project. Professional licensed operations staff will operate the round-the-clock facility without detection. Lee County does this successfully at its Three Oaks facility and other facilities.

Will this facility have an effect on wildlife?

As part of the permitting process for the project, coordination will occur with the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS) to evaluate potential impacts. Conservation measures will be used and mitigation measures provided, as necessary to offset any unavoidable impacts. The project will be largely located within previously cleared pasture, thereby minimizing potential impacts to habitat.

Wildlife surveys will be repeated prior to construction to ensure no nesting has occurred since the permitting phase. Any necessary relocation permits (i.e., gopher tortoise) will be obtained and implemented prior to the start of construction.

The wetland slough system on the eastern third of the property, containing about 33 acres, will remain as a preserve post-development, with exotic vegetation removal implemented to enhance its value for wildlife. Lee County Department of Transportation is expected to incorporate a wildlife/animal crossing for the proposed Alico Road Extension project.

What will the SEAWRF look like?

The project is in the design phase.

What is the proposed project schedule?

The SEAWRF project is in the design phase. Check the project website for information about the project and future meetings. Construction is anticipated to start in 2025.

How can I stay informed about the SEAWRF Project?

Lee County encourages you to visit the project website at www.LCUSEwater.com to sign up for periodic updates. Questions may be submitted to info@LCUSEwater.com.

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

1-2023

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Public Meeting Comment Sheet

Tuesday, January 31, 2023

Hilton Garden Inn Fort Myers Airport/FGCU
16410 Corporate Commerce Way, Fort Myers, FL 33913

Please use this feedback form to express your opinions about this project. Drop your written comments into the comment box here today, mail them to the address on the back of this form, or email them to Lee County's Public Information Consultant for the project, Cella Molnar and Associates, Inc. at info@LCUSEwater.com by February 14, 2023.

Please keep in mind that this is a public record.

Name_____

Address_____

City_____ **State** _____ **Zip Code**_____

Email Address_____

☐ *Please add me to your email list for notifications concerning this project.*

Comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

(Attach additional sheets if necessary)

Thank you for your interest in this project. Public participation is solicited without regard to race, color national origin, age, sex religion, disability, or family status. The information you provide on this comment form becomes part of the project files and may be provided to those who may make a public records request. Please note, members of the public providing comments at this meeting or following this meeting will NOT be considered participants of the Hearing Examiner record. Participants of record for those proceedings must provide comments at the Hearing Examiner public hearing, to be scheduled.

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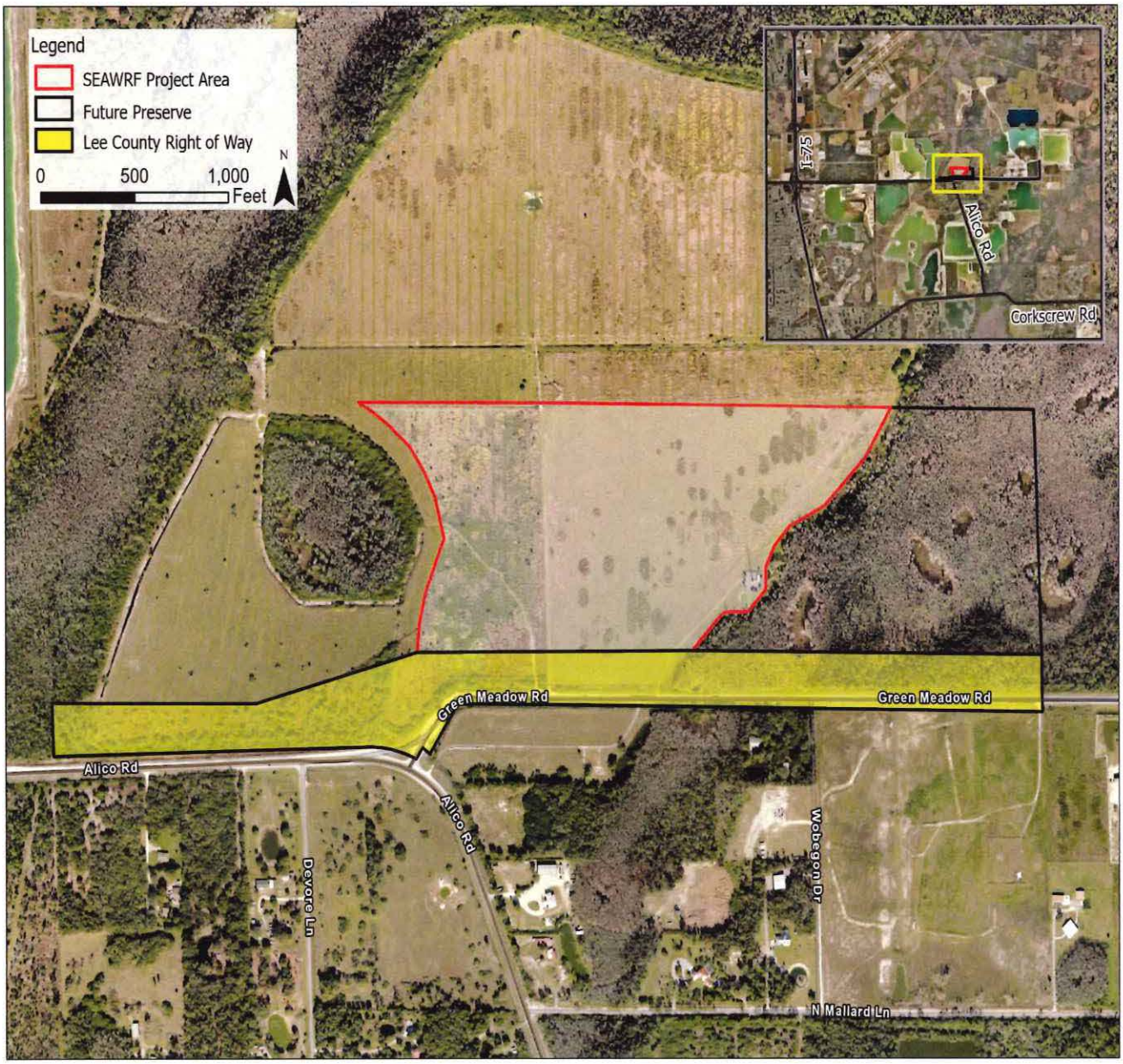
LEE COUNTY
C/O CELLA MOLNAR & ASSOCIATES, INC.
1631 HENDRY STREET
FORT MYERS, FL 33901

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Project Location Map



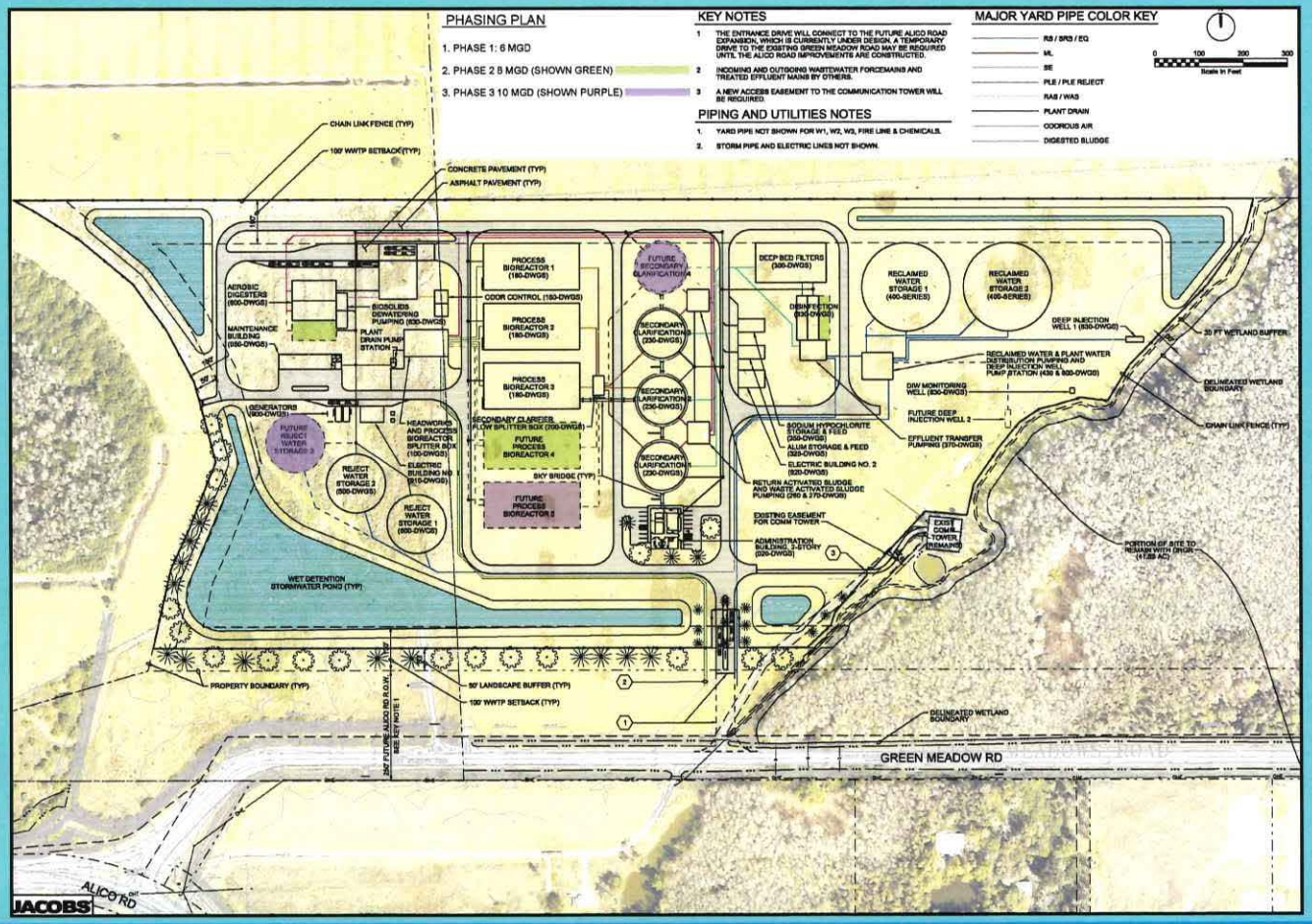
Project is located at 14201 Alico Road, Fort Myers, FL

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Conceptual Plan

- 6 mgd Advanced Water Reclamation Facility expandable to 10 mgd
- Height of buildings, tanks, etc., are planned to be no taller than 55-feet above improved grade
- Plant layout allows for gravity flow of water through treatment

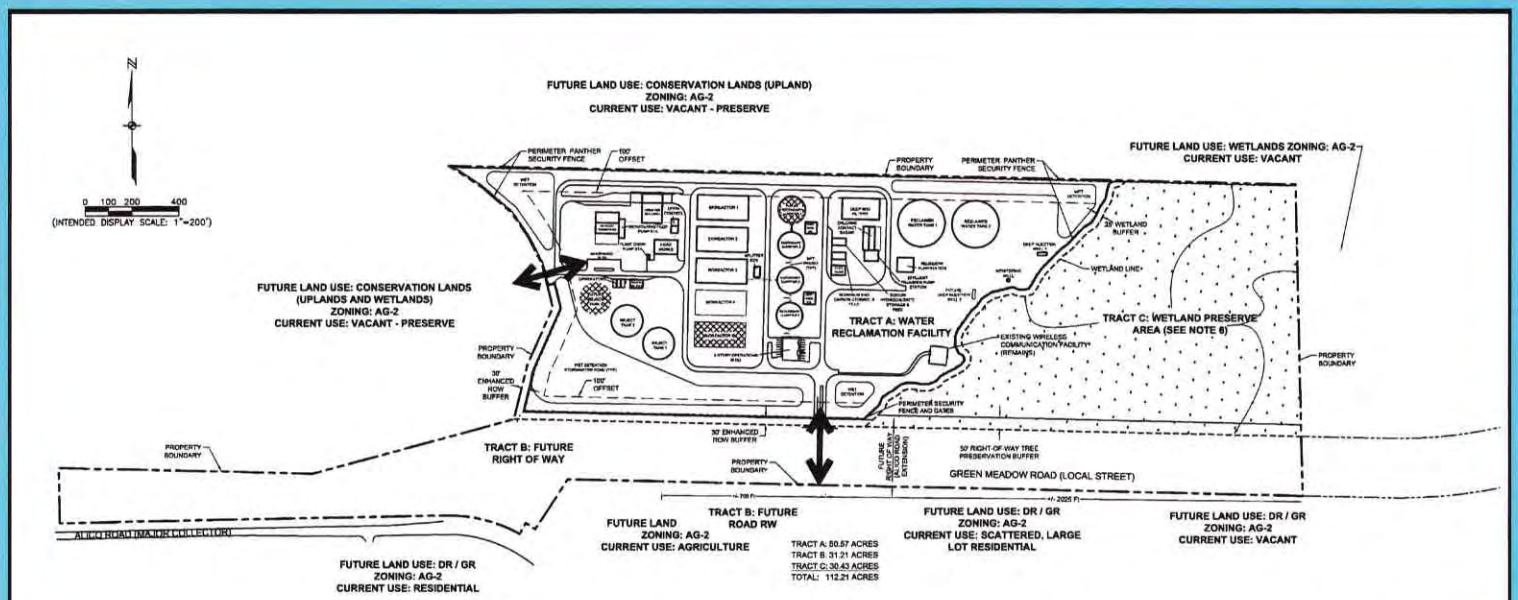


Visit the project website: **www.LCUSEwater.com**

Southeast Advanced Water Reclamation Facility

Zoning/Permitting - Master Concept Plan

- The MCP shows general layout of the site, not meant to be a specific layout.
- The MCP provides the following information:
  - Wetland Preserve
  - Perimeter Wetland/ Landscape Buffer areas
  - Building location and orientation
  - Stormwater management area



OPEN SPACE REQUIRED (SEE NOTE 7)	
80.99 ACRES X 0.30 = 24.30	
OPEN SPACE PROVIDED (SEE NOTE 7)	
DESCRIPTION	**AREA (ACRES)**
WETLAND PRESERVE:	30.43
25' WETLAND BUFFER:	0.98
PERIMETER BUFFERS:	1.43

NOTES:
1. THIS MASTER CONCEPT PLAN (MCP) IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGES DUE TO AGENCY REVIEW AND SITE CONDITIONS.
2. TOTAL DEVELOPMENT AREA: 112.20 ACRES MINUS FUTURE RIGHT OF WAY (32.21 ACRES) IS 81.00 ACRES.
3. THE DESIGN, LOCATION, AND CONFIGURATION OF THE PROPOSED DEVELOPMENT AREA TRACTS, INTERNAL AND EXTERNAL INGRESS/EGRESS POINT LOCATIONS, DRIVES, LAND IMPROVEMENTS AND STRUCTURES ARE APPROXIMATE AND SUBJECT TO ALTERATION AT TIME OF DEVELOPMENT ORDER FOR EACH TRACT. CHANGES TO THE MCP THAT ARE CONSISTENT WITH THE INTENT, CHARACTER, AND PROPERTY DEVELOPMENT REGULATIONS OF THIS CFPD CAN BE APPROVED ADMINISTRATIVELY.
4. FUTURE LAND USE DESIGNATION: PUBLIC FACILITIES; WETLANDS; AND DR/GR.
5. PHASING PROGRAM: THIS IS A MULTI-PHASED PROJECT. PLEASE REFER TO THE PHASING PROGRAM NARRATIVE.
6. THE WETLAND PRESERVE AREA WILL PROVIDE FOR AND EXCEED THE REQUIRED 30' TYPE "F" BUFFER REQUIREMENT ALONG A PORTION OF THE NORTHERN AND ENTIRE EASTERN PROPERTY BOUNDARY AS WELL AS THE REQUIRED 50' RIGHT-OF-WAY TREE PRESERVATION BUFFER ALONG A PORTION OF THE SOUTHERN PROPERTY BOUNDARY. SEE ALSO DEVIATION 1
7. FOR PURPOSES OF CALCULATING OPEN SPACE REQUIRED AND PROVIDED, THE PROPERTY AREA USED IS ONLY THAT PORTION OF THE PLANNED DEVELOPMENT WITHIN TRACTS A, B AND C DUE TO THE REDUCED LAND AREA AS A RESULT OF THE LAND TO BE UTILIZED FOR THE FUTURE ALICO ROAD EXTENSION RIGHT OF WAY. TOTAL OPEN SPACE PROVIDED EXCEEDS THE REQUIRED AMOUNT BY X.XX ACRES.

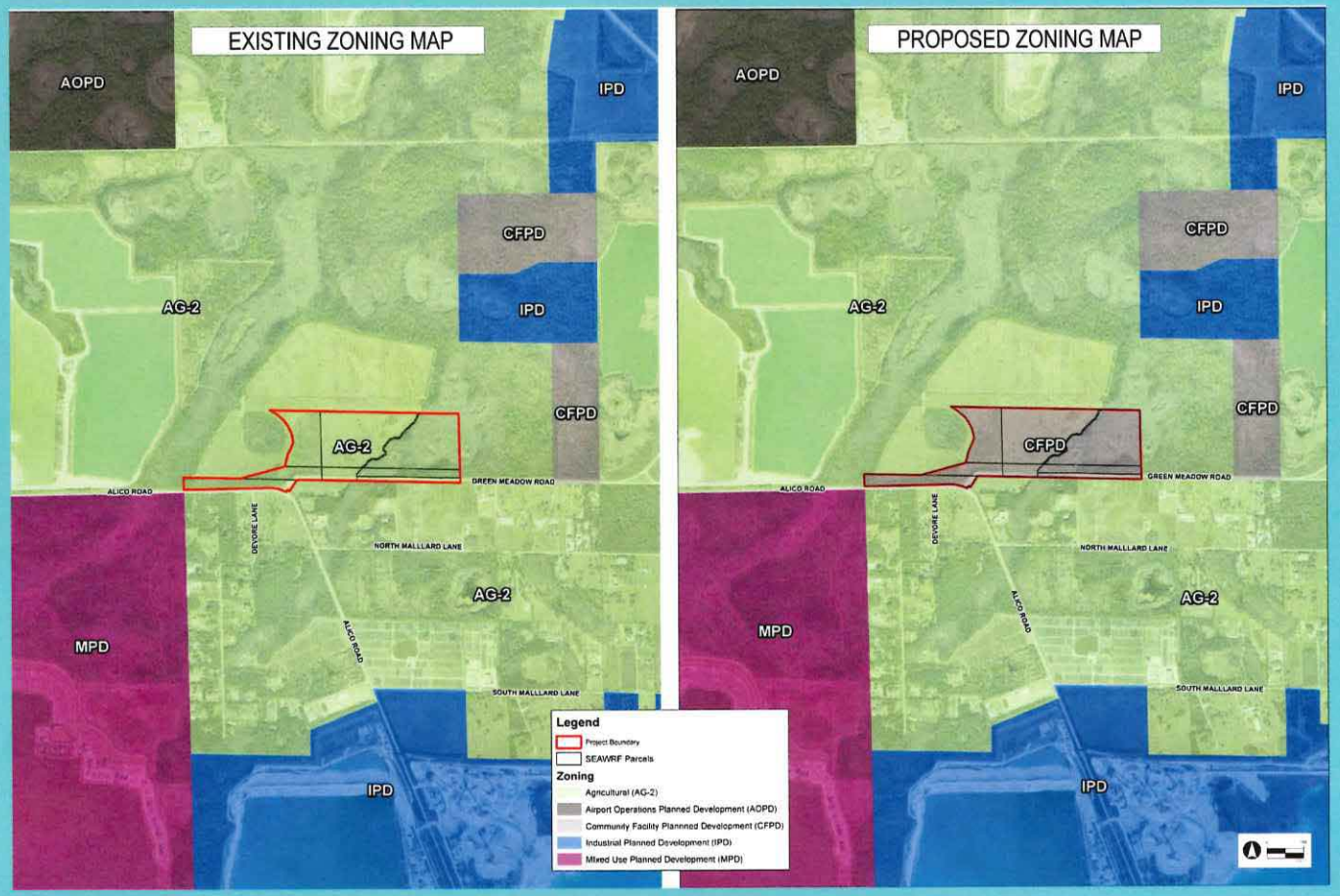
Visit the project website: **www.LCUSEwater.com**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Zoning/Permitting - Existing & Proposed Zoning Maps

- Current AG-2 Zoning for project site shown and future CFPD Zoning
- The area around the plant is already planned and zoned for development including industrial and residential



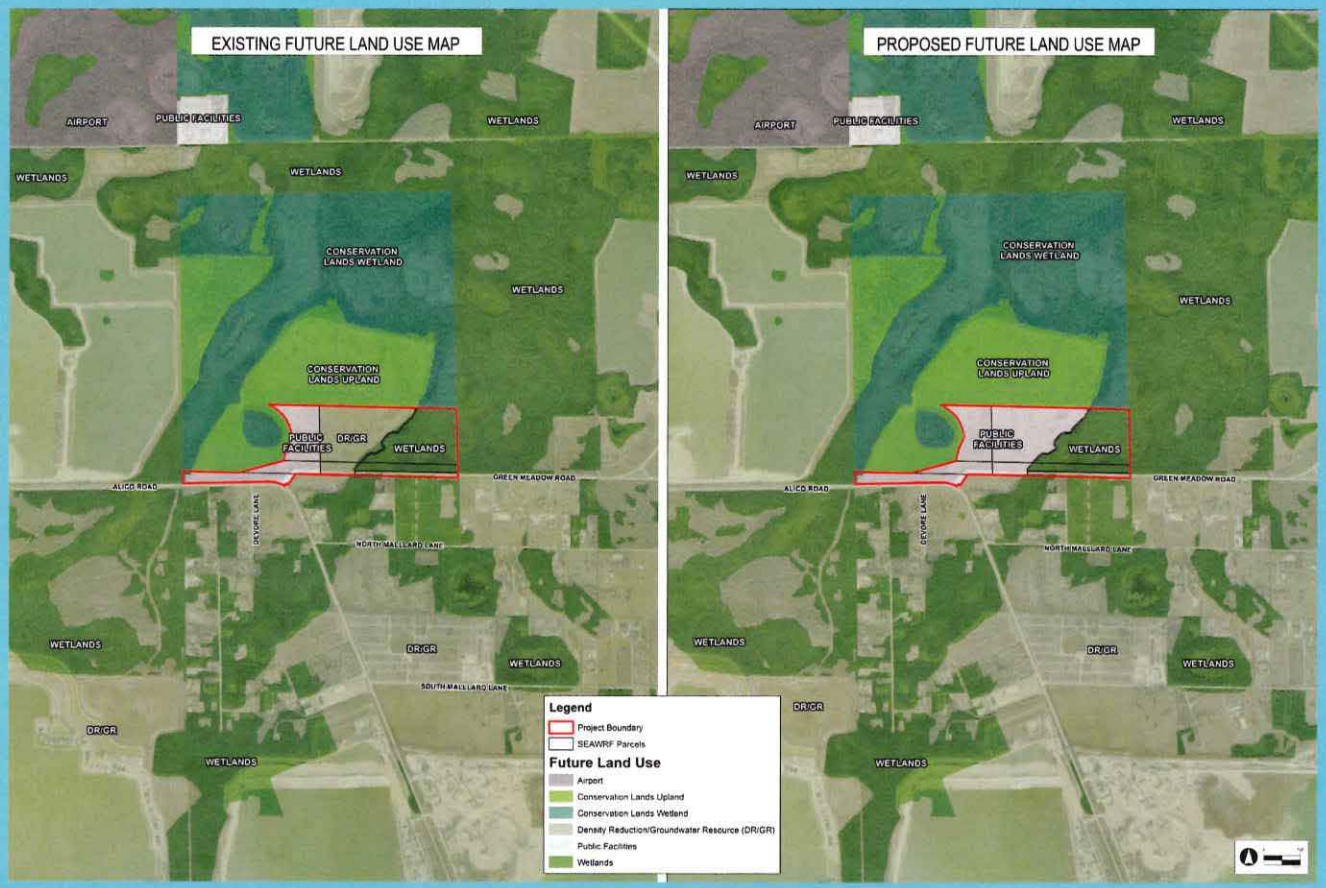
Visit the project website: **www.LCUSEwater.com**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Zoning/Permitting - Existing & Proposed Future Land Use Maps

- Future land use map for project site and proposed future land use map
- This project does not impact wetlands
- Portion of the property already has a future land use of Public Facilities

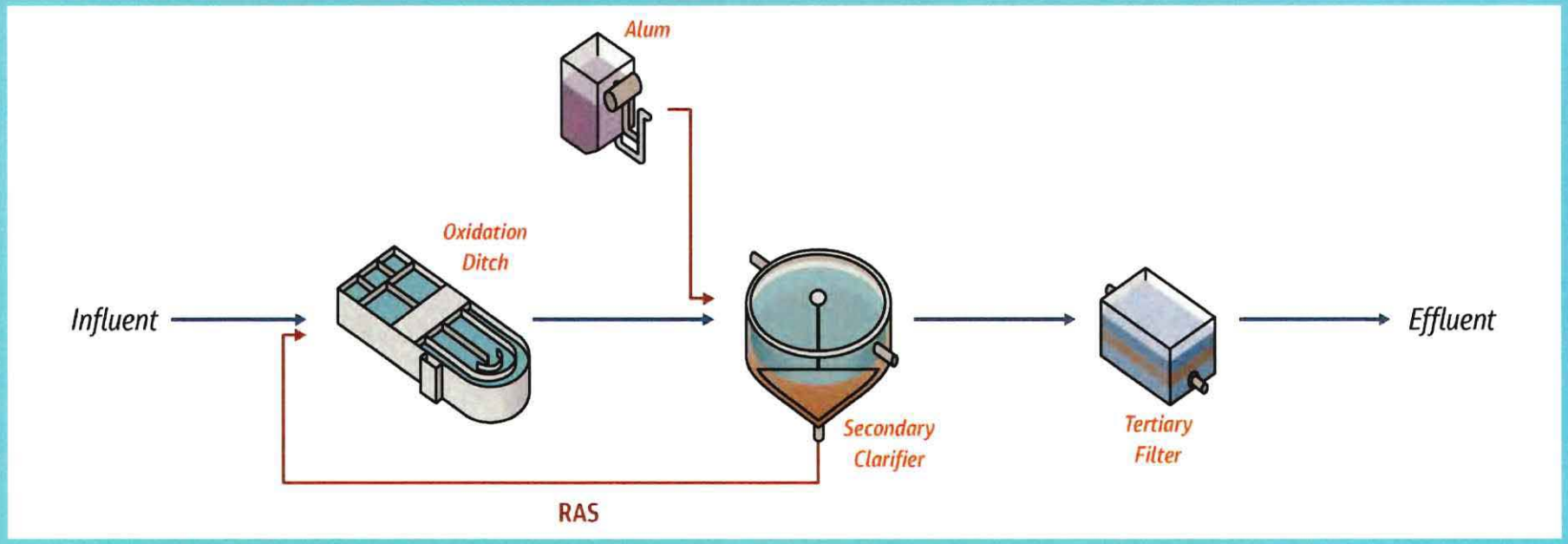


Visit the project website: **www.LCUSEwater.com**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Facility Design & Operations - Plant Design

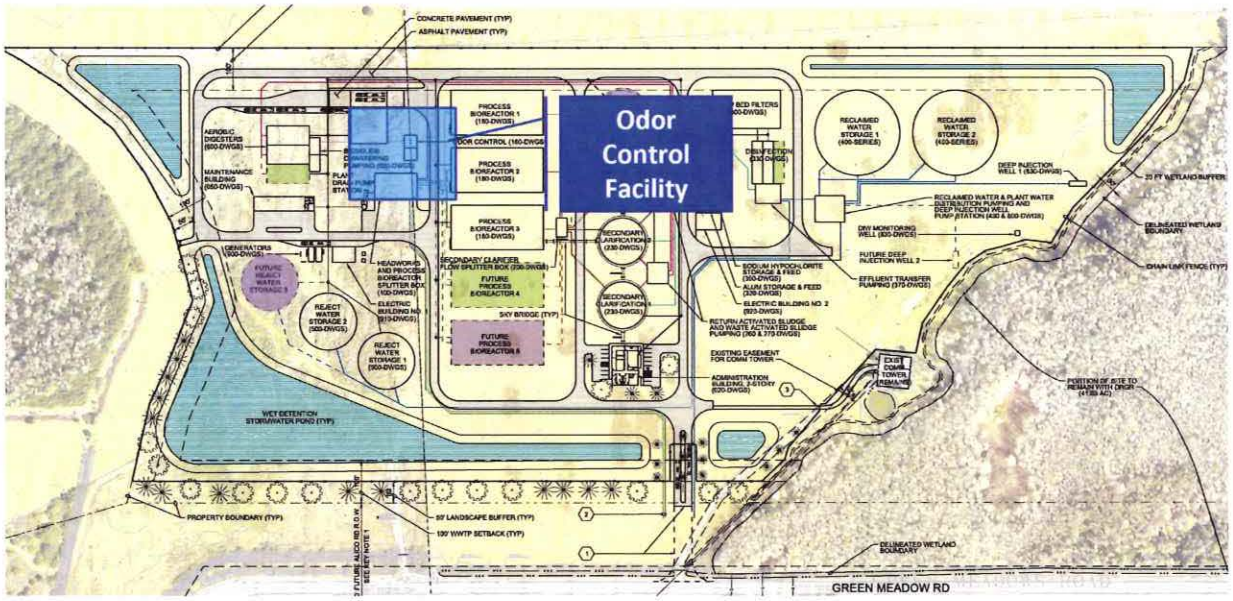


- **AWT treats pollutants in the wastewater and includes removal of nutrients to low levels using the natural growth of water treating microorganisms.**
  - **Biological nitrogen and phosphorus removal**
  - **Less chemical usage and sludge production than chemical phosphorus removal**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Facility Design & Operations - Plant Odor Control



- Influent of plant has the most odors and is located furthest away from the roadway.

- Odors are captured and treated using odor control systems, similar to the successful installations at Three Oaks WRF.

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Facility Design & Operations - Lee County Utilities Facilities

Fiesta Village AWRF
1366 San Souci Drive
Fort Myers, FL 33919

N

Three Oaks WRF
18521 Three Oaks Pkwy
Fort Myers, FL 33967

N

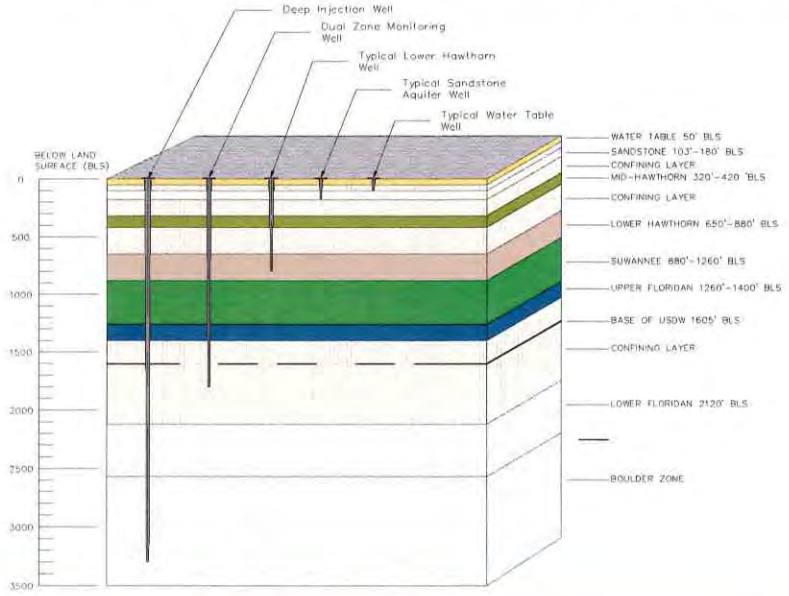
Visit the project website: **www.LCUSEwater.com**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

What is a Deep Injection Well?

A water reclamation facility deep injection well is a specially designed, constructed and highly regulated well that is used to safely dispose excess effluent. Excess reuse water is pumped down the well and is injected far below drinking water aquifers into a highly confined zone of seawater like saline water. Thick layers of rock and clay (confirmed during well drilling and testing) separate the injection zone from overlying aquifers preventing any reuse water from entering drinking water aquifers. Monitor wells located near the injection well continually sample water and pressures at multiple zones above the injection zone to ensure that no reuse water nears drinking water aquifers. In addition, deep injection wells undergo extensive mechanical integrity testing every 5 years to further ensure drinking water aquifers are thoroughly protected.



Class I Deep Injection Well (DIW) Will Safely Dispose of Excess Reuse Water While Protecting Water Supply

- Class I injection wells identified as a safe, reliable, and effective disposal mechanism.
- Regulated federally by U.S. Environmental Protection Agency and in Florida by the Florida Department of Environmental Protection (FDEP) Underground Injection Control (UIC) Program
- Class I wells can inject non-hazardous waste or municipal waste below the lowermost Underground Source of Drinking Water (USDW).
- Reject and raw sewage disposal not allowed.

Design and Construction of DIW and Monitoring Wells Protect Water Resources

- Dual zone monitoring well—above & below USDW.
- Designed using multiple overlapping casing strings to protect the drinking water aquifers.
- Wells are permitted through FDEP in rigorous permitting process, including review of:
- Well construction and testing data.
- Regional and local geology/hydrogeology

Continuous Monitoring and Testing Assures Proper Operation

- Mechanical Integrity Testing at least every 5 years
- Permit renewal every 5 years with thorough data review

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Reclaimed Water Beneficial Reuse Projects

Blacks Ford Swamp, Blacks Ford WRF, JEA

- Operating since 1999
- 230-acre receiving wetland
- Permitted for up to 6 mgd
- FDEP permit conditions require careful biological monitoring.

Boot Wetland, Walnut Drive WRF, Toho Water Authority

- Operating since 1984
- Comprehensive operational monitoring has been ongoing since 1990
- 115-acre receiving wetland
- Permitted capacity
  - 0.255 mgd AADF
  - 0.6 inches/week
- Data driven proof of no degradation of wetland habitats, only enhancement

Bennet Swamp, West Regional WRF, Daytona Beach

- Operating since 2019
- 2,800-acre receiving wetland
- Permitted capacity
  - 6 mgd
  - 0.6 inches/week
  - Allowed flows limited by TMDL downstream
- Augments regional water resources near public supply wellfield

Visit the project website: **www.LCUSEwater.com**

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Environmental - Flow Ways

APPENDIX D

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility (SEAWRF)
Written Comments & Responses from Public Meeting #1
Tuesday, January 31, 2023

(Official comment period ended February 14, 2023)

Comment: **I wish the treated water would not all be wasted by injecting into deep wells. I think the water should be used for irrigation area. Wetlands reclamation like they do in North Florida.**

Response: Lee County Utilities is researching beneficial uses for the proposed advanced treated water.

Comment: **We would like the water tank height lower than 40'-0" above finished grade. Additional tanks would provide the cubic footage you need. Smells from the site are also a concern. No storage of debris on site. No future waste management, and open land to go into conservatory. Thank you.**

Response: The diameter/height of tanks along with the value of land and the number of tanks needs to be optimized to maximize benefits. Odors from a wastewater treatment plant are most intense at the headworks of the plant. The SEAWRF will include a treatment system to minimize odor. No debris is planned to be stored on the site. No future solid waste management facilities are planned. The eastern slough will be preserved as wetlands.

Comment: **The proposed area should be moved further East to accommodate "Kingston" area to be built. This should have been in the development approval process in exchange for building 10,000+ homes. We ask to build a very tall berm and landscaping on top. In addition, can the tanks be shorter.**

Response: The site location is best suited for the needs of the Lee County community. The landscape buffer is intended to be hide the facility. An elevated berm will be considered in screening the project. The diameter/height of tanks along with the value of land and the number of tanks needs to be optimized to maximize benefits.

Comment: **I am not in favor of this project. I think it was a dirty deal done in back rooms to swap this property with the property near The Place. I don't understand how putting this between the well sites is good. All the current development is well to the east of this site. Why put it here? I want to be informed throughout all this process!**

Response: Previous regional hydraulic modeling supports this site area as being the best available location for the new plant. The site location is best suited for the needs of the Lee County community. Please visit the project website at www.LCUSEwater.com to sign up for project updates.

Comment: **I am a Lee County resident and I am writing to express my opposition to building a new waste water plant in an area that is designated conservation land. I understand that there is a need to build a plant on Lee County but it should not violate the fact that the land chosen is a type 1 priority. We love the area because of all of the wildlife but there is absolutely too much development on the Corkscrew Road corridor and the wildlife we love are losing their habitat quickly. Thank you.**

Response: The proposed advanced water reclamation facility is necessary to support the growth in this area of Lee County. The project will require an Environmental Resource Permit which details protection of any wildlife and their habitat. This project facilitated acquisition of the eastern slough which Lee County will preserve and helps with conservation goals by joining multiple areas together. Additionally, the Lee County Department of Transportation is proposing a wildlife crossing at the western slough as part of the Alico Road Extension Project.

Comment: I'm just concerned for wildlife and overcrowding.

Response: The Lee County Department of Transportation is proposing a wildlife crossing at the western slough as part of the Alico Road Extension Project.

Comment: I am also interested in county commissioners work on water quality of Caloosahatchee and what is specifically being done.

Response: Water quality is a top priority of the Lee Board of County Commissioners and water-quality projects are underway year-round. To learn more about Lee County's Water Quality Initiative, please visit Our Water Story at www.leegov.com/water. Here you will find information about how we got to where we are, what we're doing to fix it and how you can help shape the future of our waterways. Additionally, the site features a story map to take visitors on a tour of the watershed, discussing the challenges and causes as well as the steps Lee County and partner agencies have taken to help improve local water quality.

Lee County's Division of Natural Resources actively works to improve the water quality of our area. To learn more about their projects, visit their website at https://www.leegov.com/naturalresources/WaterQuality.

Comment: I own a piece of property @ 14500 Alico Rd. I was wondering if I will get city or county water instead of having to get well water?

Response: Offsite properties will not be affected by this project related to service connections to Lee County Utilities. Currently, Lee County Utilities has a 30" transmission water main that runs along Alico Road; however, individual property services are not connected to transmission mains. Visit the Lee County Utilities website at https://www.leegov.com/utilities/new-development to find out more information about utility service.

Comment: Where is all this reclaimed water going to go?

Response: The goal of the SEAWRF project is to implement beneficial reuse and it is still under evaluation. The treated effluent could be pumped down a deep injection well, used for landscape irrigation, or to recharge a natural wetland system, or a combination of these options.

Comment: Who is the current Project Manager for this project? What is the current status and schedule of the project?

Response: Mike Avoglia is the current Lee County Utilities project manager. The project is beginning to develop 30% plans as of February 2023. The SEAWRF construction is expected to begin in 2025 with completion in 2028. Please visit the project website at www.LCUSEwater.com to sign up for project updates.

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

Public Meeting Comment Sheet

Tuesday, January 31, 2023

Hilton Garden Inn Fort Myers Airport/FGCU
16410 Corporate Commerce Way, Fort Myers, FL 33913

Please use this feedback form to express your opinions about this project. Drop your written comments into the comment box here today, mail them to the address on the back of this form, or email them to Lee County's Public Information Consultant for the project, Cella Molnar and Associates, Inc. at info@LCUSEwater.com by February 14, 2023.

Please keep in mind that this is a public record.

Name Kurt Alexander

Address 9765 Marlargo Circle

City Fort Myers **State** FL **Zip Code** 33919

Email Address Ckurtalexander@gmail.com

☒ *Please add me to your email list for notifications concerning this project.*

Comments:

I wish the treated water would not all be wasted by injecting into deep wells. I think the water should be used for irrigation and Wetlands Reclamation like they do in North Florida

(Attach additional sheets if necessary)

Thank you for your interest in this project. Public participation is solicited without regard to race, color national origin, age, sex religion, disability, or family status. The information you provide on this comment form becomes part of the project files and may be provided to those who may make a public records request. Please note, members of the public providing comments at this meeting or following this meeting will NOT be considered participants of the Hearing Examiner record. Participants of record for those proceedings must provide comments at the Hearing Examiner public hearing, to be scheduled.

Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

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Please keep in mind that this is a public record.

Name John Buchholz Aqua Shore HOA President
Address 19077 Aqua Shore Drive Wildblue
City Ft Myers **State** FL **Zip Code** 33913
Email Address Johnb@buchholzgroup

☐ *Please add me to your email list for notifications concerning this project.*

Comments:

We would like the water tank height lower than 40'-0" above finsbed grade. Additional tanks would provide the ~~the~~ cubic footage you need.

- Smells from the site are also a concern
- No storage of debris on site
- No future waste management, and open land to go into conservation.

Thank you

(Attach additional sheets if necessary)

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Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

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Please keep in mind that this is a public record.

Name Kristi Huston

Address 19328 Aqua Shore

City Ft Myers **State** FL **Zip Code** 33913

Email Address Kristi.Huston@Gmail.com

☑ *Please add me to your email list for notifications concerning this project.*

Comments:

The proposed area should be moved further east to accomodate "Kingston" area to be built. This should have been in the development approval process in exchange for building 10,000+ homes.

We ask to build a very tall berm and landscaping on top. In addition, can the tanks be shorter?

(Attach additional sheets if necessary)

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Lee County
Southwest Florida

Southeast Advanced Water Reclamation Facility

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Please keep in mind that this is a public record.

Name Richard A. Sprague

Address 17630 Devore Lane

City Ft. Myers **State** fl **Zip Code** 33913

Email Address Picktater71@Aol.com

☑ *Please add me to your email list for notifications concerning this project.*

Comments:

I am not in favor of this project. I think it was a dirty deal done in back Rooms to swap this property with the property near The Place. I dont understand how putting this between the well sites is good. All the current developement is well to the east of this site. Why put it here?

I want to be informed throughout all this process!

(Attach additional sheets if necessary)

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Kaye Molnar

From: Icusewater.com Contact Form <mmoore@cella.cc>
Sent: Wednesday, February 1, 2023 6:18 AM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Duke Downey

Email

Address

26099 Fawnwood CT Bonita Springs, FL 34134

Message

I'm just concerned for wildlife and over crowding

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Kaye Molnar

From: Joanne Cimorelli <joannedcimorelli@gmail.com>
Sent: Saturday, February 4, 2023 4:02 PM
To: info@lcusewater.com
Subject: New Waste water plant in Lee County

I am a Lee County resident and I am writing to express my opposition to building a new waste water plant in an area that is designated conservation land. I understand that there is a need to build a plant on Lee County but it should not violate the fact that the land chosen is a type 1 priority. We love the area because of all of the wildlife but there is absolutely too much development on the Corkscrew Road corridor and the wildlife we love are losing their habitat quickly.
Thank you.
Joanne Cimorelli

Joanne Cimorelli
Cell: 484.686.7763
Email: joannedcimorelli@gmail.com

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Wednesday, February 8, 2023 2:10 PM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Jim Harshbarger

Email

'wharshbar

Address

21004 W 1st St, apt 1401 Ft Myers, Fl 33901

Message

I am also interested in county commissioners work on water quality of Caloosahatchie and what is specifically being done.

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Tuesday, February 7, 2023 9:07 AM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Robert Neuhauser

Email

rneuhauser@mac.com

Address

8495 Buena Vista Rd

Message

I own a piece of property @14500 Alico Rd. I was wondering if I will get city or county water instead of having to get well water?
Thanks

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Wednesday, February 8, 2023 10:20 PM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Norman Cannon

Email

normancannon@embarqmail.com

Address

10 Iguana Ct

Message

Where is all this reclaimed water going to go?

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Sent from Southeast Advanced Water Reclamation Facility

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Thursday, February 9, 2023 9:24 AM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Marcus Russo

Email

mrusso@gaylordmerlin.com

Message

Who is the current Project Manager for this project?
What is the current status and schedule of the project?
When is acquisition scheduled to commence?

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Sent from Southeast Advanced Water Reclamation Facility

From: Ryan Gonzalez
To: info@lcusewater.com
Subject: Your upcoming Water Reclamation Facility
Date: Friday, January 13, 2023 3:55:46 PM

Hello,

When will construction begin and who is the design firm for the upcoming Southeast Advanced Water Reclamation Facility? When will bids go out as well? I have some clients interested in submitting qualifications when the timing is appropriate.

Thanks for your help,

Ryan Gonzalez
Industrial Services
8009 Creedmoor Rd, Suite 102
Raleigh, NC 27613
(919) 348-2919 voice & text
rgonzalez@ind-serv.com
www.ind-serv.com

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Monday, January 16, 2023 12:56 PM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Taylor Stevenson

Email

ta lort955@gmail.com

Address

18521 Green Meadow Rd.

Message

Can someone please call me in regards to this matter. I live on Green Meadow Rd. 803-847-2557. Thank you Taylor Stevenson

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Sent from Southeast Advanced Water Reclamation Facility

Kaye Molnar

From: lcusewater.com Contact Form <mmoore@cella.cc>
Sent: Thursday, January 26, 2023 12:05 PM
To: Kaye Molnar
Subject: Southeast Advanced WRF

Name

Patty Whitehead

Email

pbackos hotmail.com

Address

20791 TANGLEWOOD LN

Message

I would like to be informed when (any) agency meetings are held for approval of this plant and be given at least 5 days notice of those meetings

I would like to receive future communications about the SEAWRF Project from Lee County?

Yes

Sent from Southeast Advanced Water Reclamation Facility

SURFACE WATER AND GROUNDWATER ANALYSIS

Surface Water and Groundwater Impacts/Benefits Analysis

For

Southeast Advanced Water Reclamation Facility

Prepared For:
Lee County Utilities
1500 Monroe St.
Fort Myers, FL 33901

Prepared By:

JOHNSON ENGINEERING
Johnson Engineering, Inc., E.B. 642
P.O. Box 1550
2122 Johnson St.
Fort Myers, Florida 33902
(239) 334-0046

July 21, 2023

This item has been digitally signed and sealed by Jordan L. Varble, P.E., on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Jordan Levi Varble, P.E.
Florida License No. 81414

c=US, o=JOHNSON ENGINEERING INC, dnQualifier=A01410C0000017D9506EDF600003491, cn=Jordan Varble 2023.07.21 14:27:55 -04'00'

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I. PROJECT OVERVIEW

Lee County is proposing to construct a new advanced water reclamation facility (WRF) to help serve existing and future wastewater flows in the southeast Lee County service area. The proposed site is on 112.2 acres of property located north of the intersection of Alico Road and Green Meadow Road in Lee County, Florida. The property contains a mix of uplands, wetlands, and ditches. An overview of the existing property attributes is provided below and in the attached figures as well as the separate Environmental Impact Analysis report. The proposed WRF will be constructed on the upland portion of the property. The eastern wetlands on the property will remain undeveloped. This analysis provides an overview of the benefits associated with the drainage and surface water management design of the project.

II. EXISTING CONDITIONS

A. Topography

The topography of the property generally slopes north to south or northeast to southwest. The upland portion of this property was previously cleared and leveled to facilitate agricultural operations which historically included irrigated row crops and more recently pasture. Elevations in the upland area of the site generally range from 24.0 feet to 24.5 feet NAVD 88. Please refer to **Figures 1a** and **1b** for a topographic map of the parcel and surrounding areas.

B. Flow-ways

The subject site is located within the upper watershed of the Estero River. Due to the relatively flat topography of this area of the watershed, a well-defined channel does not exist and stormwater runoff is conveyed downstream via wetland flow-ways. The historical flow-way map (**Figure 2**) shows the wetlands east and west of the project site convey flows from the upstream watershed. Mapping from Lee County shows the current contributory area upstream of the project site is approximately 19 square miles.

C. Hydrology

Several past studies have performed hydrologic and hydraulic modeling of the Estero River, though most efforts focused on the portion of the watershed west of Interstate 75 (approximately five miles downstream). Lee County's 1992 Surface Water Management Plan established the basin allowable discharge rate of 42 cubic feet per second per square mile (CSM) for the 25-year, 3-day storm for the Estero River. The site is outside the 100-year flood zone mapped by the Federal Emergency Management Agency (FEMA). Peak storm results from the 2020 Southern Lee County Flood Mitigation Plan estimate the 25-year, 3-day storm in the wetlands surrounding the site is 25.0 feet NAVD 88 (MIKE-SHE model) or 24.8 feet NAVD 88 (ICPR4 model). The current site inside the proposed development footprint stores approximately 29 acre-feet of water at elevation 25 feet. Extrapolating this elevation to estimate the peak stage from the 100-year,

3-day design storm event yields a peak stage of 25.5 feet and an existing storage volume of 51 acre-feet.

The upland area of the project site is not significant with respect to recharge of the Surficial aquifer. Review of the Florida Department of Environmental Protection (FDEP) rainfall isopleth map for South Florida indicates the site receives a mean rainfall amount of 52 inches annually (FDEP, 2010, Environmental Resource Permit Stormwater Quality Applicant's Handbook). Studies by the South Florida Water Management District (SFWMD) indicate approximately 40 inches to 45 inches per year are returned to the atmosphere annually through evapotranspiration (SFWMD, 2000, Lower West Coast Water Supply Plan).

To verify these textbook values, a fully integrated, two-dimensional surface water and groundwater model was created using ICPR4 that simulates the existing hydrologic and hydraulic characteristics of the site and surrounding wetlands. A continuous simulation for the years 2018 through 2021 (years without a major landfalling hurricane) was modeled to estimate an annual water budget. Boundary conditions were applied in the model based on historical groundwater data collected by Lee County at monitoring well site 47A-GW12.

An existing ground "surface" was generated in AutoCAD using recent topographic survey data of the site to create a gridded digital elevation model of the property. ICPR4 utilizes this surface to set ground elevations at each triangle vertex in the 2D overland computational mesh, shown in **Figure II-A**. The existing ground surface was also used to set the initial integrated water surface elevation at the beginning of the model simulation period. Land use categories are used by the model to compute runoff, overland flow, and evapotranspiration (ET_p and ET_a, described later). Existing land uses for the site were condensed into those shown in **Figure II-B**. Overland flow roughness coefficients for each land use category are provided in **Table 1**. The model uses a range in roughness values based on the depth of flow, with shallow flowing having a higher n value than deeper flow. The transportation land use category includes both pervious and impervious areas, so the coefficient used for it is an approximate average of the two. Also provided in the table are percent impervious, crop coefficient, and root depth values for each land use category. A conservatively high imperviousness assumption was made for pervious to account for potential future improvements made to the site.

Table 1. Land use categories with associated model input parameters.

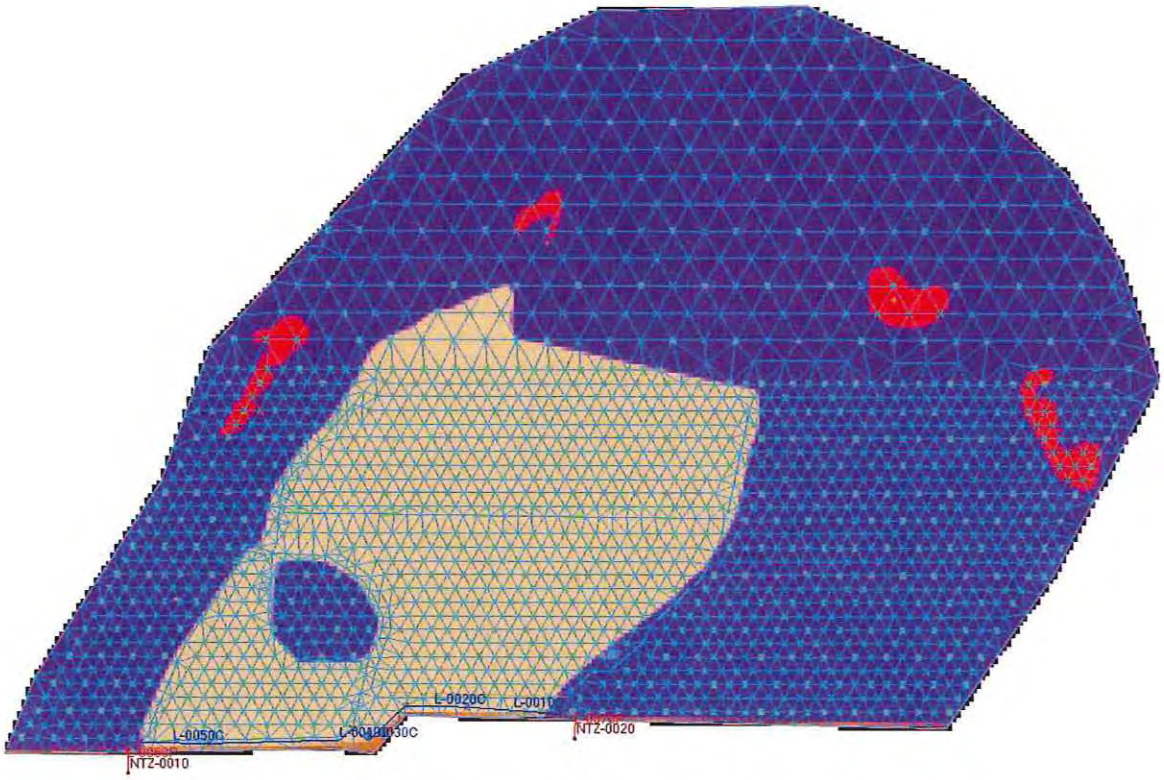
Land Use Category	Mannings n Coefficient	Percent Impervious	Crop Coefficient	Root Depth (ft)
Building	0.03-0.06	100	1	2
Cropland	0.1-0.2	0	1	3
Forested Wetland	0.1-0.2	0	0.9	3
Non-Forested Marsh	0.03-0.06	0	1	3
Transportation	0.06-0.12	40	1	2
Pavement (Pr. Cond. model)	0.03-0.06	100	1	0.25
Pervious (Pr. Cond. model)	0.1-0.2	50	1	3
Pond (Pr. Cond. model)	0.03-0.06	0	1	3

Soil types are also input parameters used by the model to determine the runoff/infiltration ratio and soil moisture accounting (used to estimate evapotranspiration). The soil categories used in the model are shown in **Table 2** and were based on information from USDA NRCS soil mapping; locations of each soil type are shown in **Figure II-C**. The custom soil report from NRCS for the model area is provided in **Appendix A**. The vertical saturated hydraulic conductivity (K_v) used in the model was set to one half of the saturated hydraulic conductivity (K_{sat}) values from NRCS to provide a factor of safety. As shown in the table, the values generally range from 7 to 13 feet per day, with an average in the range of 9 to 10 feet per day. For simplicity, a uniform horizontal hydraulic conductivity (K_h) value of 10 feet per day was applied to the groundwater flow component of the model. An additional model input parameter to estimate evapotranspiration for each land use category is the crop coefficient data set, which includes root zone depths and crop coefficients.

Table 2. NRCS soil characteristics.

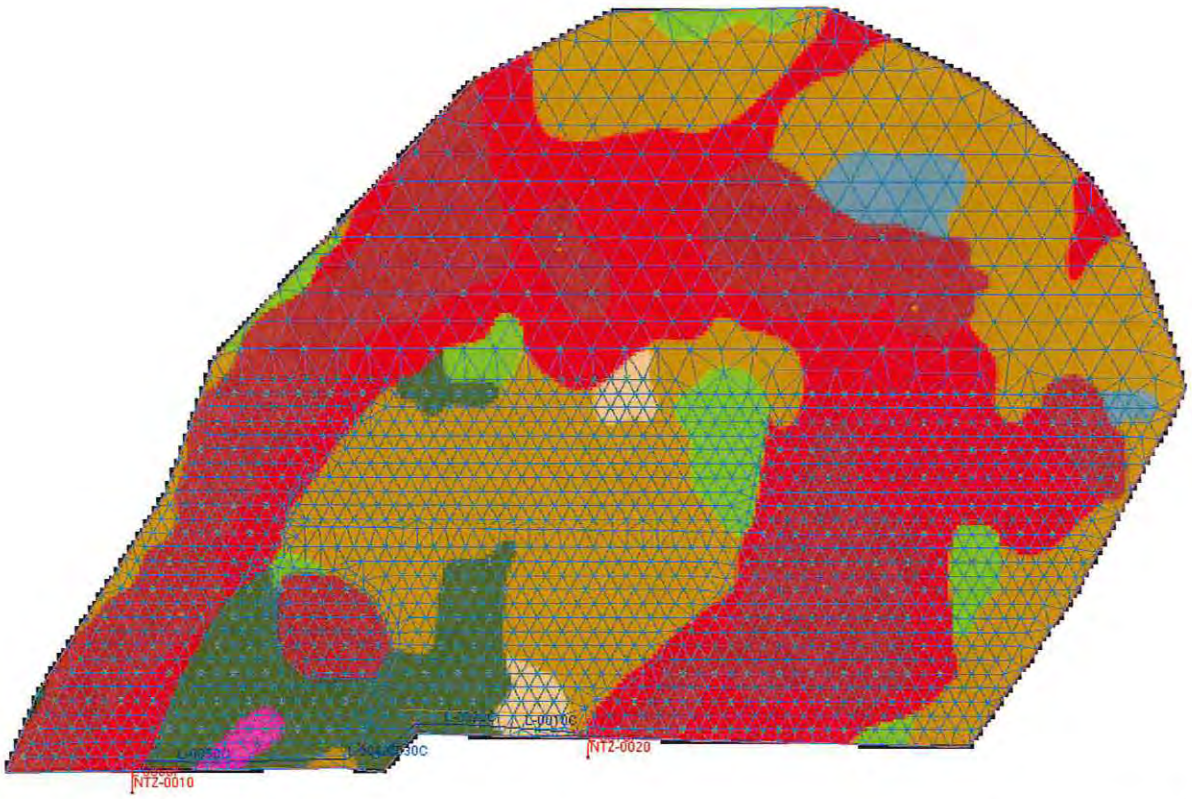
Soil Name	HSG	K_{sat} (ft/day)
6 - Brynwood FS	B/D	10
10 - Pompano FS	A/D	13
12 - Felda FS	A/D	12
13 - Cypress Lake FS	A/D	11
26 - Pineda-Pineda - wet	A/D	8
33 - Oldsmar sand	A/D	7
34 - Malabar FS	A/D	11
49 - Felda FS - ponded	A/D	12
64 - Brynwood FS - wet - Urban land complex	B/D	10
73 - Pineda FS - ponded	A/D	8

Figure II-A. 2D overland computational mesh, with LiDAR.



Raster Legend			
	Building		Non Forested Marsh
	Cropland		Transportation
	Forested Wetland		

Figure II-B. Land use categories within 2D overland computational mesh.



Raster Legend			
	10 - Pompano FS		34 - Malabar FS
	12 - Felda FS		49 - Felda FS - ponded
	13 - Cypress Lake FS		6 - Brynwood FS
	26 - Pineda-Pineda - wet		64 - Brynwood FS - wet - ...
	33 - Oldsmar sand		73 - Pineda FS - ponded

Figure II-C. Soil categories within 2D overland computational mesh.

Input parameters for the groundwater computational mesh include the ground surface, aquifer bottom, and horizontal conductivity. The same ground surface used in the overland flow mesh is used in the groundwater region to establish the interface between the two. A simplistic, uniform aquifer bottom elevation of 0 feet NAVD 88 provides an aquifer thickness of approximately 24 feet across the property. The horizontal saturated hydraulic conductivity was set at 7 feet per day.

Daily rainfall amounts used in the model were based on NEXRAD rainfall data provided by SFWMD. Daily reference evapotranspiration (ET_{ref}) amounts were based on ET estimates at the FAWN station in Immokalee. The model uses these input parameters, along with site-specific soil information to calculate potential evapotranspiration (ET_p), actual evapotranspiration (ET_a), site runoff, surficial aquifer recharge (percolation), and the change in the water stored onsite. The annual water budget for the simulation period is provided in **Table 3**.

Table 3. Water budget for existing conditions model simulation (all units are inches).

Simulation Year	Precipitation	ET_p	ET_a	Storage	Runoff	Percolation
2018	53.9	41.7	37.8	0.2	10.0	5.9
2019	64.3	42.8	42.1	0.2	12.3	9.7
2020	58.8	43.9	37.8	0.6	10.9	9.6
2021	48.1	42.9	38.1	-0.3	4.3	5.9

Wet season water table (WSWT) mapping from Lee County shows the average WSWT elevation at the project site is 23 feet NAVD 88 (see **Figure 3a**), which is approximately one foot below the existing ground elevation. Historical monitoring well data from wells surrounding the site are also provided in **Figures 3b** through **3e** and suggest that the historical WSWT may be as high as 24 feet NAVD 88 in this area. Based on these measurements and the existing ground elevation, the soil storage capacity of the existing upland areas of the site is around one inch during the wet season.

D. Hydrogeology

Three main aquifers compose the groundwater resources below the project site: the Surficial (water table), Intermediate (including Sandstone and Mid-Hawthorn), and the Floridan (including Lower Hawthorn and Suwannee) aquifers. **Figures 4a** and **4b** provide a schematic representation of the hydrogeology of the Green Meadows wellfield, which lies approximately one mile to the north. The surficial and intermediate aquifers generally contain fresh groundwater, with chloride concentrations typically less than 250 milligrams per liter (mg/l), which is the secondary maximum contaminant level for drinking water. The Floridan aquifer typically contains brackish groundwater, with chloride concentrations typically exceeding 250 mg/l. Chloride concentrations generally increase with depth, both among the four aquifers and within the Floridan aquifer.

The Surficial Aquifer System (SAS) is the uppermost system, comprised of sediments extending from the land surface to the upper confining zone of the Intermediate Aquifer System (IAS). This aquifer system is usually unconfined. At the project site, the upper part of the SAS is comprised of fine sand and the lower is made up of limestone and sand and has a total thickness of approximately 50 feet.

The Sandstone and Mid-Hawthorn aquifers comprise the IAS and have a total aquifer thickness of 350 feet at the project site. The Sandstone aquifer is the first water-bearing unit encountered in the IAS. This aquifer underlies the Upper Hawthorn confining zone separating the SAS from the IAS. This aquifer is characterized by phosphatic limestones with interbedded sand and shell, generally occurring at depths between 100 feet and 250 feet below land surface (bls). The Mid-Hawthorn aquifer underlies the Mid-Hawthorn confining zone within the IAS, but often does not constitute a

significant producing zone in this area. This aquifer generally occurs at depths between 450 feet to 600 feet bls.

Wells penetrating the Floridan aquifer typically flow at land surface. The FAS underlies all of Florida and contains several distinct producing zones. However, since the water quality generally deteriorates with depth, only the top of the FAS is typically utilized as a source of drinking water. This system generally consists of a porous, fractured limestone and dolostone formation. The Lower Hawthorn aquifer is the first water bearing unit encountered in the FAS. This aquifer underlies the Lower Hawthorn confining zone separating the IAS from the FAS. This aquifer is encountered at approximately 600 feet to 650 feet bls.

E. Water Use

Irrigation withdrawals from the Surficial and Intermediate Aquifer Systems have been permitted on the site since the 1990s. SFWMD water use permit number 36-03772-W allocated 335 million gallons per year from the water table aquifer for irrigation of row crops on the property and adjacent fields to the north and west. The permit allowed the construction of four wells cased to 20 feet bls. The property also has a water use permit for landscape irrigation with an annual allocation of 0.94 million gallons per year from the Mid-Hawthorn aquifer.

III. PROPOSED CONDITIONS

A. Drainage and Surface Water Management

Onsite stormwater management facilities will be constructed in conjunction with the proposed WRF and will largely maintain the historical stormwater runoff from the existing site. Stormwater runoff from the developed area of the property will be collected through swales and catch basins and routed to onsite stormwater ponds which temporarily detain stormwater runoff to provide water quality treatment and attenuation benefits. A control structure will limit the discharge of water from the ponds into the adjacent wetlands to the west. The stormwater will then continue within the western slough, following existing drainage patterns. The proposed stormwater management system will include a retention component to foster additional percolation and thus recharge the surficial aquifer.

Peak discharge rates from the 25-year, 3-day design storm event will be limited to the basin allowable discharge rate of 42 CSM, meeting SFWMD and FDEP criteria. The onsite system will also provide the required water quality treatment volume, calculated as the greater of one inch of runoff from the entire drainage area or 2.5 inches times the percent imperviousness of the site. A perimeter berm will be constructed around the site to provide more than 51 acre-feet of storage, which is greater than the existing site storage for either the 25-year or 100-year, 3-day storm events.

B. Water Supply

Water use requirements for the proposed WRF are minimal and limited to the needs of the office staff who will be operating the facility. The potable water supply demand of approximately 3,750 gallons per day to service 25,000 square feet of building space will be supplied by Lee County Utilities. Onsite irrigation water, if utilized, will be sourced from treated effluent from the WRF, defined as an "alternative water supply." The project has minimal water supply requirements and therefore will not impact present or future water resources. This application intends to demonstrate that the proposed land use change and associated water use will prove compatible and compliant with both Lee County and SFWMD regulations and long-range water supply planning.

C. DR/GR

Lands designated Density Reduction/Groundwater Resource (DR/GR) are defined in the Lee Plan as "upland areas that provide substantial recharge to aquifers most suitable for future wellfield development" and areas that "are the most favorable locations for physical withdrawal of water from those aquifers." The subject site is located on lands currently depicted as DR/GR (see **Figure 5**) and the following narrative demonstrates the proposed uses are consistent with the DR/GR goals.

The preceding Water Supply section demonstrated the availability of irrigation and potable water supplies to meet the project's needs at build-out, including the use of reclaimed water for irrigation. SFWMD considers this source an "alternative water supply" and encourages its use. Use of the proposed sources will not adversely impact the shallow aquifers that the DR/GR designation seeks to protect, nor will use of these sources interfere with use of shallow aquifers for public supply wellfield development. Due to development at the project site, withdrawals for agricultural irrigation from the water table and sandstone aquifers will be eliminated. This application intends to demonstrate that the proposed land use change and associated water use will prove compatible and compliant with both Lee County and SFWMD regulations and long-range water supply planning. This section will use previously established DR/GR definition criteria to discuss the recharge potential to the Surficial aquifer at the project site. This includes formulation of a water budget for the site based on site-specific aquifer data and recorded water levels.

As discussed previously, the site-specific integrated stormwater model estimated the existing water budget for the project site and surrounding wetlands. A revised model was created to represent the proposed physical changes to the site and analyze the associated changes to the local hydrology. The model utilized the same continuous simulation period of 2018 through 2021 with its associated rainfall, ET_{ref}, aquifer bottom, saturated conductivity, and boundary conditions. Updated input parameters to reflect the new site layout included an updated ground surface, land use categories, soil types, crop coefficients, and onsite stormwater management structures. The

proposed onsite stormwater management system is designed to retain up to 1.1 inches of runoff *per rainfall event* from the project site, which will recharge the surficial aquifer.

A site specific runoff analysis shows that the proposed site and its stormwater management system results in de minimis change in infiltration into the Surficial aquifer (see **Table 4**). Additionally, the import of fill material to raise site elevations will increase the storage capacity of the Surficial aquifer by increasing the distance from land surface to the water table. To further demonstrate the uses being proposed are consistent with the DR/GR goal to slow down the discharge rates of the stormwater runoff in the area, the project's proposed stormwater management system will limit the peak discharge from the site resulting from the 25-year storm event.

Table 4. Water budget for proposed conditions model simulation (all units are inches).

Simulation Year	Precipitation	ET_p	ET_a	Storage	Runoff	Percolation
2018	53.9	40.2	36.6	0.3	11.2	5.7
2019	64.3	41.3	40.4	0.3	14.1	9.4
2020	58.8	42.3	36.9	0.4	12.3	9.2
2021	48.1	41.3	37.1	-0.3	5.3	5.9

Additional illustrations that demonstrate the site is protecting regional water resources are shown by the model result graphs in **Figures 6a** through **6h**. The four time-stage graphs show that the water levels inside the site during the continuous simulation period are elevated above the existing conditions (**Figure 6b**) which will recharge the surficial aquifer while the water levels of the surrounding offsite wetlands remain generally unchanged (typically no more than a 0.1-foot difference is shown in the graphs, which is well within the margin of error of LiDAR data or typical regional models) when comparing the existing vs. proposed conditions simulations (**Figures 6c** through **6e**). The three profile charts (**Figures 6f** through **6h**) demonstrate that even though the onsite water levels are increased inside the perimeter berm, the proposed site is not increasing the peak water levels of the offsite wetlands.

Underlying the SAS are the Upper Hawthorn confining zone and then the IAS. The first water bearing unit encountered in the IAS is the Sandstone aquifer. Given the low Surficial aquifer recharge values resulting from the water budget and the confining unit separating the aquifers, this area does not represent an area of significant recharge for the Sandstone aquifer. The only substantial recharge areas in Lee County are those surrounding the major Surficial or Sandstone aquifer wellfields, where recharge is induced rather than naturally occurring. These areas are defined by Wellfield Protection Zones and are protected by the Lee County Wellfield Protection Ordinance. The recharge areas for Lee County's existing and proposed wellfield expansions are not overlying the project site. No part of the project site lies within the Lee County Wellfield Protection Zones specified in the Ordinance. See **Figure 7** for Lee County wellfield protection zones and major public water supply wellfield locations.

FIGURES

Notes

1. LiDAR was acquired from Lee County and has a flight date of 2018 and References NAVD 88.

2. Aerial photographs were acquired from Lee County and have a flight date of 2022.

N

0 2,000 4,000 Feet

Project Limits

ALICO RD

GREEN MEADOW RD

FEMA Zone X

ALICO RD

AE

X

Legend

FEMA FLOOD ZONE

- A
- AE
- AH
- AO
- OPEN WATER
- VE
- X
- Project Limits

LiDAR Value

- -4 - 15
- 16 - 17
- 18 - 19
- 20 - 21
- 22 - 23
- 24 - 25
- 26 - 27
- 28 - 29
- 30 - 31
- 32 - 33

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JOHNSON ENGINEERING

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Jacobs Engineering Group

Southeast Advanced Water Reclamation Facility
Lee County, Florida

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	February 2023
PROJECT NO.	20181232-002
FILE NO.	04-46-26
SCALE:	As Shown

Topographic Map
with
FEMA Flood Zones

Figure 1a

Notes

1. Topographic lines are based on LiDAR information acquired from Lee County and has a flight date of 2007 and references NAVD 88.

2. Aerial photographs were acquired from Lee County and have a flight date of 2022.

3. Propoerty lines were acquired from Lee County in March 2021.

Project Limits

FEMA Zone X

ALICO RD

GREEN MEADOW RD

0 500 1,000 Feet

Legend

- Project Limits
- Parcels
- Elev. Contour (2-ft)

FEMA FLOOD ZONE

- A
- AE
- AH
- AO
- OPEN WATER
- VE
- X

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Southeast Advanced Water Reclamation Facility Lee County, Florida

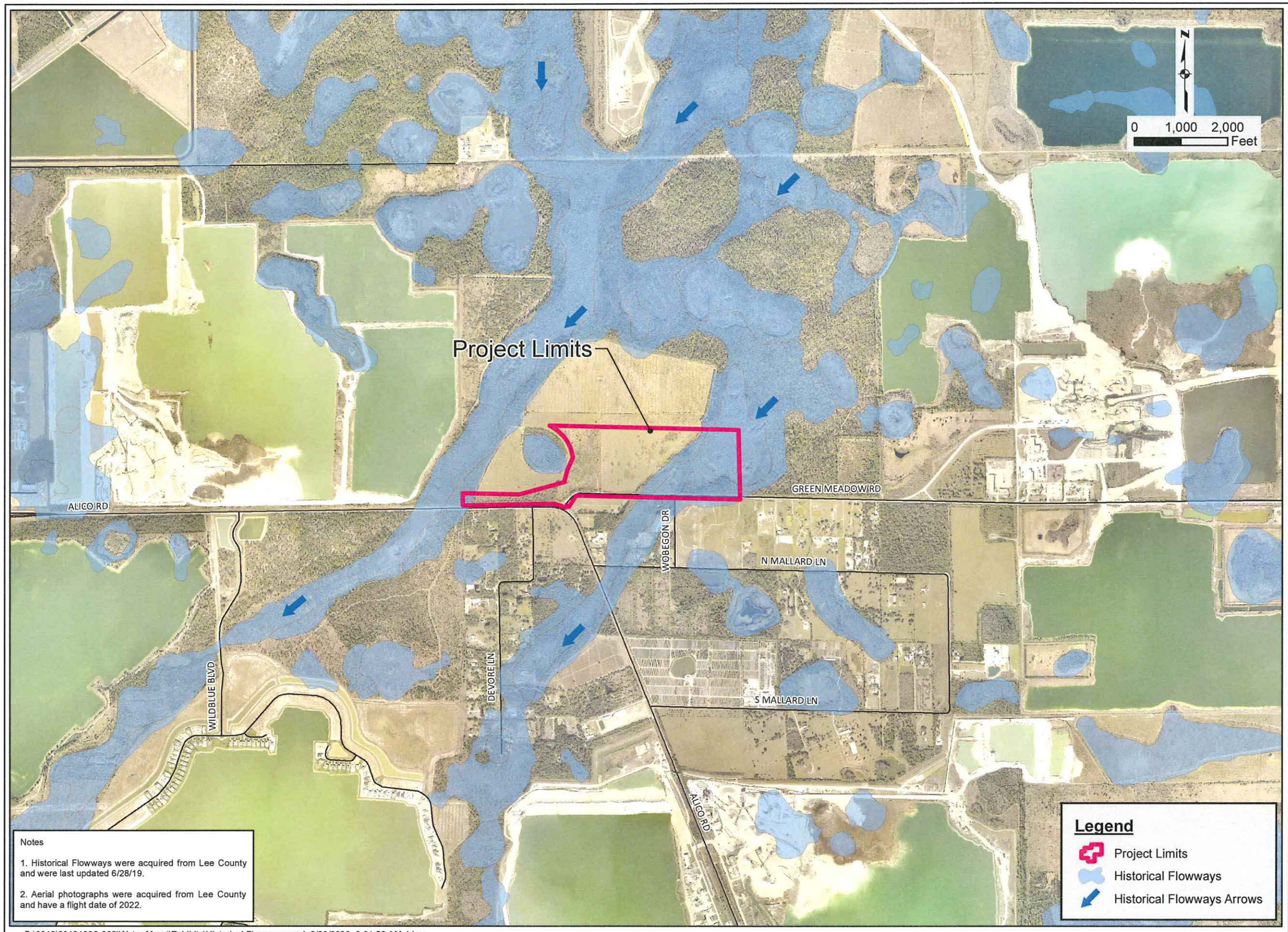
REVISIONS

NO.	DESCRIPTION	DATE

DATE:	February 2023
PROJECT NO.	20181232-002
FILE NO.	04-46-26
SCALE:	As Shown

Topographic Map with FEMA Flood Zones

Figure 1b



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Lee County, Florida

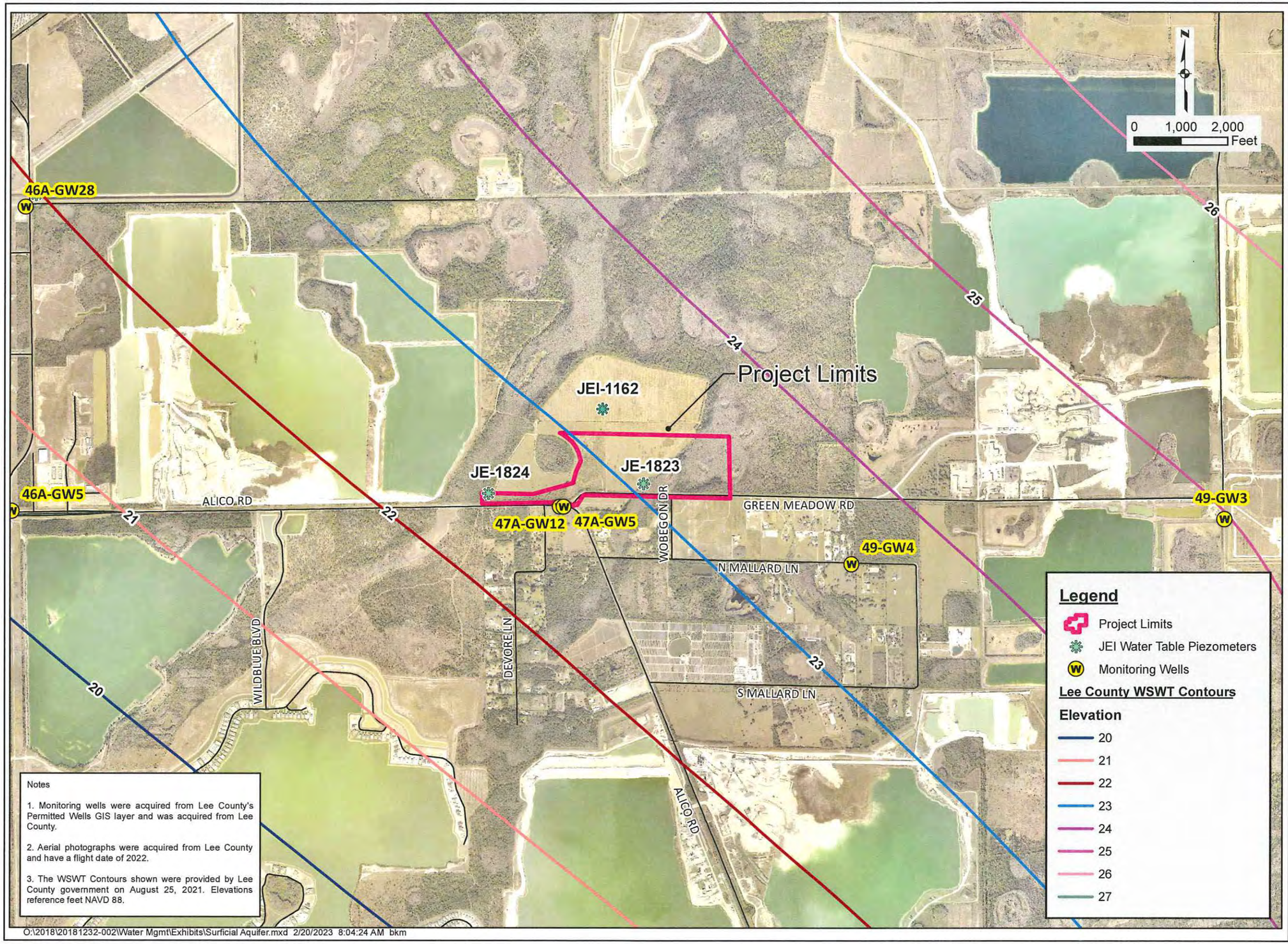
REVISIONS

NO.	DESCRIPTION	DATE

DATE:	February 2023
PROJECT NO.	20181232-002
FILE NO.	04-46-26
SCALE:	As Shown

Historical Flowways

Figure 2



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Lee County, Florida

REVISIONS

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DATE:	February 2023
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FILE NO.	04-46-26
SCALE:	As Shown

Surficial Aquifer
Wet Season Water
Table Map

SHEET NUMBER

Figure 3a

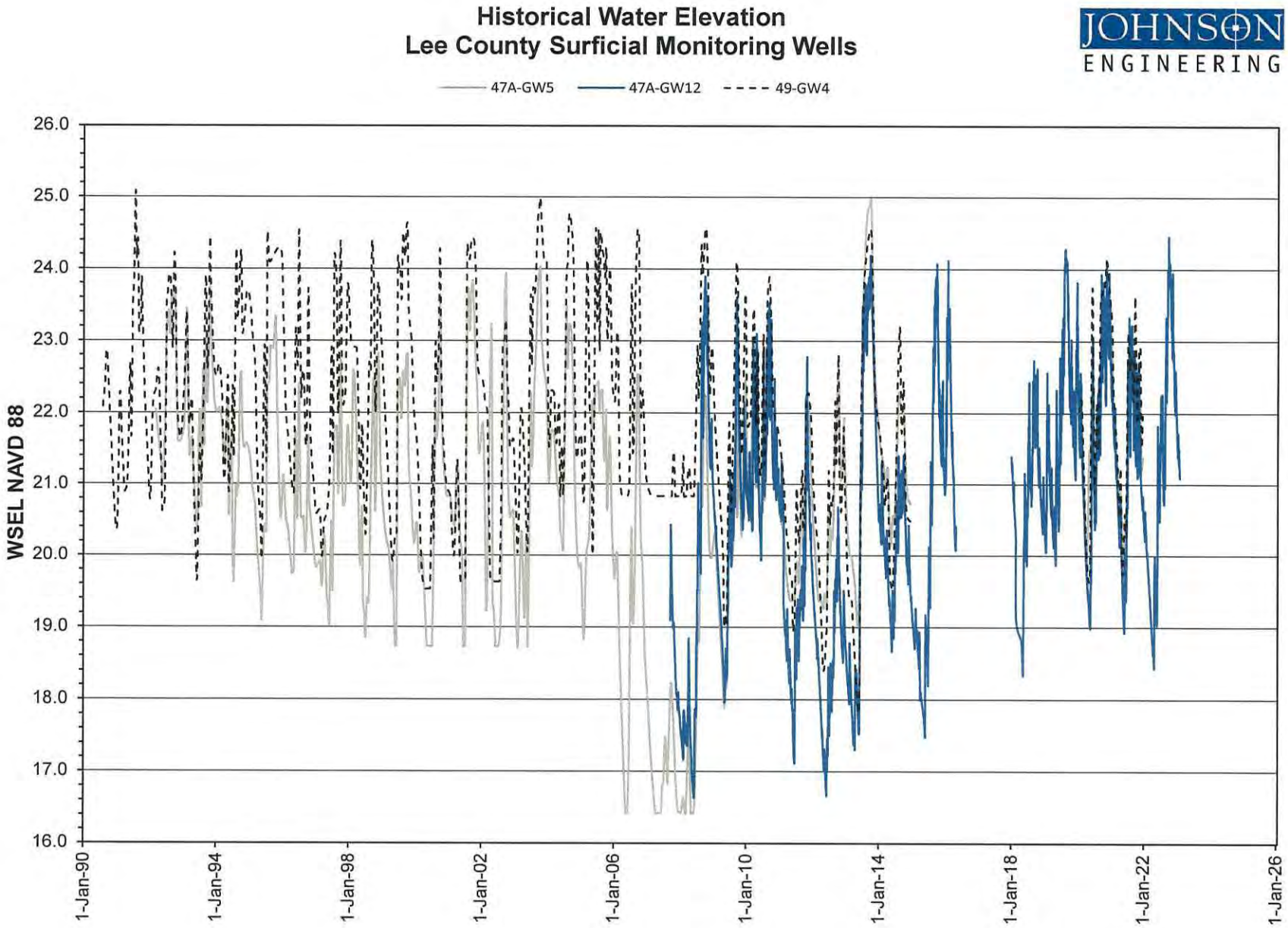
Historical Water Elevation
Lee County Surficial Monitoring Wells
JOHNSON ENGINEERING
47A-GW5
47A-GW12
49-GW4
WSEL NAVD 88
26.0
25.0
24.0
23.0
22.0
21.0
20.0
19.0
18.0
17.0
16.0
1-Jan-90
1-Jan-94
1-Jan-98
1-Jan-02
1-Jan-06
1-Jan-10
1-Jan-14
1-Jan-18
1-Jan-22
1-Jan-26

Figure 3b

Historical Water Elevation
JEI Surficial Monitoring Well 1823

JOHNSON ENGINEERING

Notes:
JE-1823 in service 8/31/2021.
Rainfall is from SFWMD NexRAD data for a block of 27 grid cells covering the project

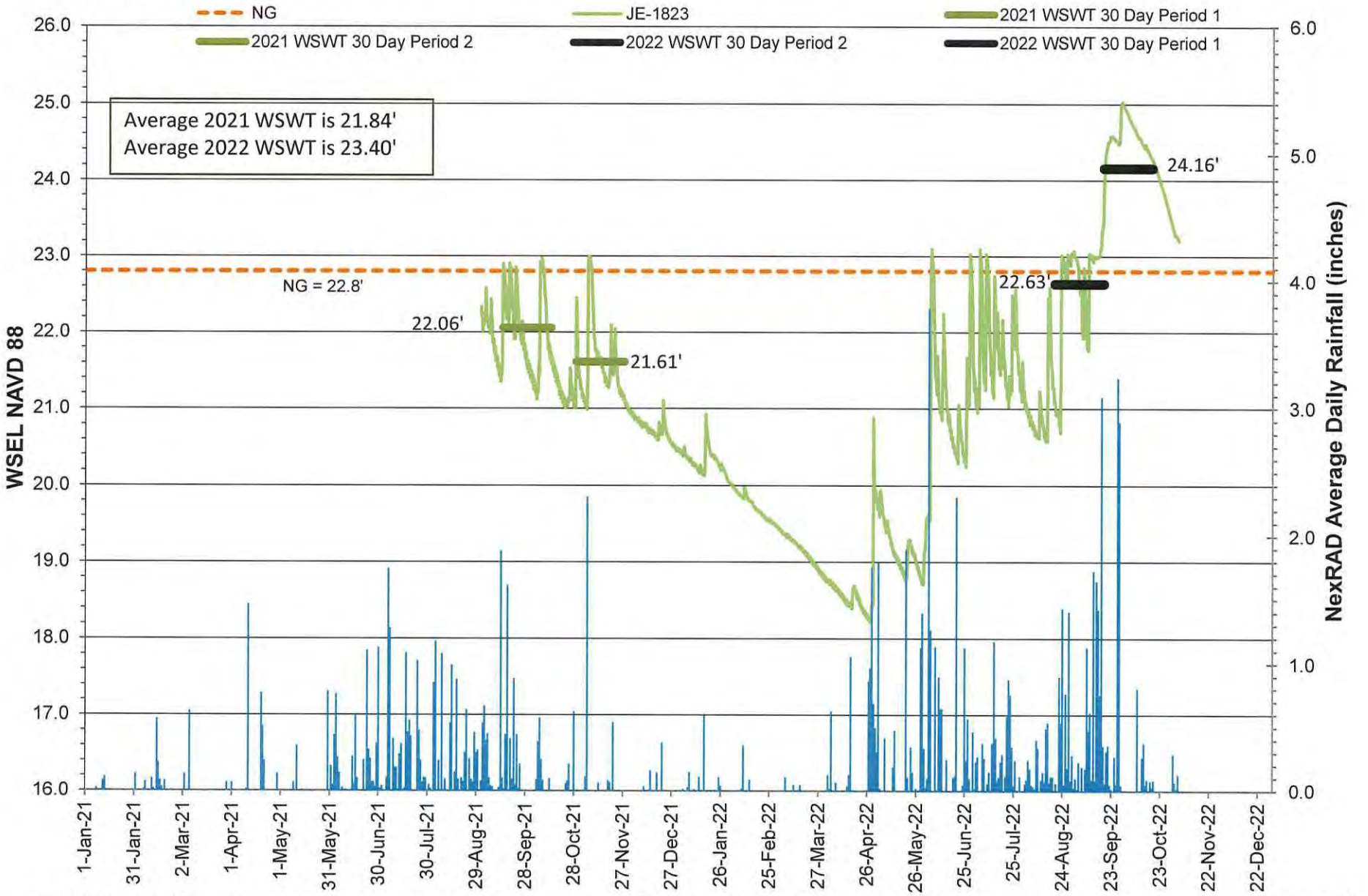

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Figure 3c

Historical Water Elevation
JEI Surficial Monitoring Well 1824

JOHNSON ENGINEERING

Notes:
JE-1824 in service 8/31/2021.

Rainfall is from SFWMD NexRAD data for a block of 27 grid cells covering the project

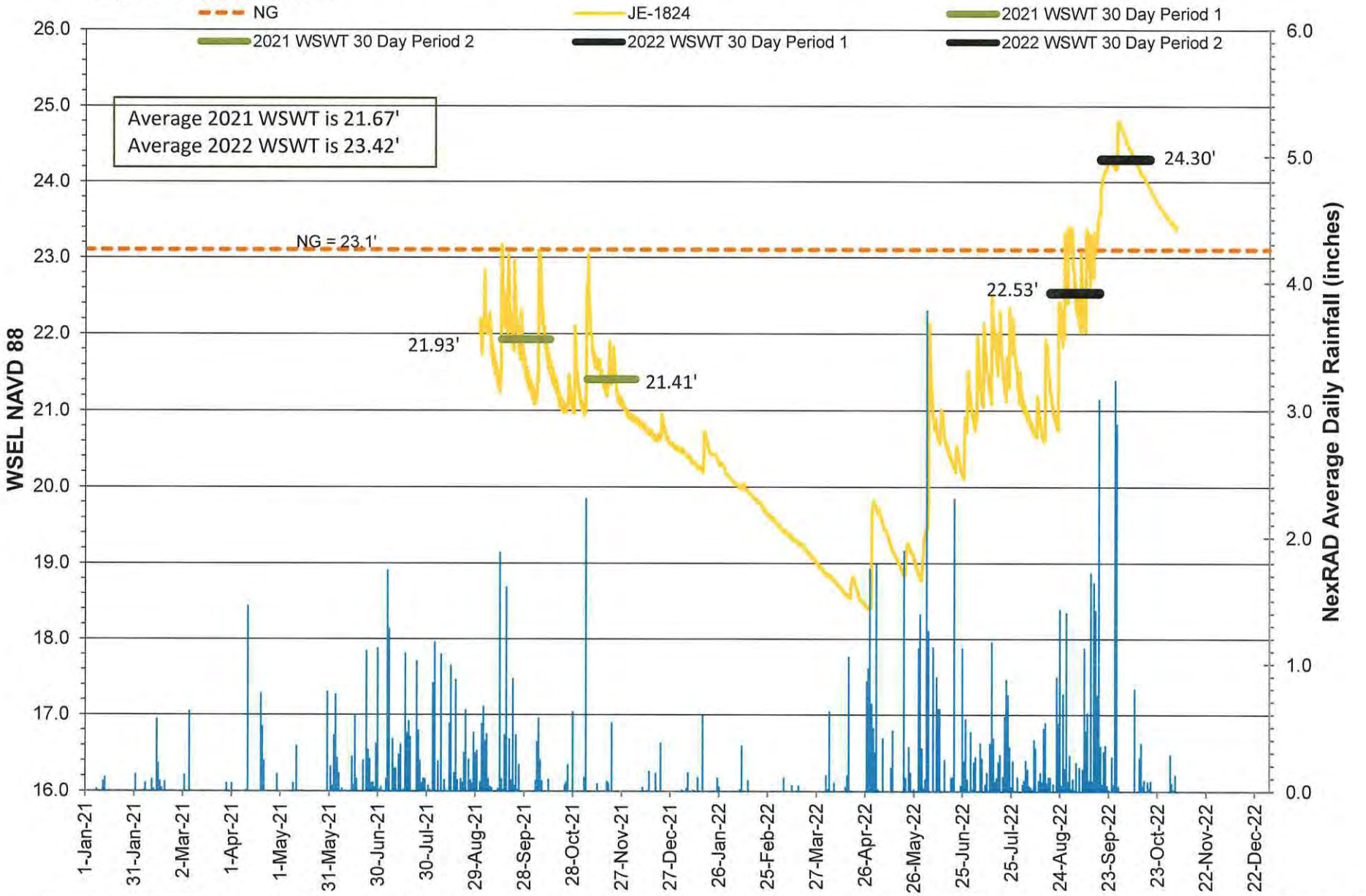

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Figure 3d

Historical Water Elevation
JEI Surficial Monitoring Well 1162

JOHNSON ENGINEERING

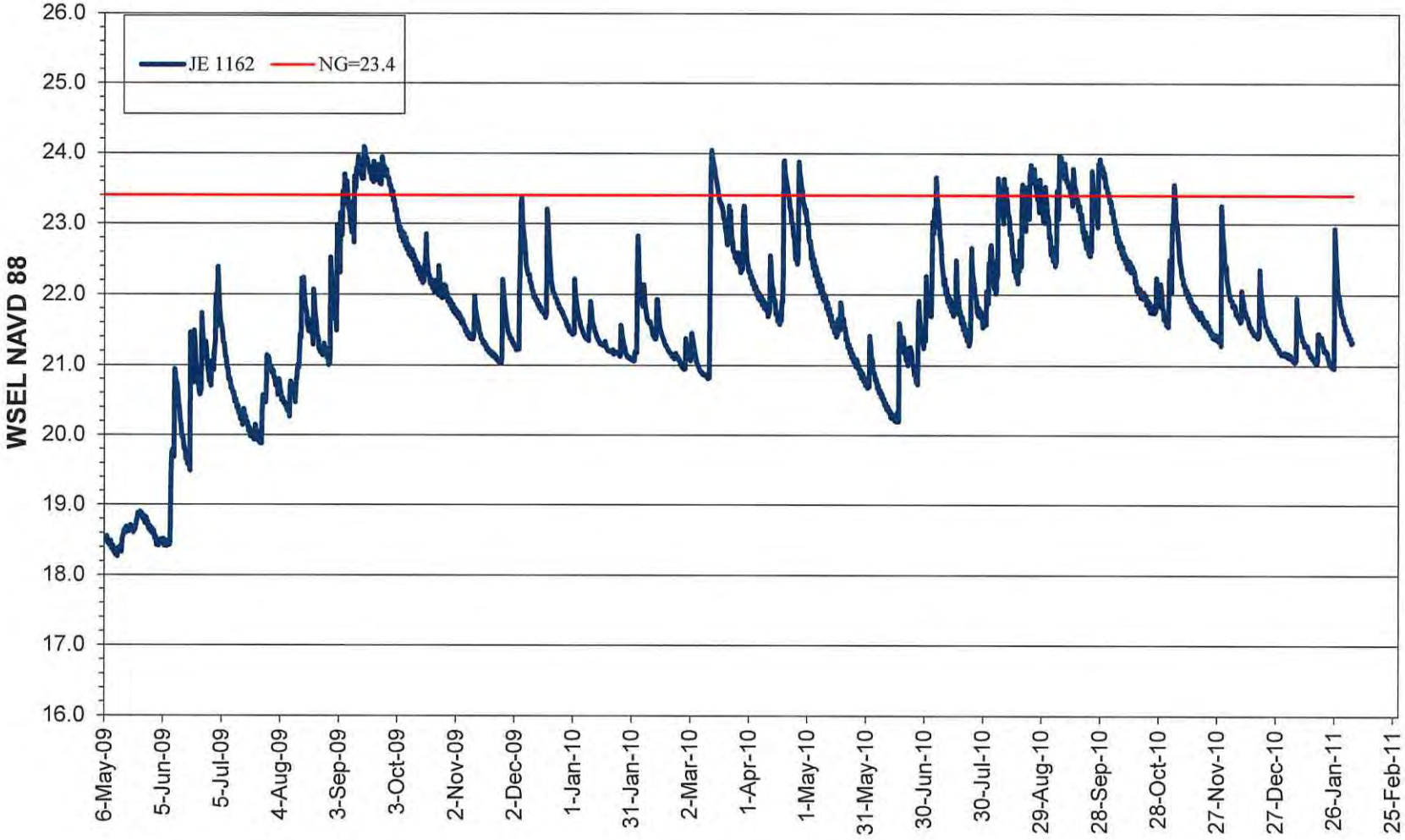
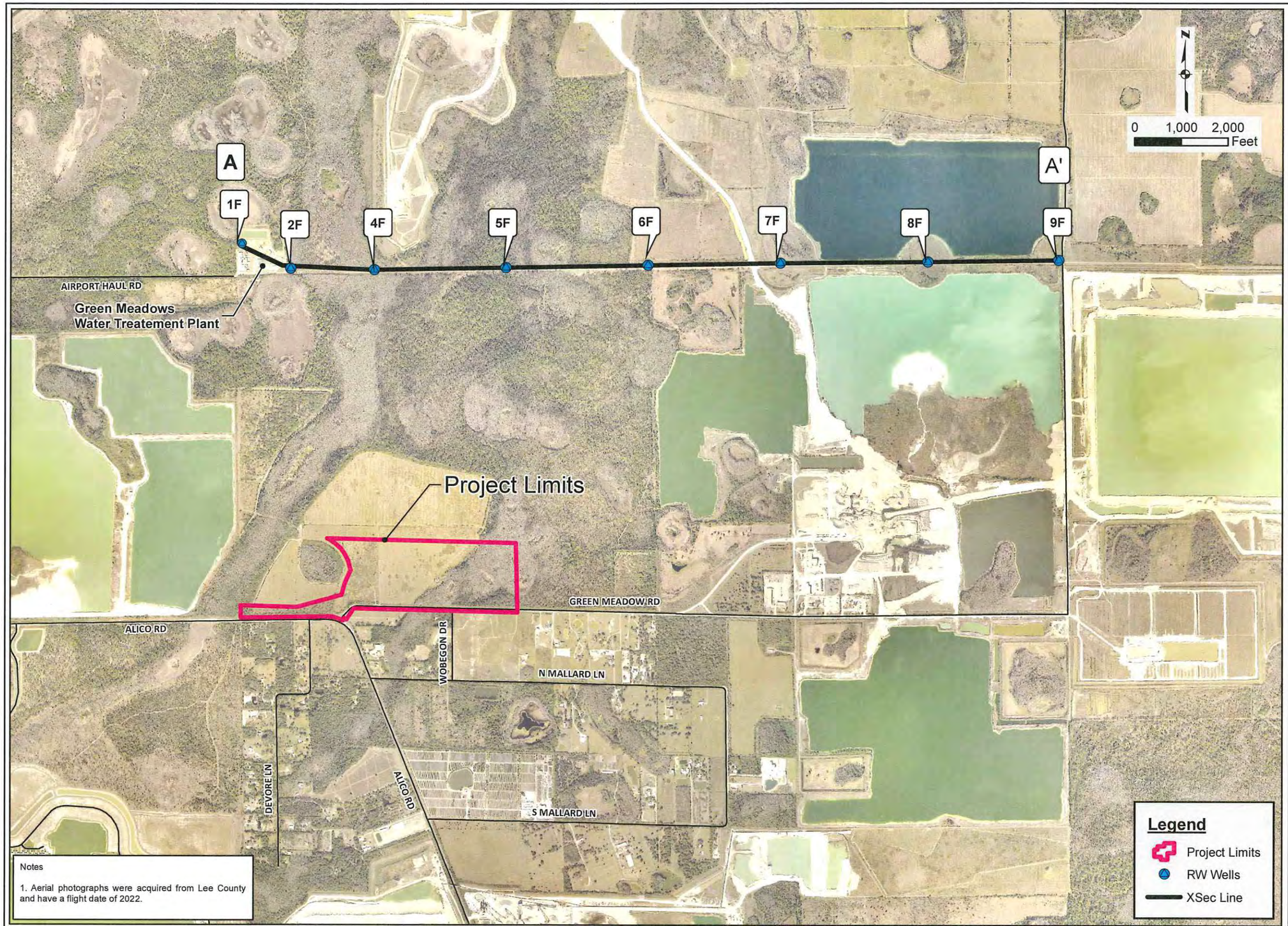


Figure 3e



O:\2018\20181232-002\Water Mgmt\Exhibits\Green Meadows Cross Section Location Map.mxd 2/20/2023 7:40:10 AM bkm

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Southeast Advanced Water Reclamation Facility
Lee County, Florida

REVISIONS

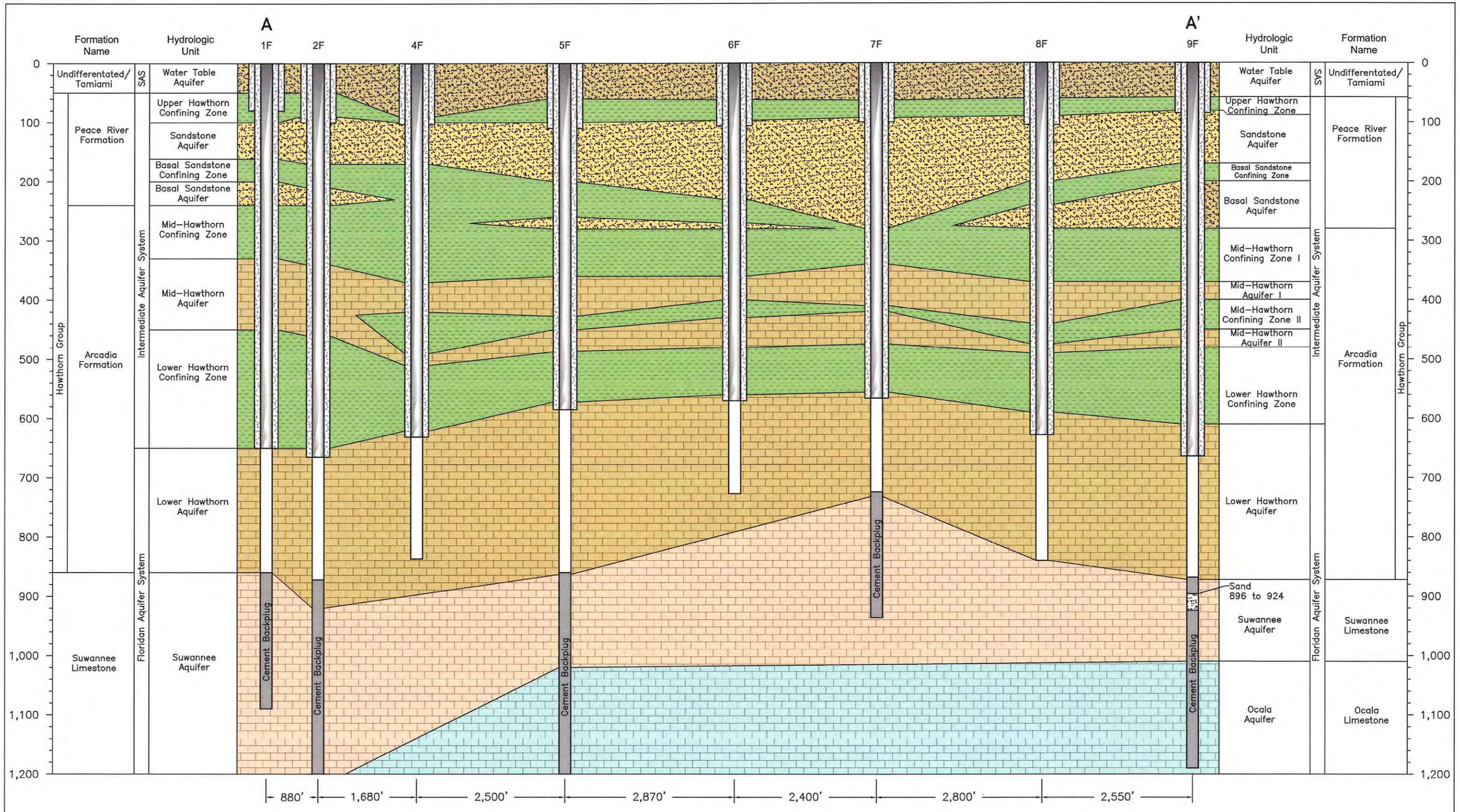
NO.	DESCRIPTION	DATE

DATE:	February 2023
PROJECT NO.	20181232-002
FILE NO.	04-46-26
SCALE:	As Shown

Green Meadows Wellfield Cross Section Location Map

SHEET NUMBER

Figure 4a

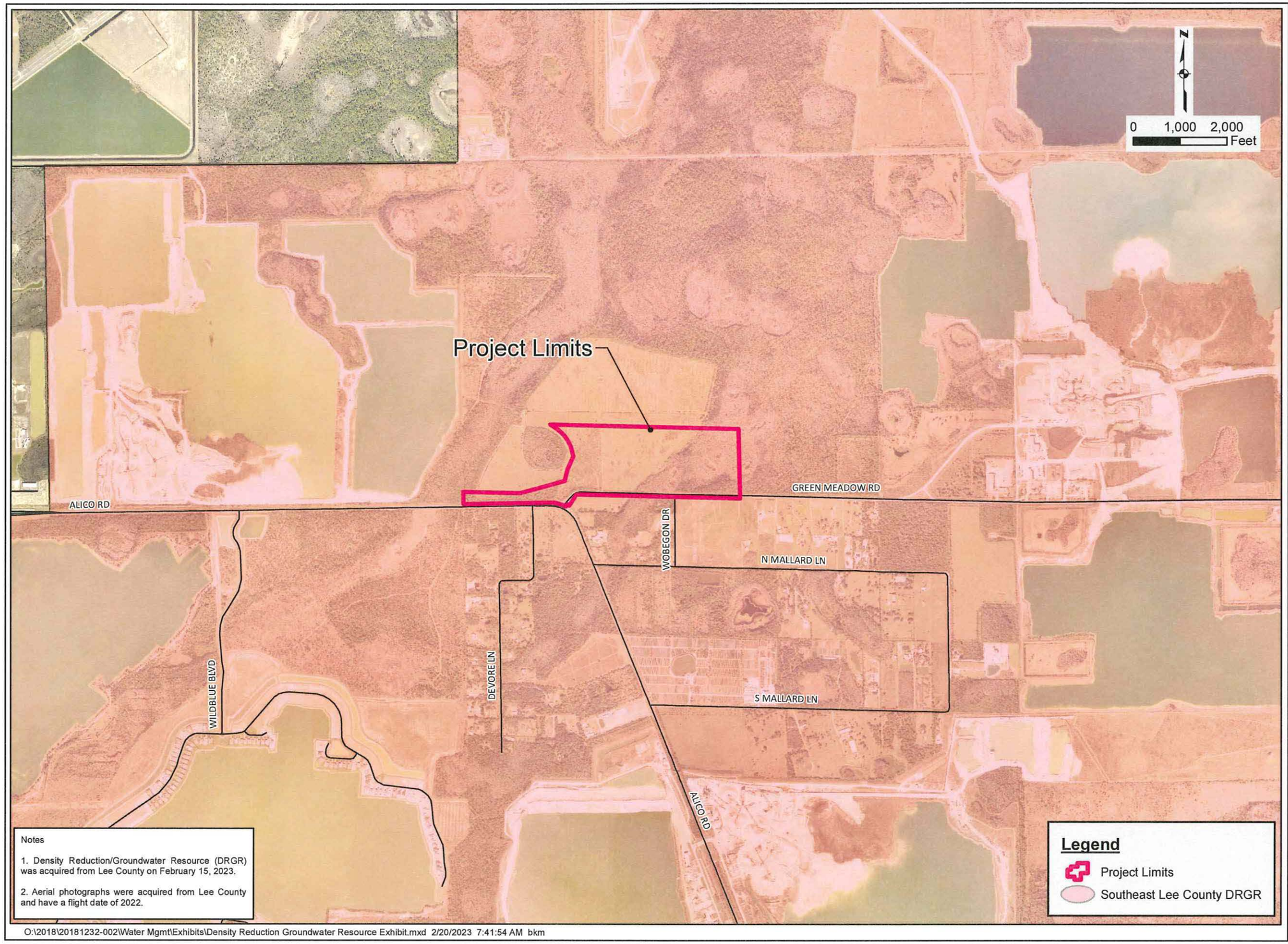


GREEN MEADOWS WELLFIELD STRATIGRAPHIC CROSS SECTION A TO A'

Vertical Exaggeration: 13x

\\FTMS01\Proj-jei\20108376-000\Drawings\8x11 DIW\Completion Report\11x17section A-A'.dwg (Section A-A) JWM Oct 31, 2017 - 3:55pm

Figure 4b



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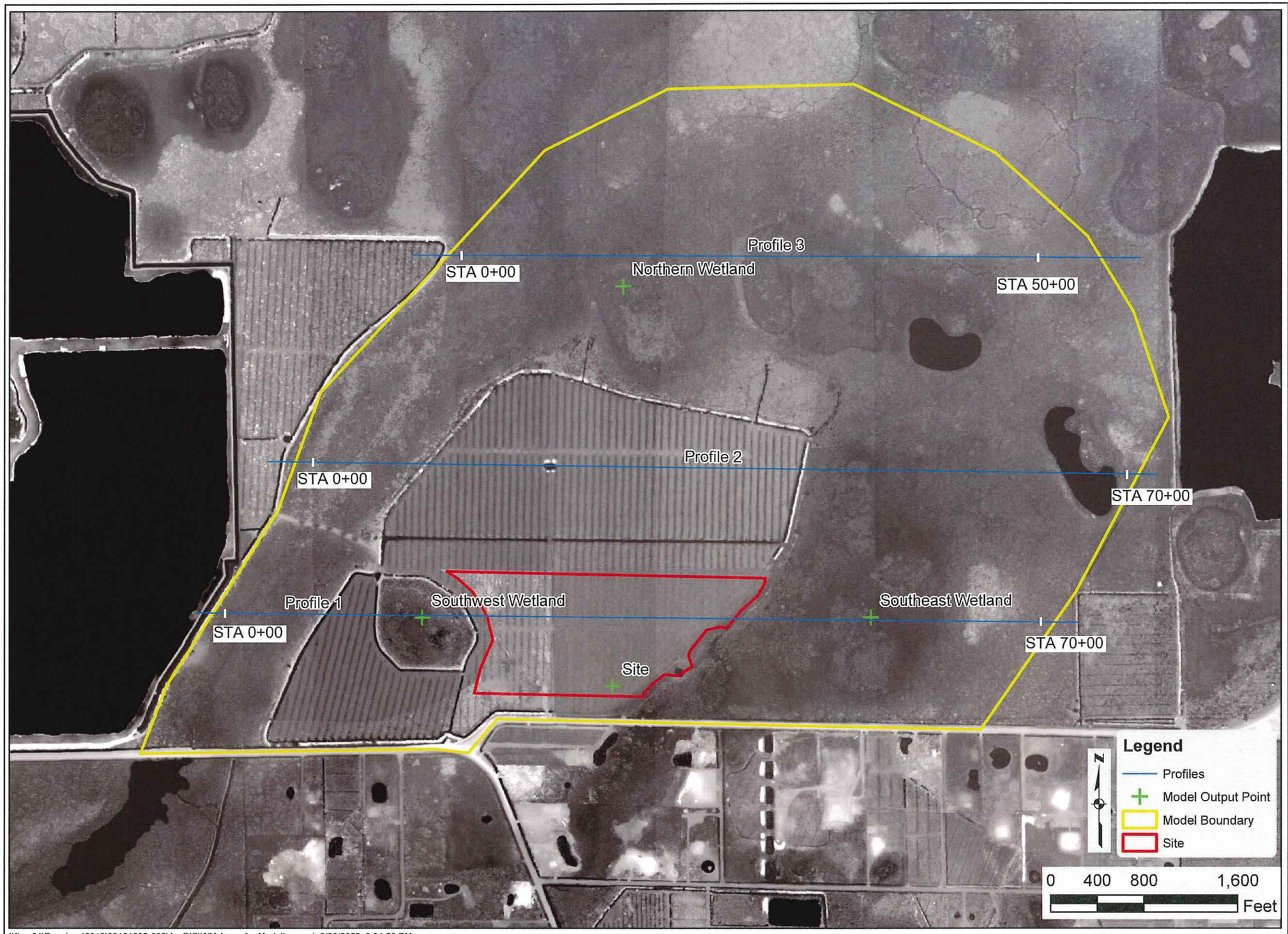
Density Reduction/ Groundwater Resource (DRGR)

Figure 5



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Lee County Utilities

Southeast Area Water Reclamation Facility
Lee County, Florida

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PROJECT NO.	20181232-002
FILE NO.	00-00-00
SCALE:	As Shown

Model Output
Profile Locations

SHEET NUMBER
6a

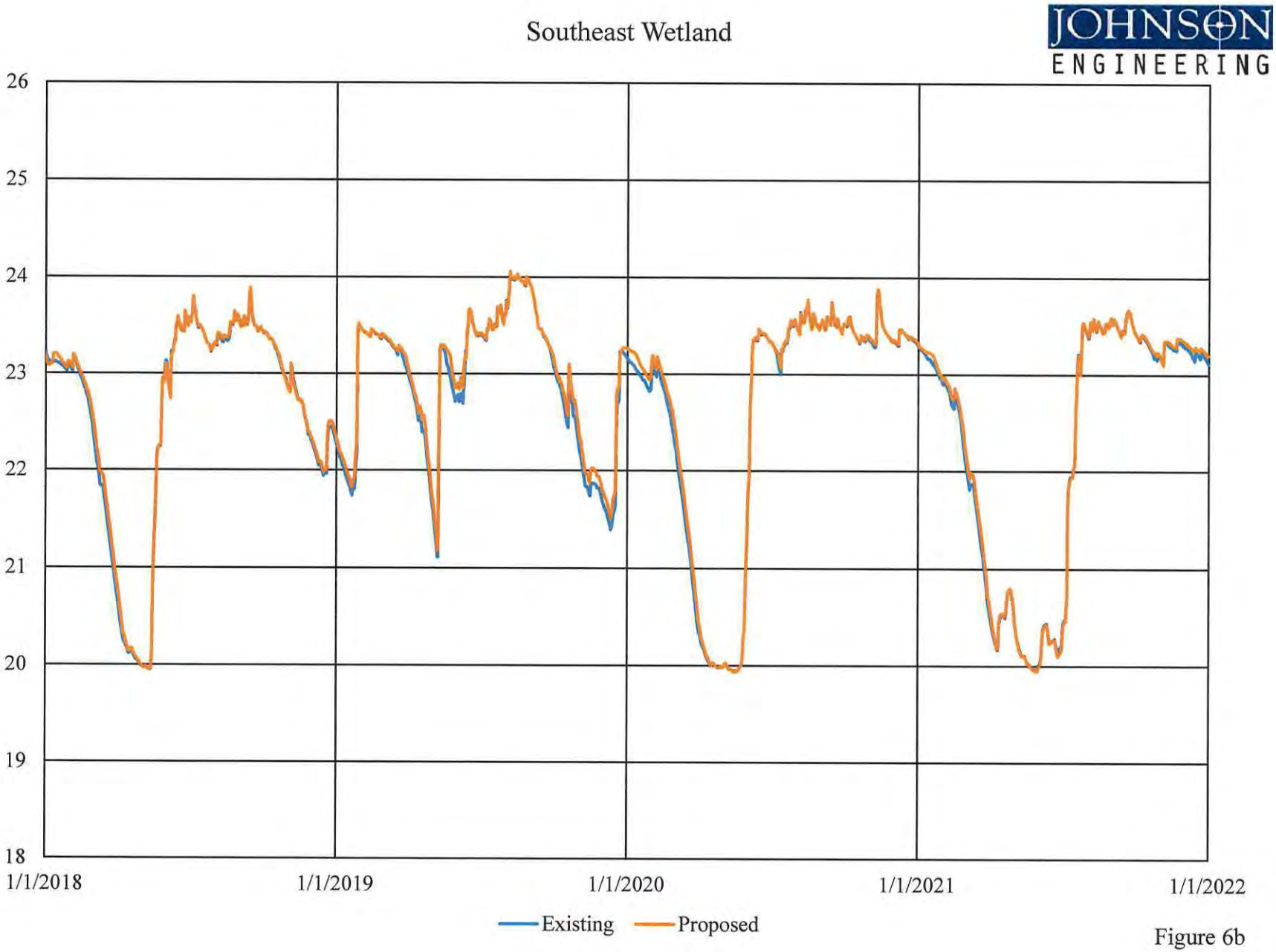
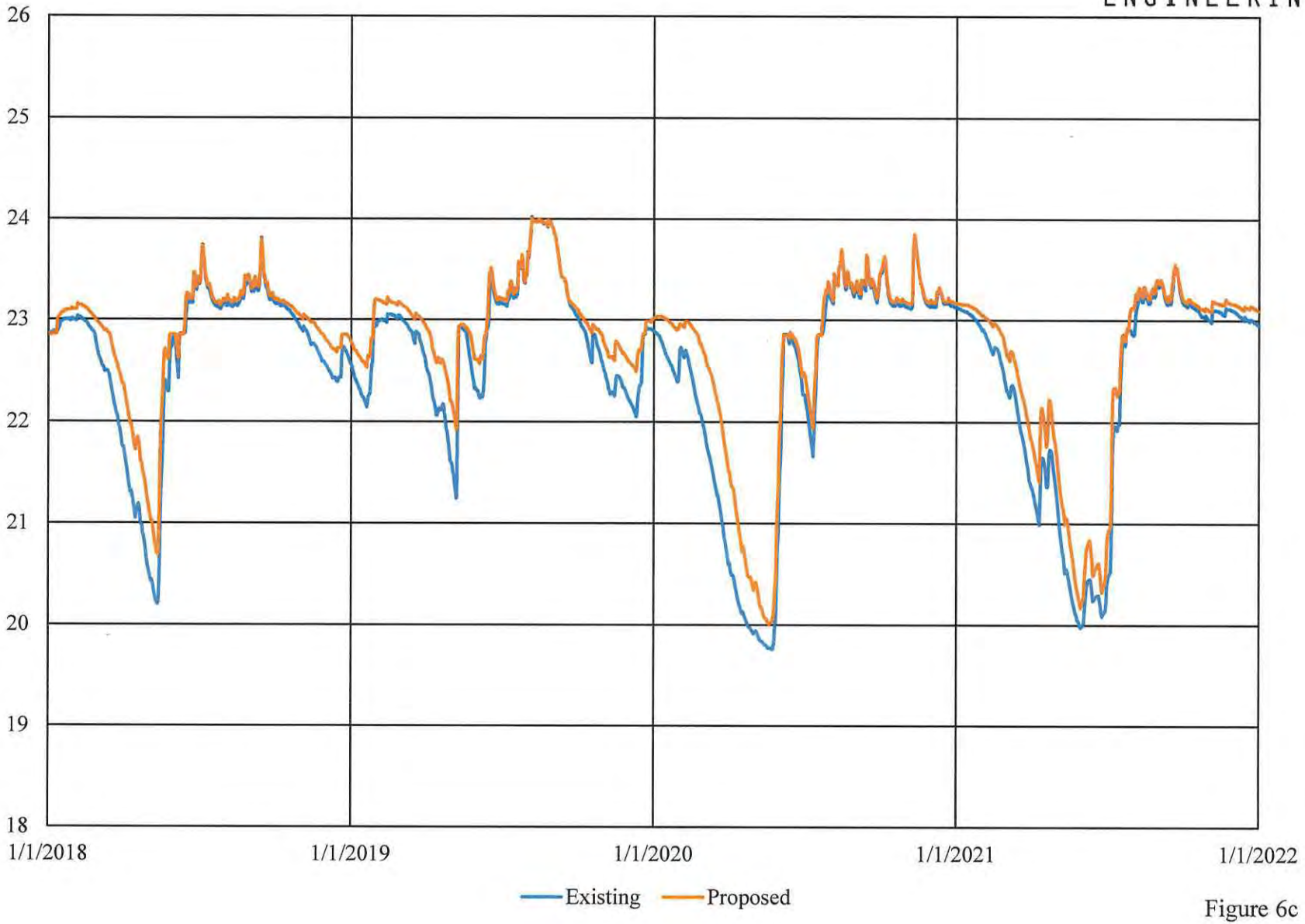

Southeast Wetland
JOHNSON ENGINEERING
26
25
24
23
22
21
20
19
18
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
Existing
Proposed

Figure 6b

Southwest Wetland

JOHNSON ENGINEERING



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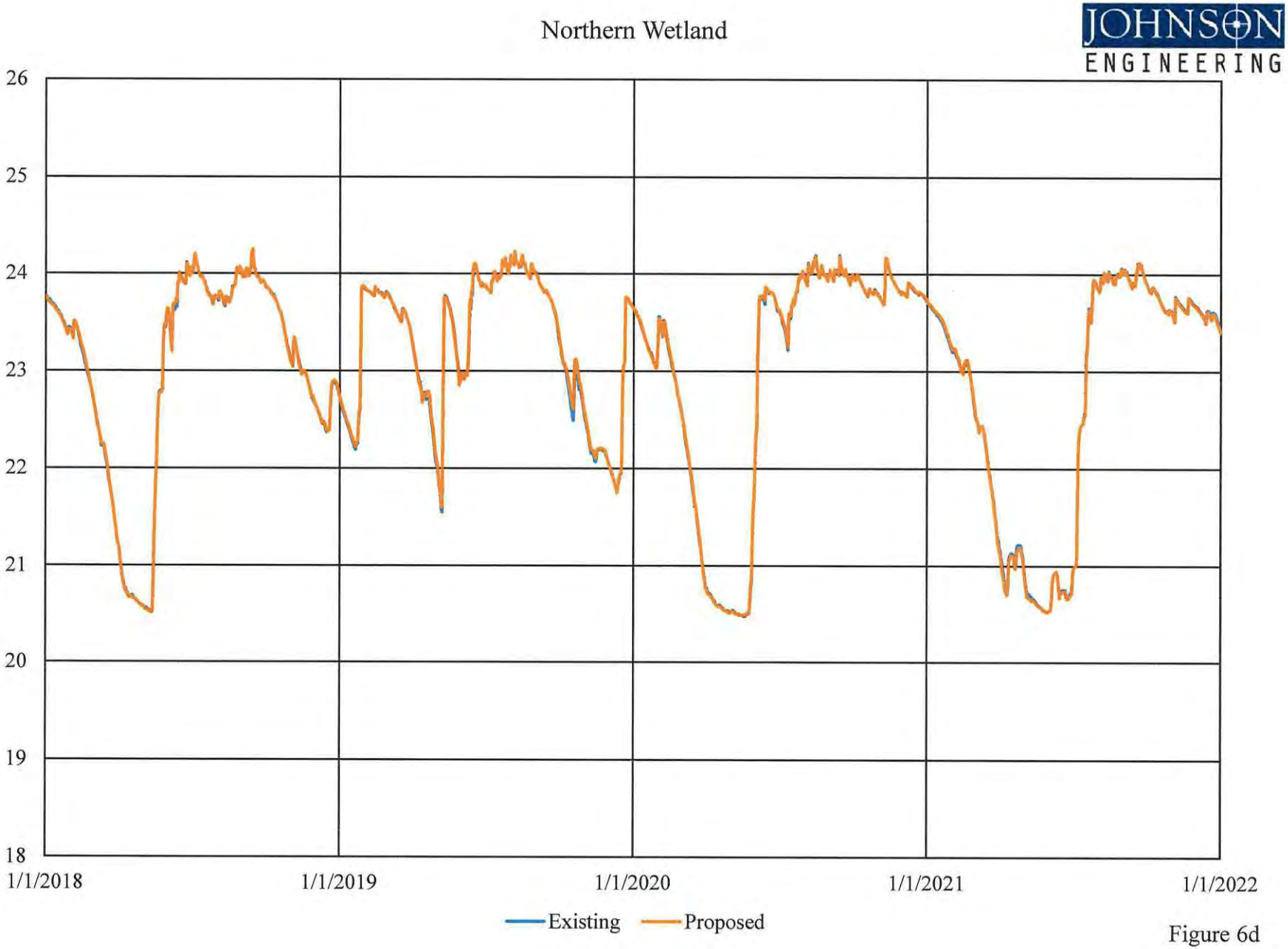
Northern Wetland
JOHNSON
ENGINEERING
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24
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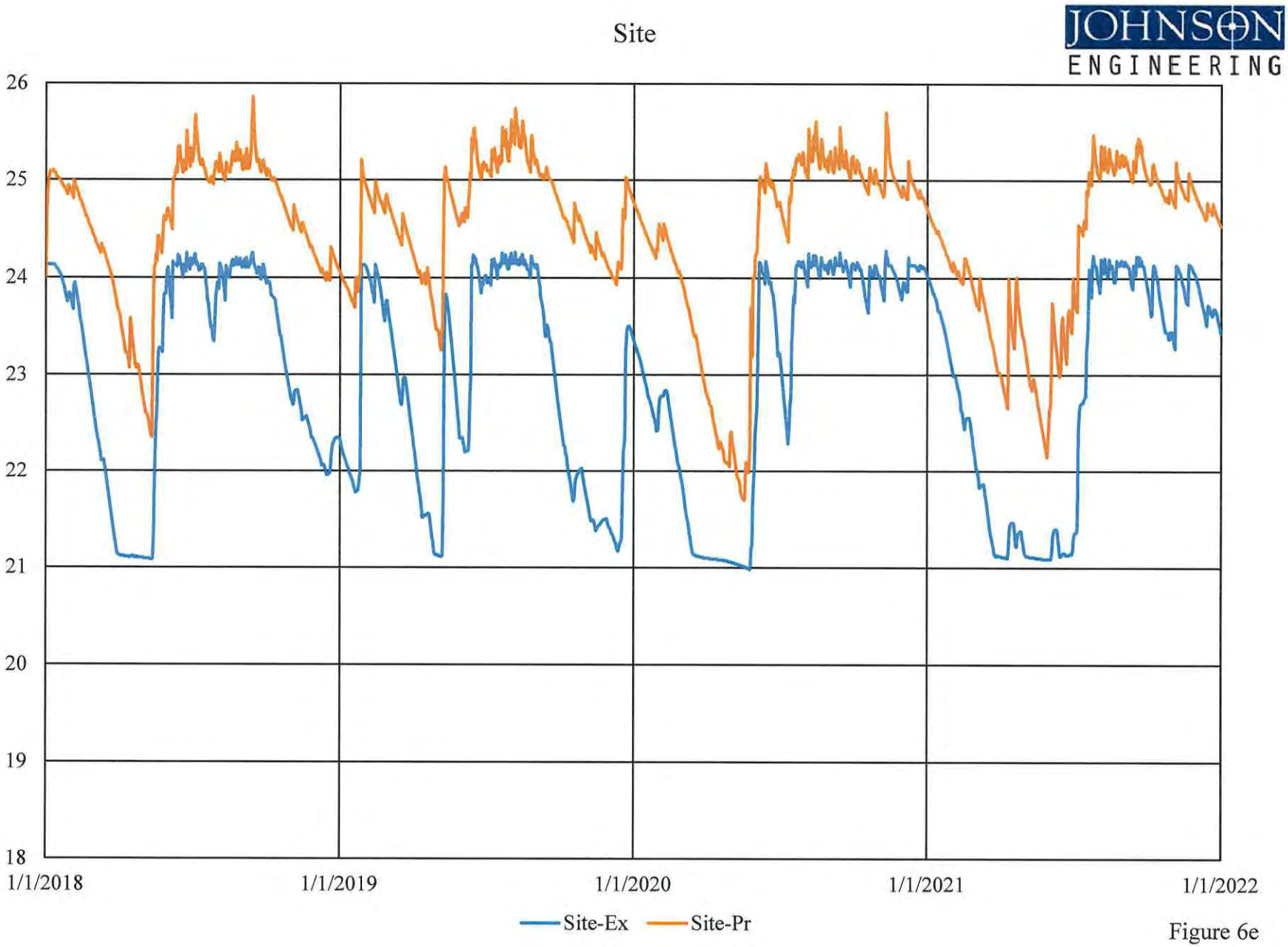
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
Existing
Proposed

Figure 6d


Site
JOHNSON
ENGINEERING
26
25
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22
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1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
Site-Ex
Site-Pr

Figure 6e

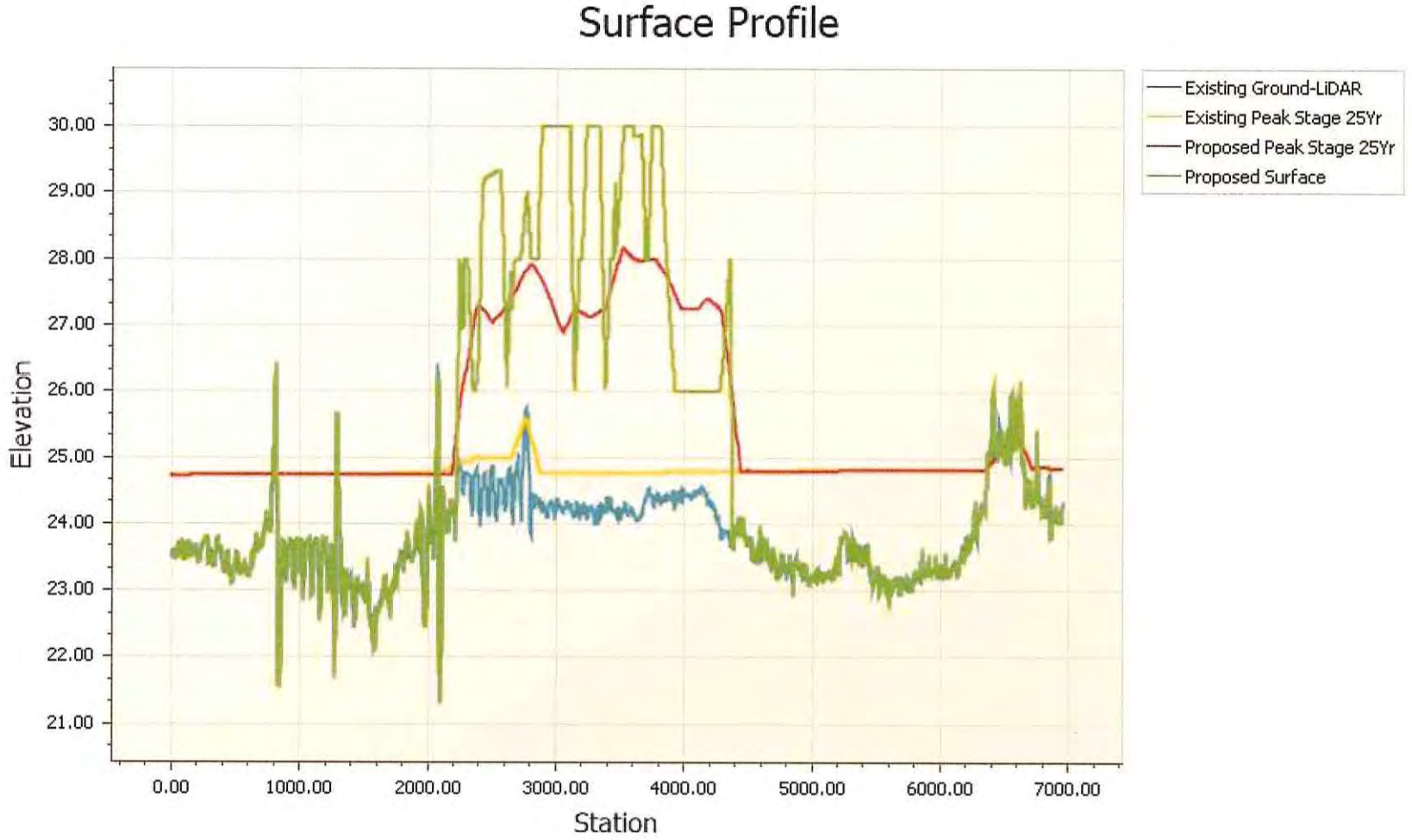


Figure 6f. Existing and proposed 25-year, 3-day peak stages along Profile 1.

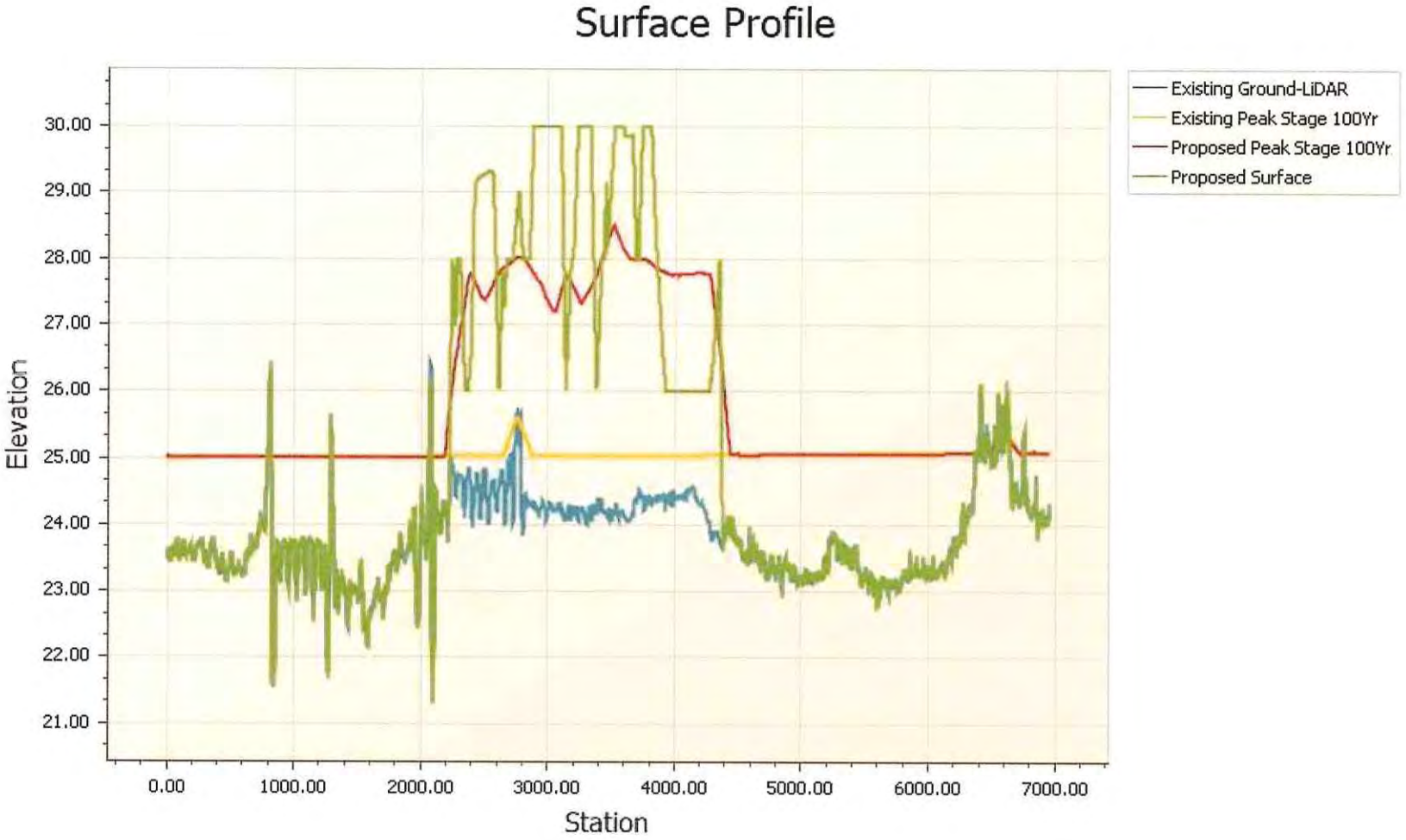


Figure 6g. Existing and proposed 100-year, 3-day peak stages along Profile 1.

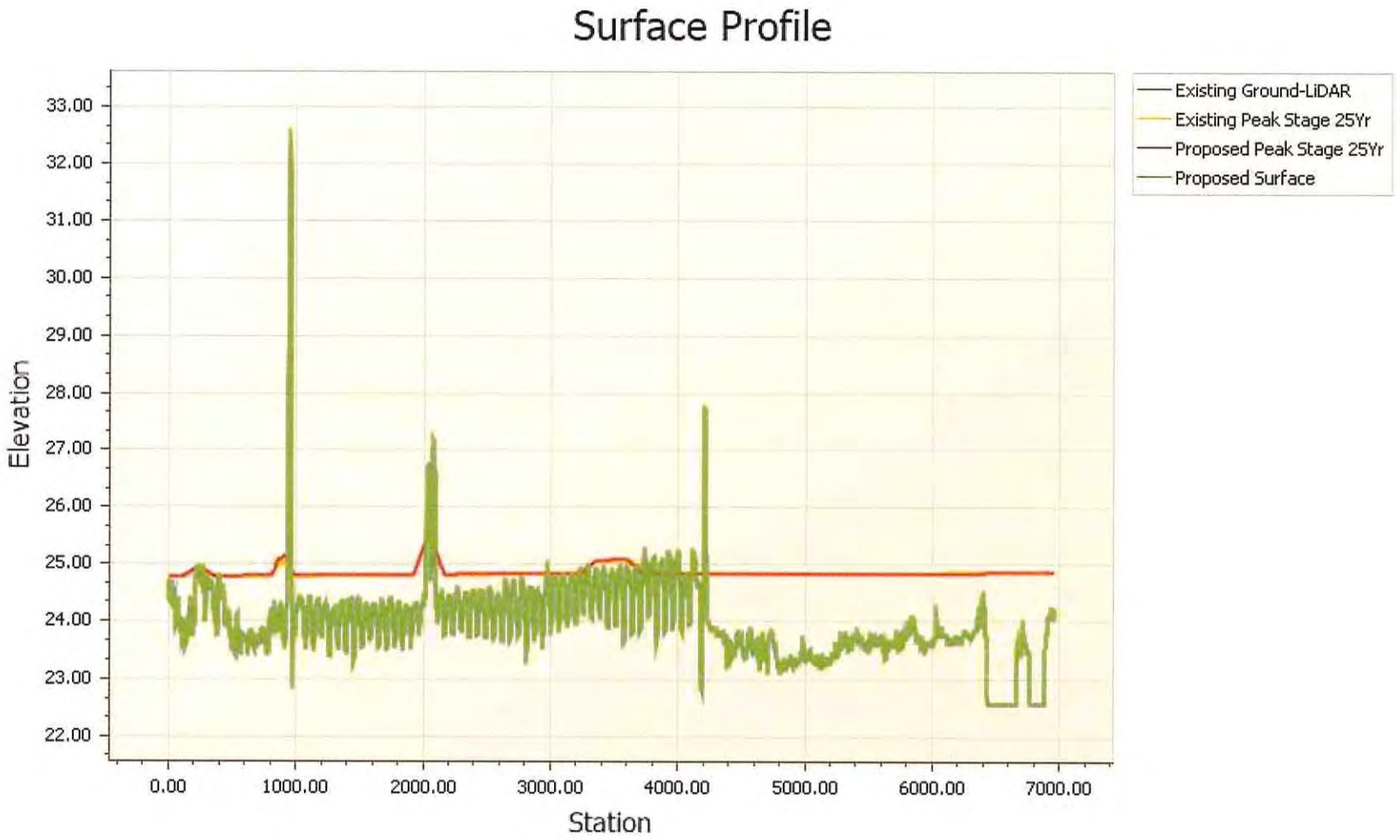


Figure 6h. Existing and proposed 25-year, 3-day peak stages along Profile 2.

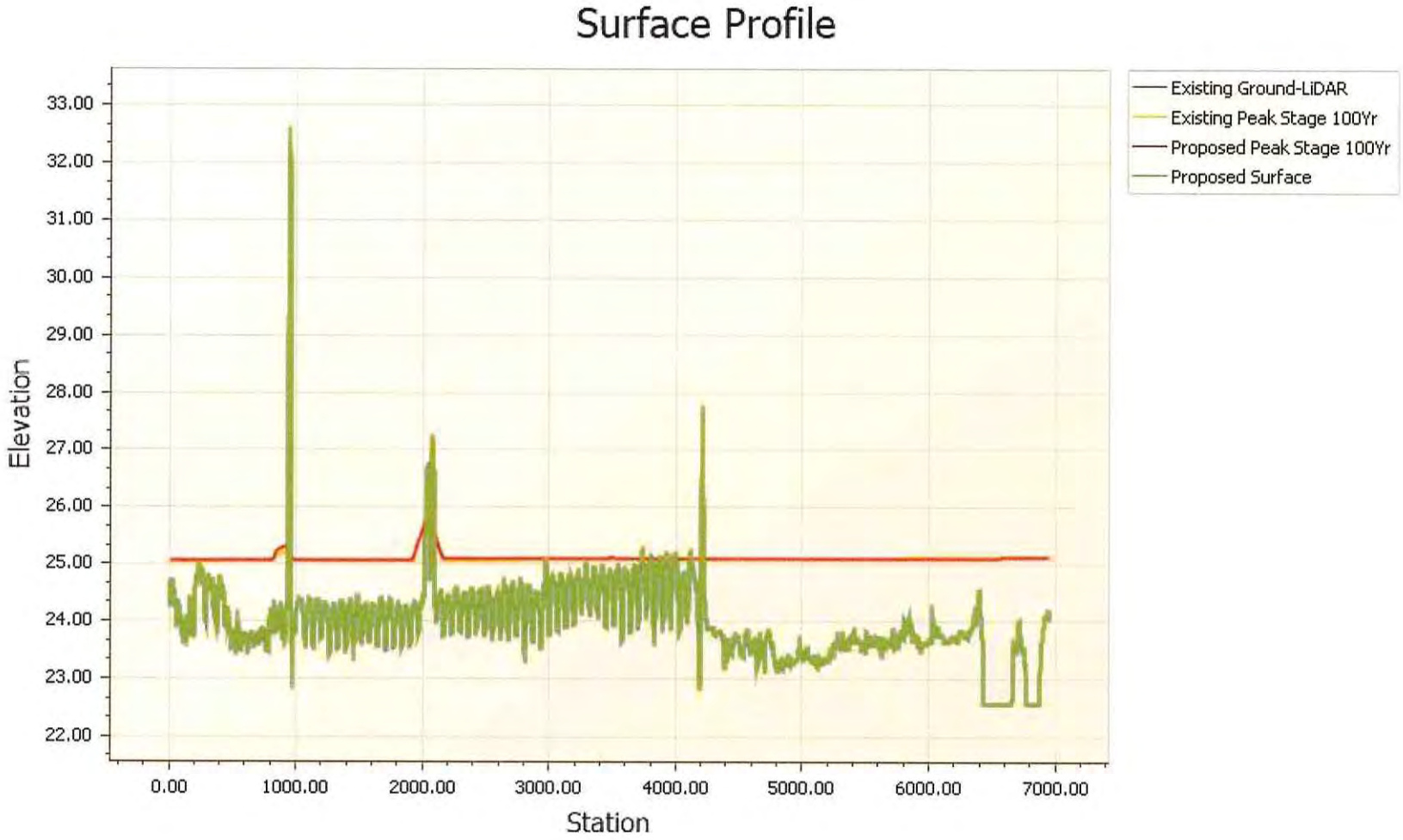


Figure 6i. Existing and proposed 100-year, 3-day peak stages along Profile 2.

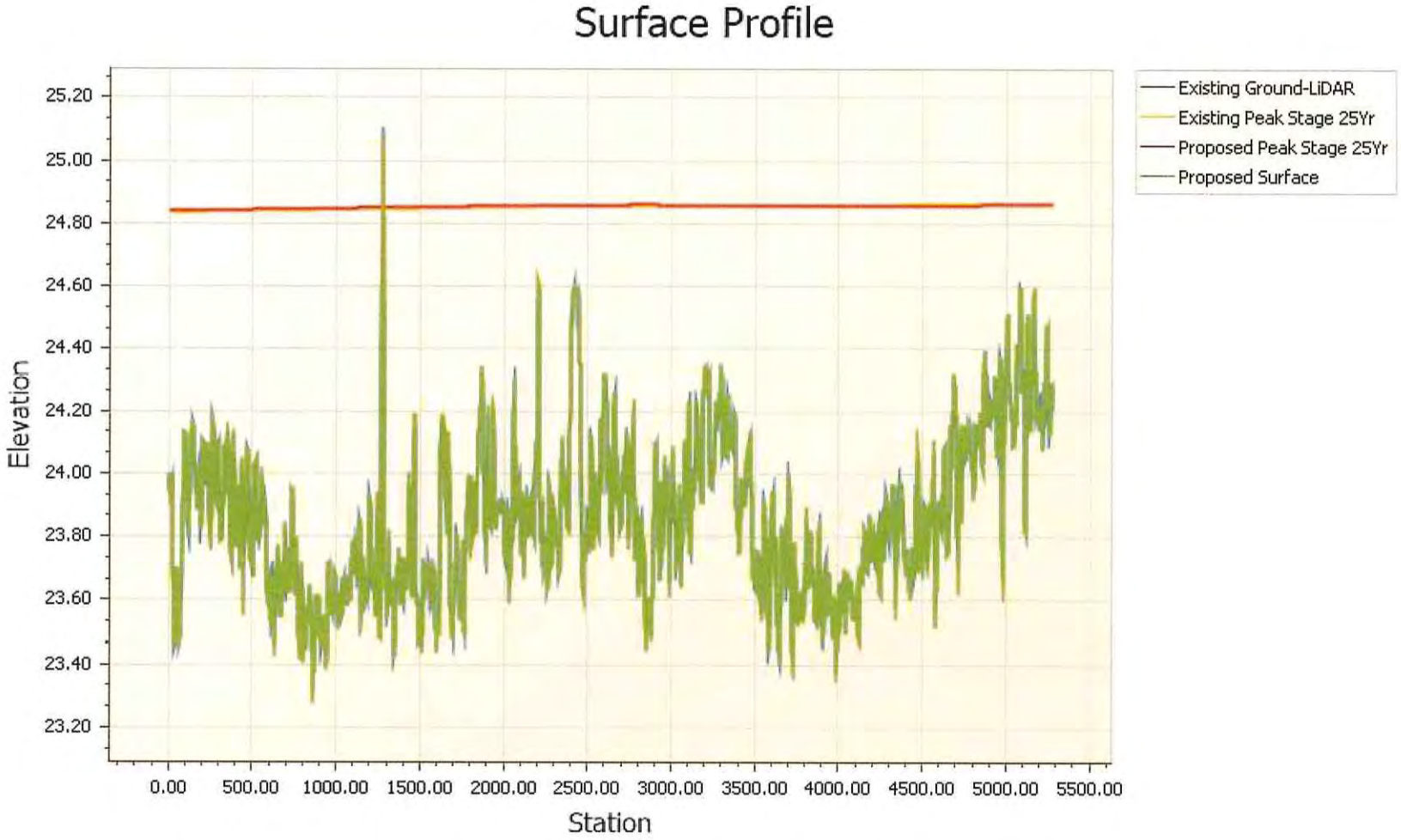


Figure 6j. Existing and proposed 25-year, 3-day peak stages along Profile 3.

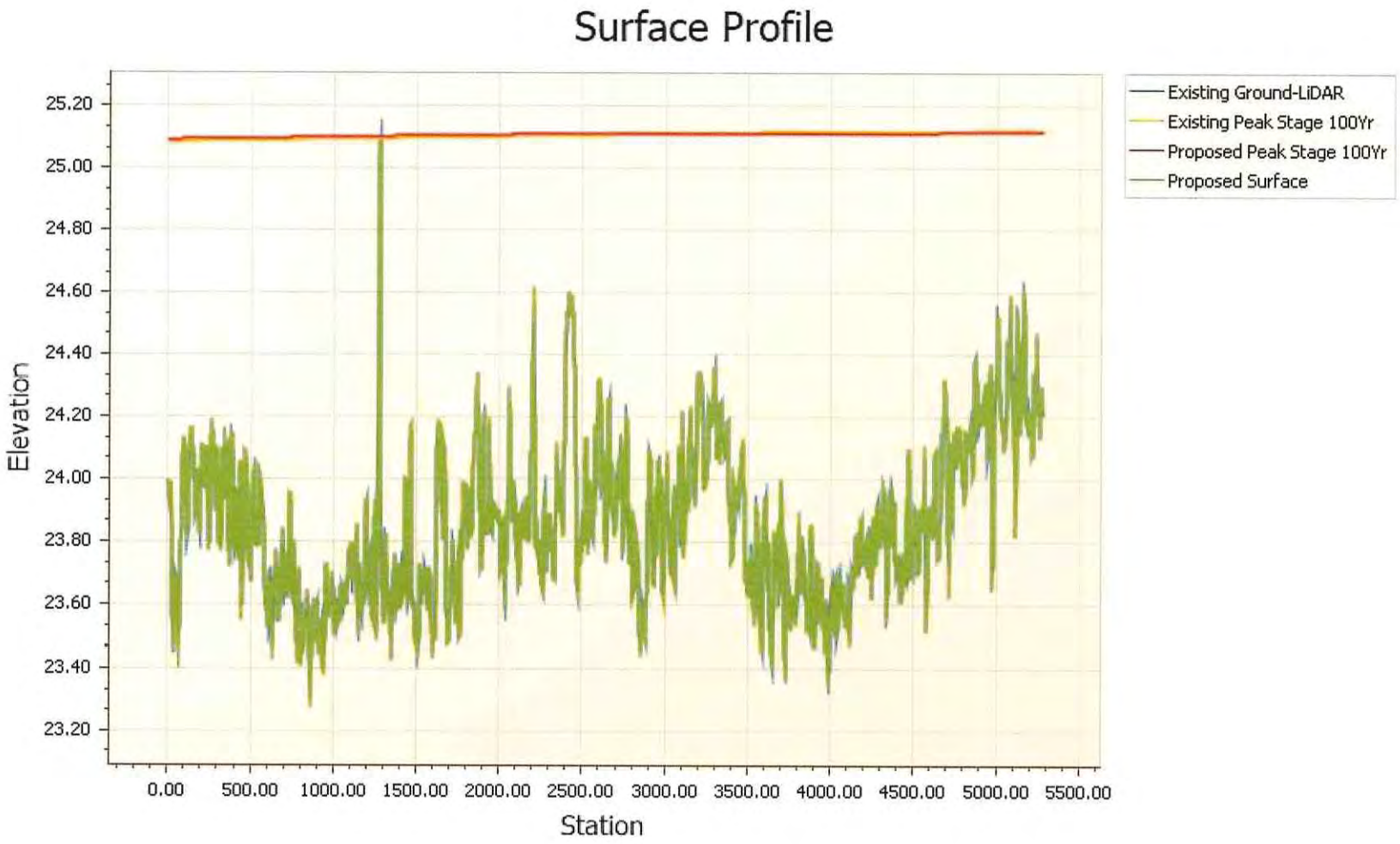
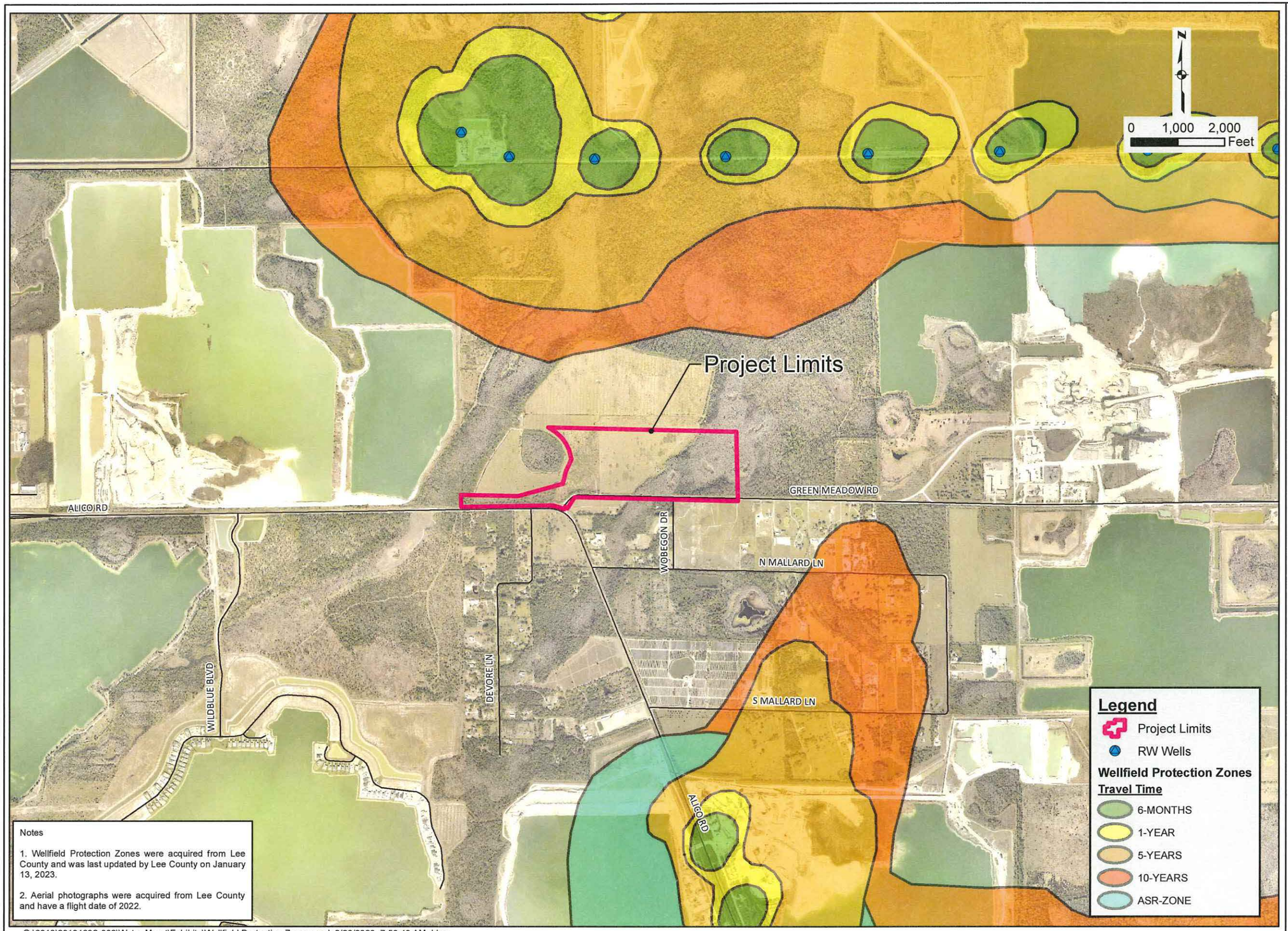


Figure 6k. Existing and proposed 100-year, 3-day peak stages along Profile 3.



Notes

1. Wellfield Protection Zones were acquired from Lee County and was last updated by Lee County on January 13, 2023.

2. Aerial photographs were acquired from Lee County and have a flight date of 2022.

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Jacobs Engineering Group

Southeast Advanced Water Reclamation Facility
Lee County, Florida

REVISIONS

NO.	DESCRIPTION	DATE

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PROJECT NO.	20181232-002
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SCALE:	As Shown

Wellfield Protection Zones

Figure 7

APPENDIX A

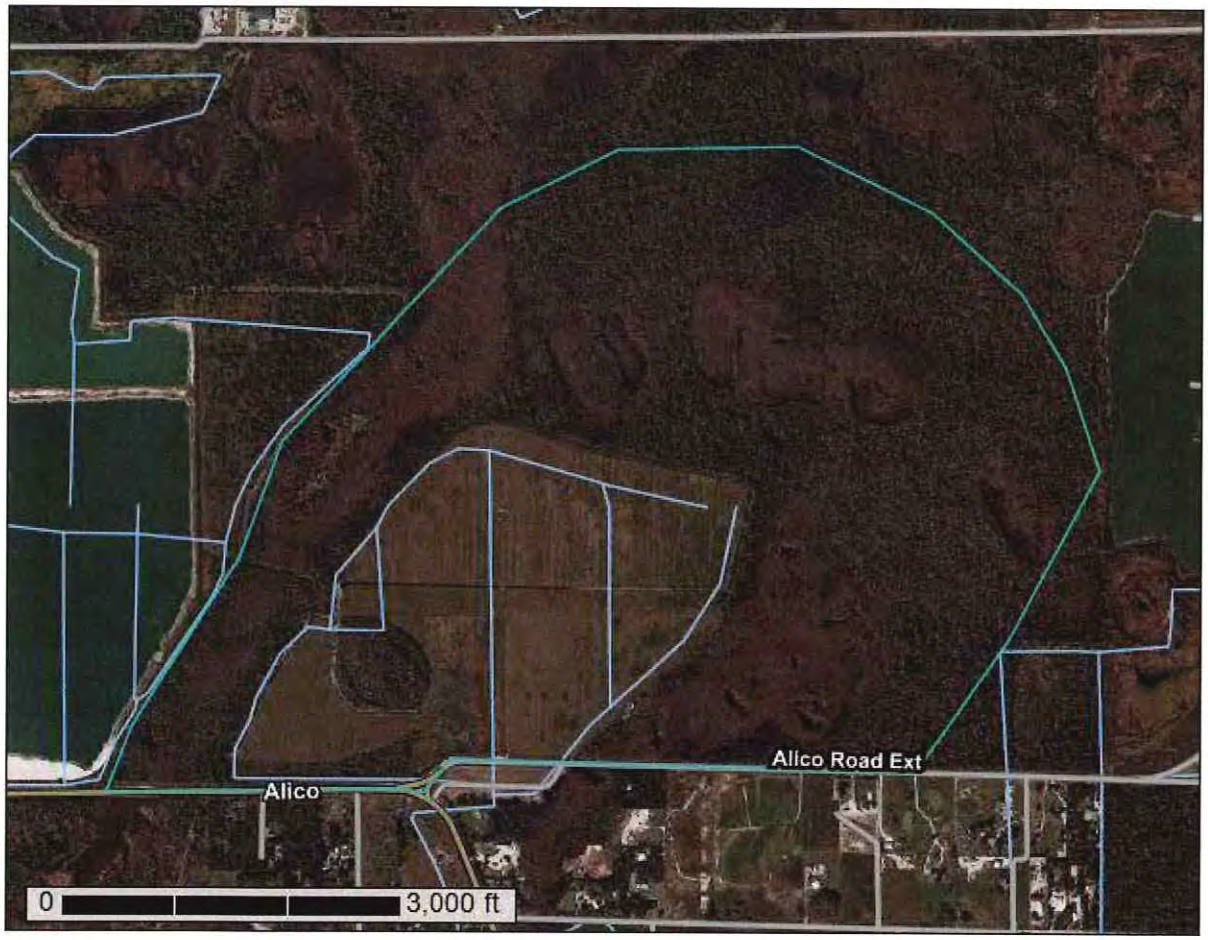
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lee County, Florida



July 20, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

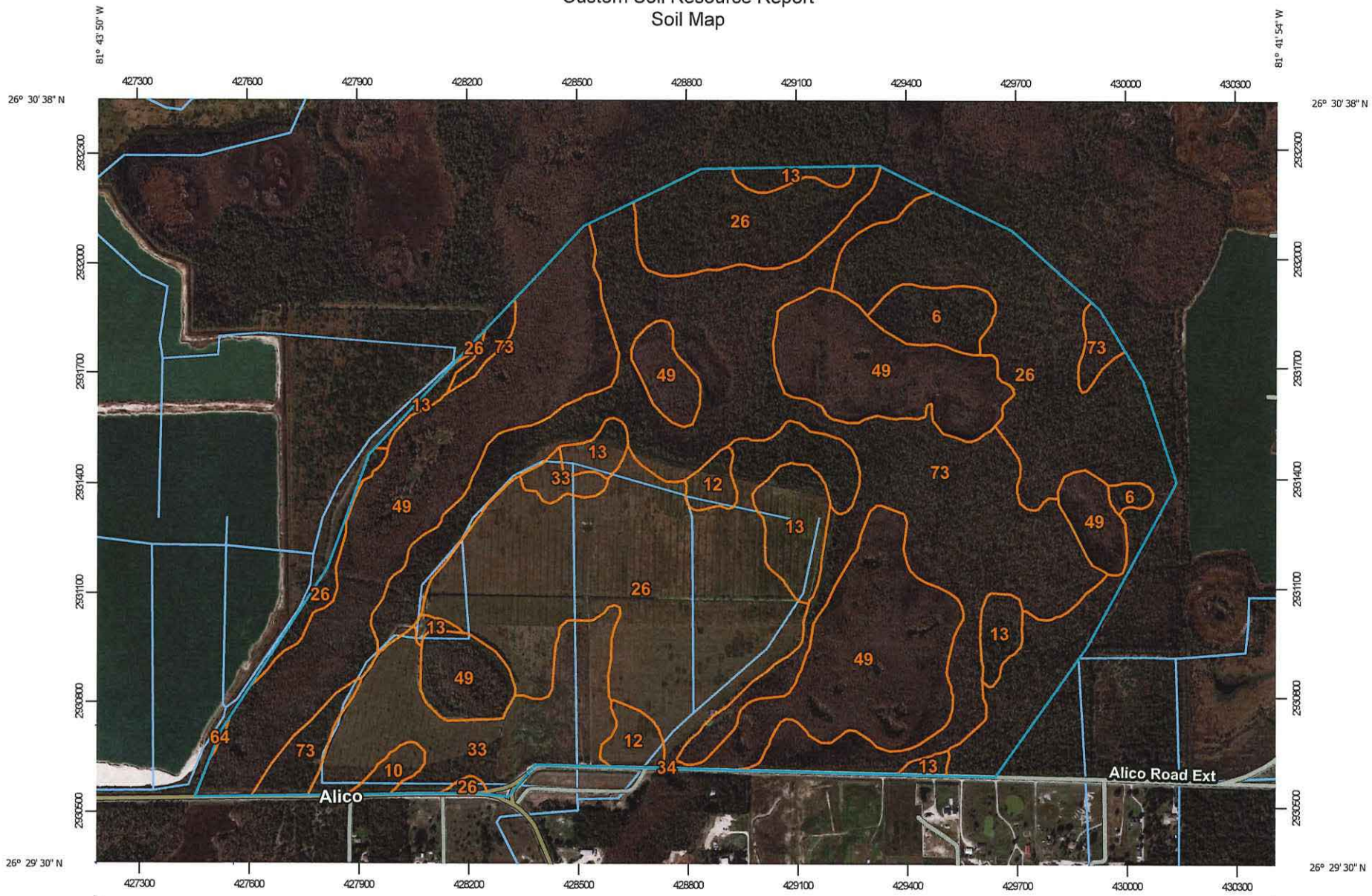
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	190.3	24.1%
Totals for Area of Interest		**788.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lee County, Florida

6—Brynwood fine sand, wet, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2zlfc
Elevation: 0 to 70 feet
Mean annual precipitation: 46 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 360 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Brynwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brynwood

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits over limestone

Typical profile

A - 0 to 2 inches: fine sand
Eg - 2 to 7 inches: fine sand
Bw - 7 to 12 inches: fine sand
2R - 12 to 22 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 2 to 20 inches to lithic bedrock
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.95 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 0.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Cypress lake

Percent of map unit: 6 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Rock outcrop, misc

Percent of map unit: 5 percent
Hydric soil rating: No

Parkwood variant, mod. deep

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Wetland Hardwood Hammock (R155XY012FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G155XB341FL)
Hydric soil rating: No

Wabasso

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

10—Pompano fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw3
Elevation: 0 to 100 feet
Mean annual precipitation: 44 to 65 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Pompano and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pompano

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
C - 4 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Malabar

Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Convex, concave
Across-slope shape: Linear, concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Valkaria
Percent of map unit: 4 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Immokalee
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Myakka
Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Riviera
Percent of map unit: 2 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

12—Felda fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2tzvy
Elevation: 0 to 180 feet
Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Felda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Felda

Setting

Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
Eg - 4 to 35 inches: fine sand
Btg - 35 to 43 inches: fine sandy loam
Cg - 43 to 80 inches: extremely paragravelly fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Minor Components

Wabasso

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear

Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Oldsmar

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Valkaria

Percent of map unit: 4 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

13—Cypress Lake fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2zlds
Elevation: 0 to 60 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Cypress lake and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cypress Lake

Setting

Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits over limestone

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 14 inches: fine sand

E/B - 14 to 25 inches: fine sand
Btg - 25 to 30 inches: fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 8 to 40 inches to lithic bedrock
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Minor Components

Brynwood

Percent of map unit: 8 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear

Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Ft. drum

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

26—Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svyp
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Pineda and similar soils: 45 percent
Pineda, wet, and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda

Setting

Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 1 inches: fine sand
E - 1 to 5 inches: fine sand
Bw - 5 to 36 inches: fine sand
Btg/E - 36 to 54 inches: fine sandy loam
Cg - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: No

Description of Pineda, Wet

Setting

Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 1 inches: fine sand
E - 1 to 5 inches: fine sand
Bw - 5 to 36 inches: fine sand
Btg/E - 36 to 54 inches: fine sandy loam
Cg - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)

Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Minor Components

Felda
Percent of map unit: 6 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Wabasso
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Valkaria
Percent of map unit: 2 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Brynwood
Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Cypress lake
Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

33—Oldsmar sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2sm4p
Elevation: 0 to 80 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Oldsmar and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oldsmar

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: sand
E - 6 to 38 inches: sand
Bh - 38 to 50 inches: sand
Btg - 50 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Immokalee

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Holopaw

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Cypress lake

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Tequesta

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL), Organic soils in depressions and on flood plains (G156AC645FL)
Hydric soil rating: Yes

34—Malabar fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svz3
Elevation: 10 to 140 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Malabar and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Malabar

Setting

Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 17 inches: fine sand
Bw - 17 to 42 inches: fine sand
Btg - 42 to 59 inches: fine sandy loam
Cg - 59 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Valkaria

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Oldsmar

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda

Percent of map unit: 4 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

49—Felda fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzxb
Elevation: 0 to 150 feet
Mean annual precipitation: 46 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Felda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Felda

Setting

Landform: Flats on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: fine sand
Eg - 7 to 24 inches: fine sand
Btg - 24 to 36 inches: fine sandy loam
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D

Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Floridana

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Winder

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Eaton

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G154XB345FL)
Hydric soil rating: Yes

Sanibel

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave

Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Myakka

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Kaliga

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

64—Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2zlfd
Elevation: 0 to 80 feet
Mean annual precipitation: 42 to 70 inches
Mean annual air temperature: 70 to 79 degrees F
Frost-free period: 360 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Brynwood and similar soils: 45 percent
Urban land: 33 percent
Minor components: 22 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brynwood

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits over limestone

Typical profile

A - 0 to 2 inches: fine sand
Eg - 2 to 7 inches: fine sand
Bw - 7 to 12 inches: fine sand
2R - 12 to 22 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 2 to 20 inches to lithic bedrock
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.95 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 0.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Description of Urban Land

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G155XB999FL)
Other vegetative classification: Forage suitability group not assigned (G155XB999FL)
Hydric soil rating: Unranked

Minor Components

Cypress lake

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)

Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Jenada

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Forage suitability group not assigned (G156AC999FL)
Hydric soil rating: Yes

Dania

Percent of map unit: 3 percent
Landform: Marshes on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds (R156AY010FL), Organic soils in depressions and on flood plains (G156AC645FL)
Hydric soil rating: Yes

Clewiston

Percent of map unit: 2 percent
Landform: Depressions on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Brynwood

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear

Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pompano

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

73—Pineda fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2svz7
Elevation: 0 to 90 feet
Mean annual precipitation: 46 to 60 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Pineda and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 12 inches: fine sand
Bw - 12 to 31 inches: fine sand
Btg/E - 31 to 39 inches: fine sandy loam
Btg - 39 to 55 inches: fine sandy loam
Cg - 55 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Malabar

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 2 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Cypress lake

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 2 percent

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

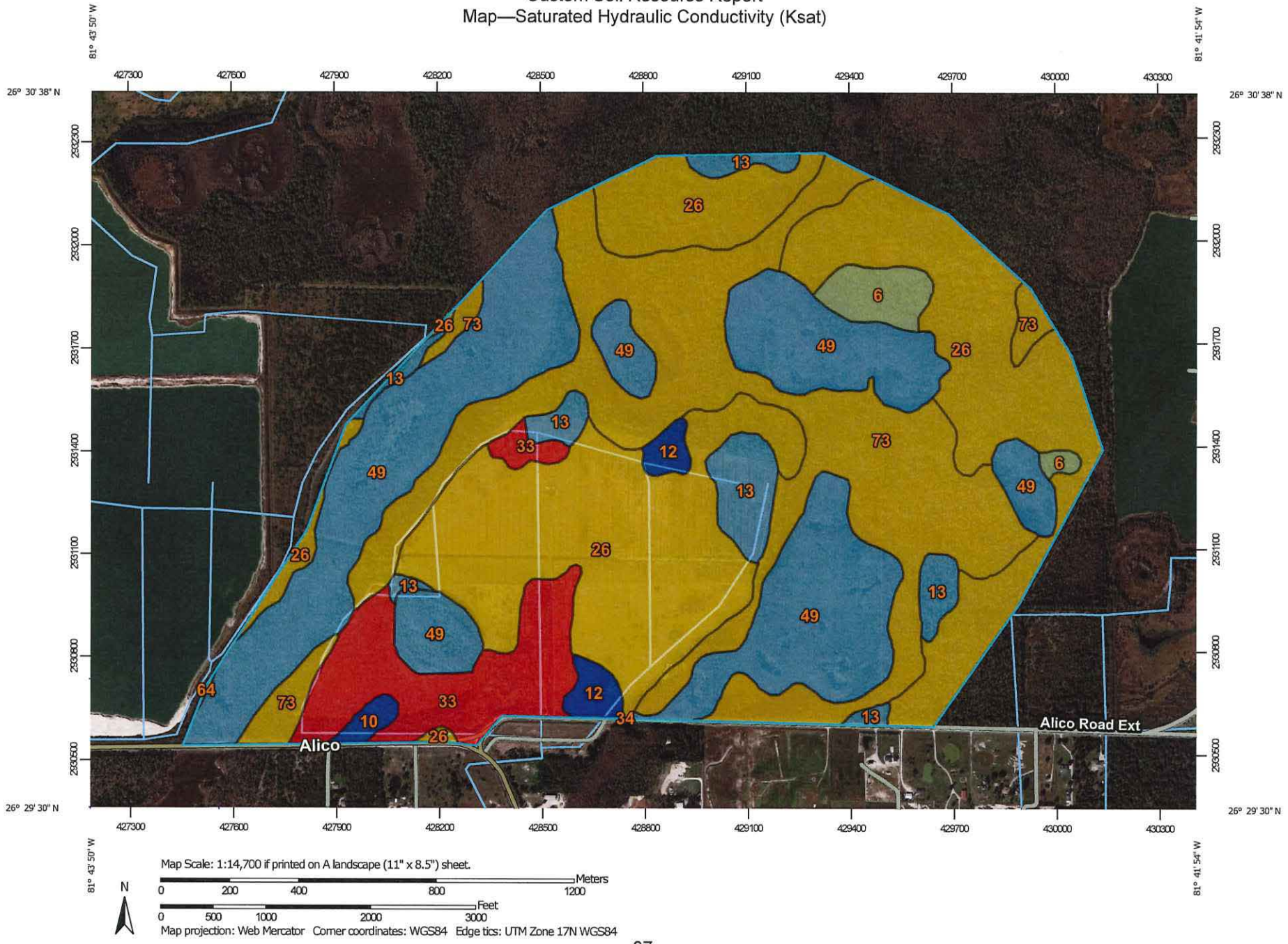
Saturated Hydraulic Conductivity (Ksat)

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Custom Soil Resource Report
Map—Saturated Hydraulic Conductivity (Ksat)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- <= 47.5488
- > 47.5488 and <= 56.7350
- > 56.7350 and <= 69.9273
- > 69.9273 and <= 82.3543
- > 82.3543 and <= 91.7400
- Not rated or not available

Soil Rating Lines

- <= 47.5488
- > 47.5488 and <= 56.7350
- > 56.7350 and <= 69.9273
- > 69.9273 and <= 82.3543
- > 82.3543 and <= 91.7400
- Not rated or not available

Soil Rating Points

- <= 47.5488
- > 47.5488 and <= 56.7350
- > 56.7350 and <= 69.9273
- > 69.9273 and <= 82.3543
- > 82.3543 and <= 91.7400
- Not rated or not available

Water Features

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND	MAP INFORMATION
Streams and Canals	

Table—Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	69.9273	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	91.7400	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	85.4829	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	78.5287	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	56.7350	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	47.5488	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	78.2871	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	82.3543	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	69.9273	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	52.9665	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Saturated Hydraulic Conductivity (Ksat)

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

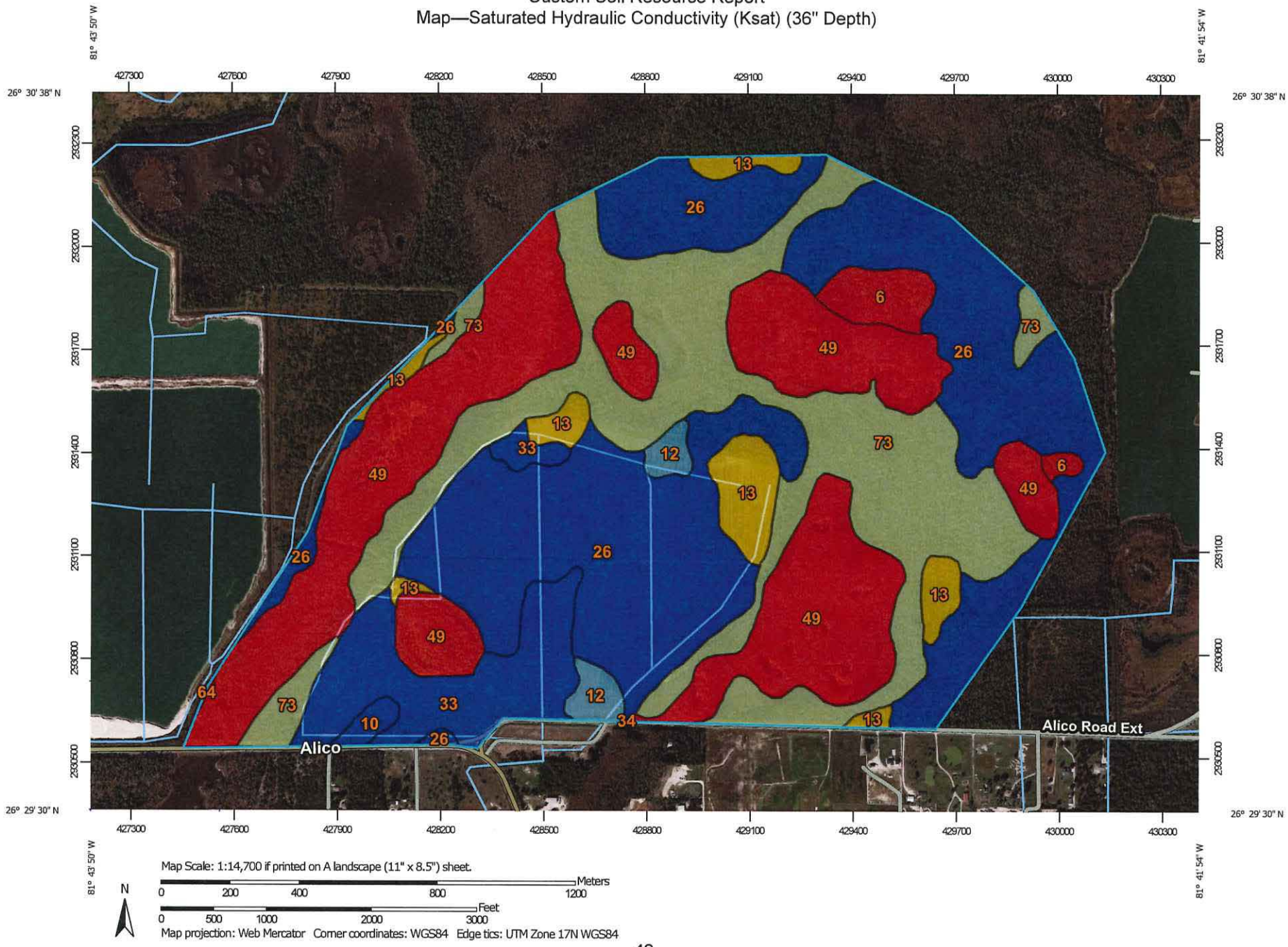
Saturated Hydraulic Conductivity (Ksat) (36" Depth)

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Custom Soil Resource Report
Map—Saturated Hydraulic Conductivity (Ksat) (36" Depth)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- <= 70.8026
- > 70.8026 and <= 78.5868
- > 78.5868 and <= 83.5868
- > 83.5868 and <= 90.3442
- > 90.3442 and <= 92.0000
- Not rated or not available

Soil Rating Lines

- <= 70.8026
- > 70.8026 and <= 78.5868
- > 78.5868 and <= 83.5868
- > 83.5868 and <= 90.3442
- > 90.3442 and <= 92.0000
- Not rated or not available

Soil Rating Points

- <= 70.8026
- > 70.8026 and <= 78.5868
- > 78.5868 and <= 83.5868
- > 83.5868 and <= 90.3442
- > 90.3442 and <= 92.0000
- Not rated or not available

Water Features

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND	MAP INFORMATION
Streams and Canals	

Table—Saturated Hydraulic Conductivity (Ksat) (36" Depth)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	69.9273	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	91.7400	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	90.3442	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	78.5868	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	92.0000	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	92.0000	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	91.7400	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	70.8026	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	69.9273	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	83.5868	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Saturated Hydraulic Conductivity (Ksat) (36" Depth)

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 91

Units of Measure: Centimeters

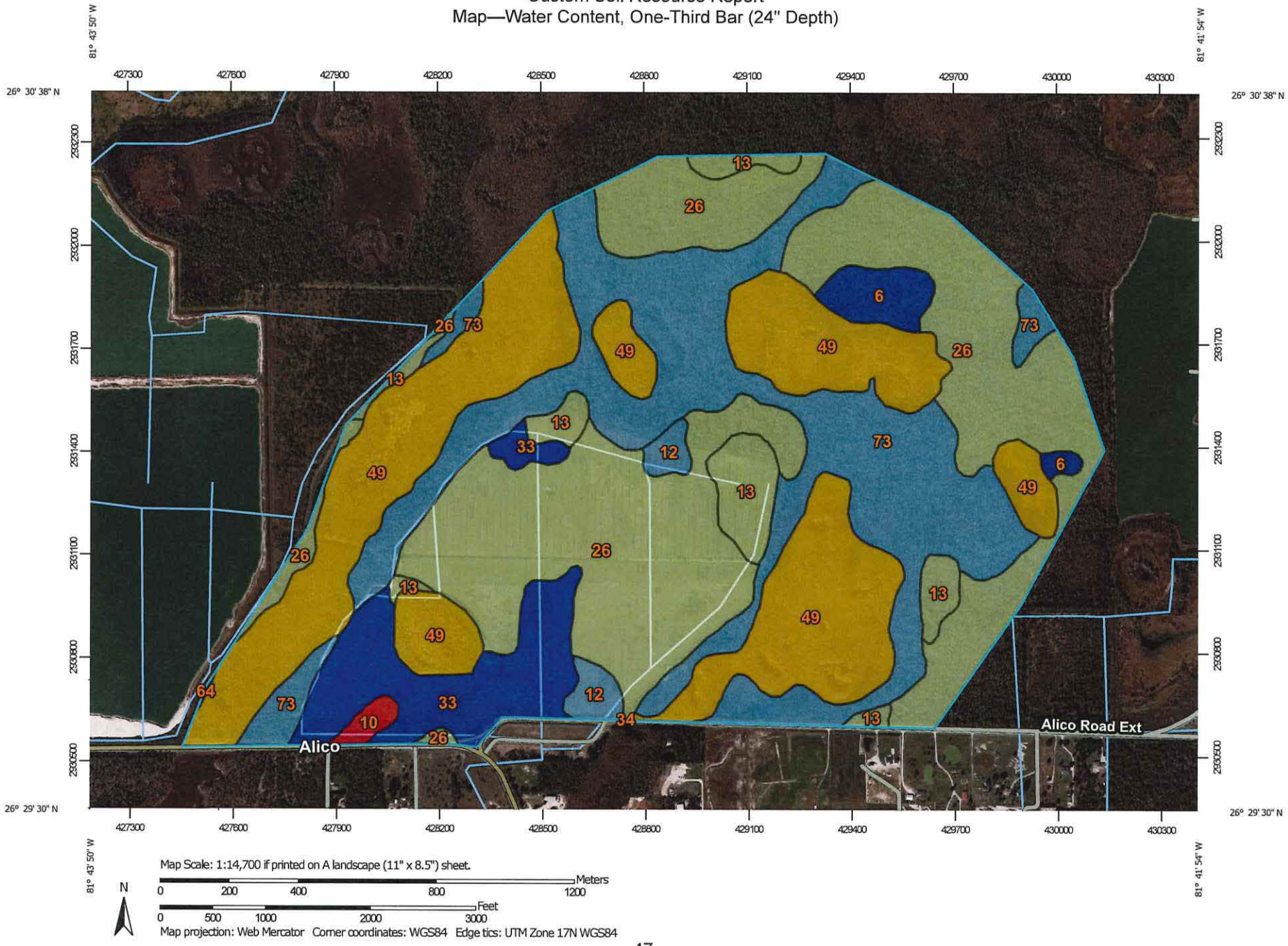
Water Content, One-Third Bar (24" Depth)

Water content, one-third bar, is the amount of soil water retained at a tension of 1/3 bar, expressed as a volumetric percentage of the whole soil. Water retained at 1/3 bar is significant in the determination of soil water-retention difference, which is used as the initial estimation of available water capacity for some soils. Water retained at 1/3 bar is the value commonly used to estimate the content of water at field capacity for most soils.

Water content varies between soil types, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure.

For each soil layer, water content is recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Water Content, One-Third Bar (24" Depth)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 6.3
- > 6.3 and <= 6.8
- > 6.8 and <= 7.3
- > 7.3 and <= 8.4
- > 8.4 and <= 8.9
- Not rated or not available

Soil Rating Lines
- <= 6.3
- > 6.3 and <= 6.8
- > 6.8 and <= 7.3
- > 7.3 and <= 8.4
- > 8.4 and <= 8.9
- Not rated or not available

Soil Rating Points
- <= 6.3
- > 6.3 and <= 6.8
- > 6.8 and <= 7.3
- > 7.3 and <= 8.4
- > 8.4 and <= 8.9
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Water Content, One-Third Bar (24" Depth)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	8.9	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	6.3	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	8.4	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	7.2	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	7.3	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	8.6	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	8.0	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	6.8	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	8.9	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	8.1	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Water Content, One-Third Bar (24" Depth)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: Yes

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

Units of Measure: Centimeters

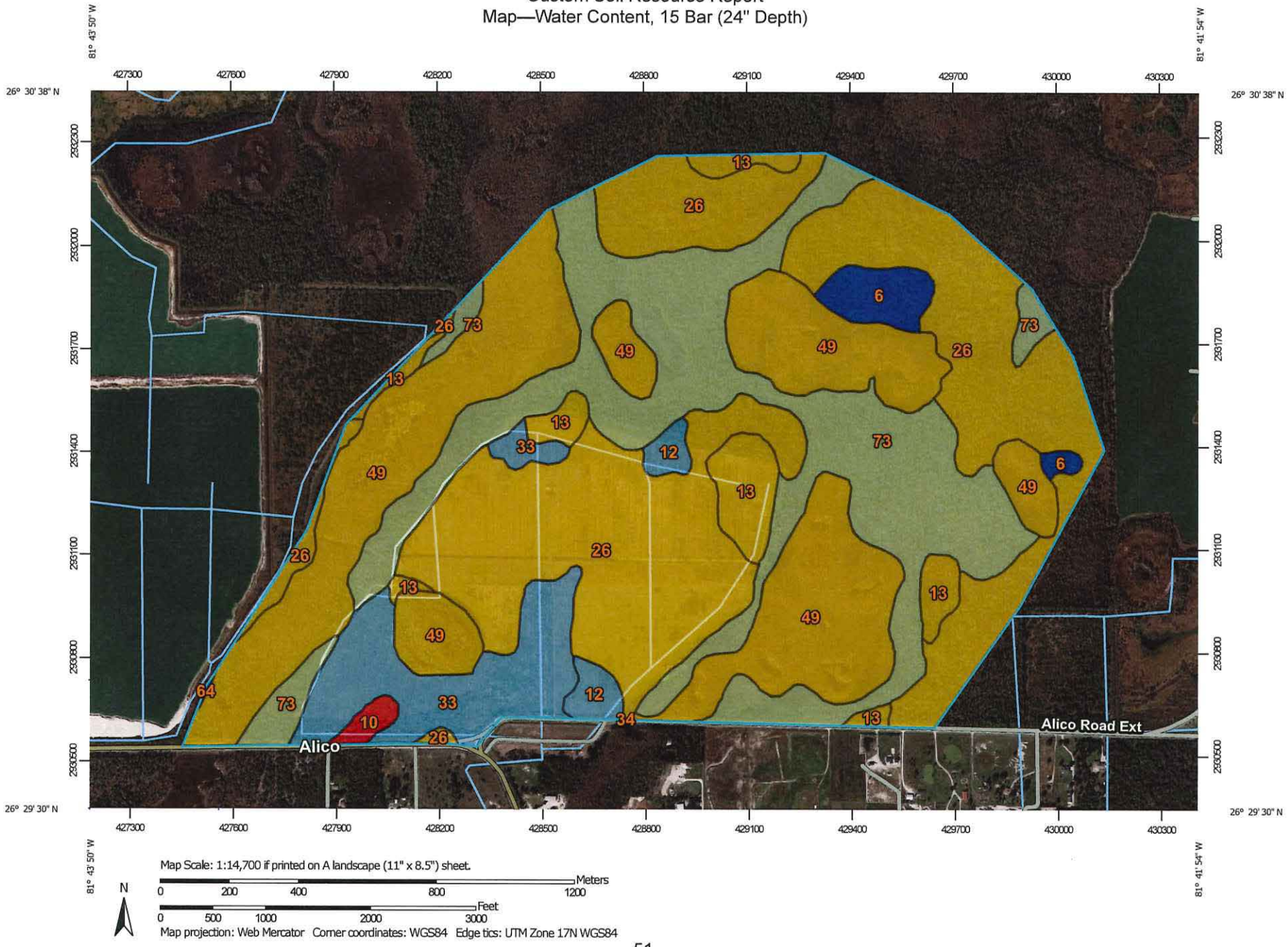
Water Content, 15 Bar (24" Depth)

Water content, 15 bar, is the amount of soil water retained at a tension of 15 bars, expressed as a volumetric percentage of the whole soil material. Water retained at 15 bars is significant in the determination of soil water-retention difference, which is used as the initial estimation of available water capacity for some soils. Water retained at 15 bars is an estimation of the wilting point.

Water content varies between soil types, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure.

For each soil layer, water content is recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Water Content, 15 Bar (24" Depth)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 1.4
- > 1.4 and <= 1.7
- > 1.7 and <= 2.3
- > 2.3 and <= 2.5
- > 2.5 and <= 2.7
- Not rated or not available

Soil Rating Lines
- <= 1.4
- > 1.4 and <= 1.7
- > 1.7 and <= 2.3
- > 2.3 and <= 2.5
- > 2.5 and <= 2.7
- Not rated or not available

Soil Rating Points
- <= 1.4
- > 1.4 and <= 1.7
- > 1.7 and <= 2.3
- > 2.3 and <= 2.5
- > 2.5 and <= 2.7
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Water Content, 15 Bar (24" Depth)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	2.7	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	1.4	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	2.4	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	1.6	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	1.7	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	2.5	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	2.3	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	1.7	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	2.7	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	2.3	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Water Content, 15 Bar (24" Depth)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: Yes

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

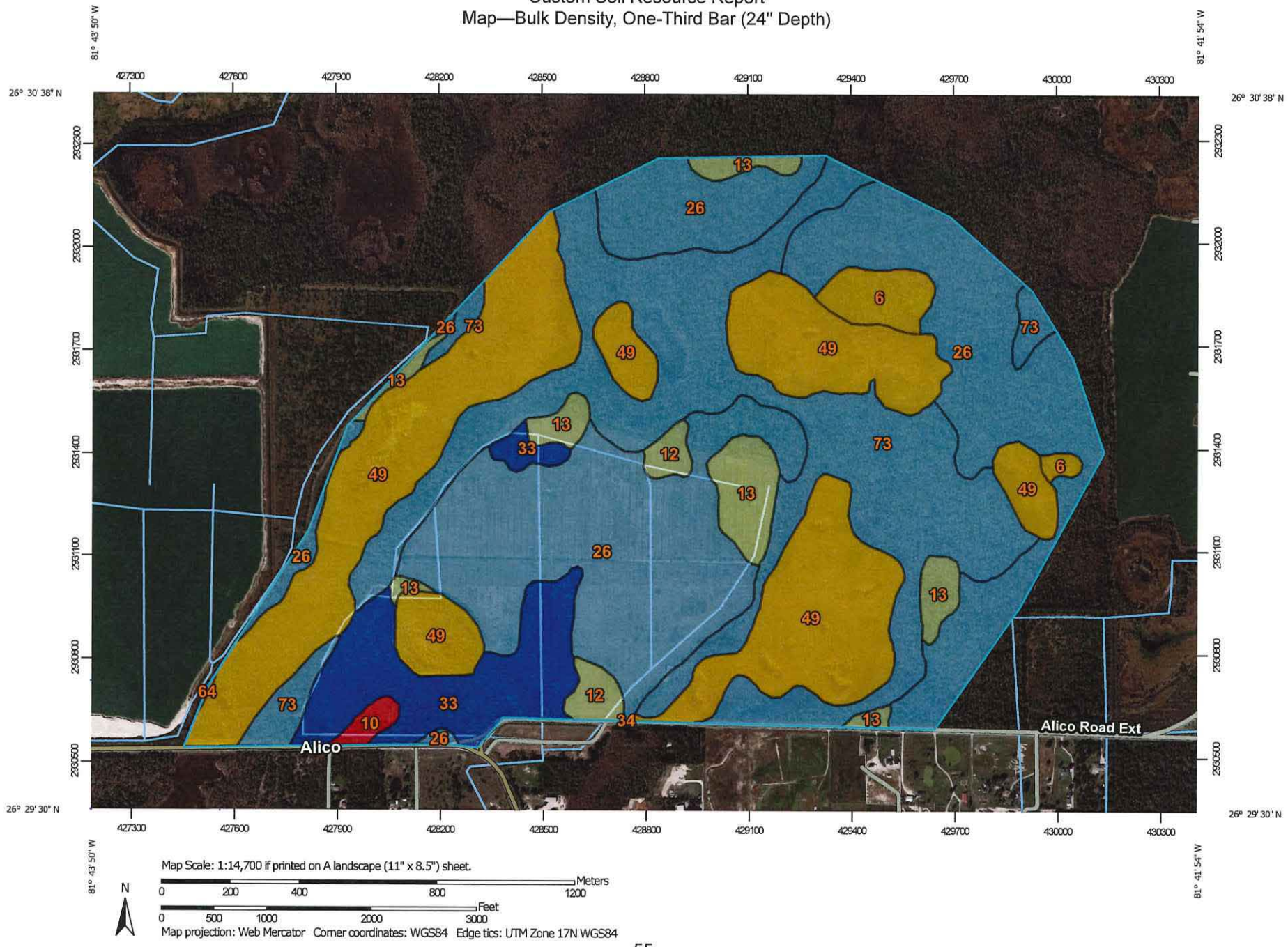
Units of Measure: Centimeters

Bulk Density, One-Third Bar (24" Depth)

Bulk density, one-third bar, is the ovendry weight of the soil material less than 2 millimeters in size per unit volume of soil at water tension of 1/3 bar, expressed in grams per cubic centimeter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Bulk Density, One-Third Bar (24" Depth)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- <= 1.56
- > 1.56 and <= 1.57
- > 1.57 and <= 1.59
- > 1.59 and <= 1.61
- > 1.61 and <= 1.64
- Not rated or not available

Soil Rating Lines

- <= 1.56
- > 1.56 and <= 1.57
- > 1.57 and <= 1.59
- > 1.59 and <= 1.61
- > 1.61 and <= 1.64
- Not rated or not available

Soil Rating Points

- <= 1.56
- > 1.56 and <= 1.57
- > 1.57 and <= 1.59
- > 1.59 and <= 1.61
- > 1.61 and <= 1.64
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Bulk Density, One-Third Bar (24" Depth)

Map unit symbol	Map unit name	Rating (grams per cubic centimeter)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	1.57	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	1.56	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	1.58	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	1.59	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	1.61	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	1.64	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	1.59	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	1.57	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	1.57	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	1.60	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Bulk Density, One-Third Bar (24" Depth)

Units of Measure: grams per cubic centimeter

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

Units of Measure: Centimeters

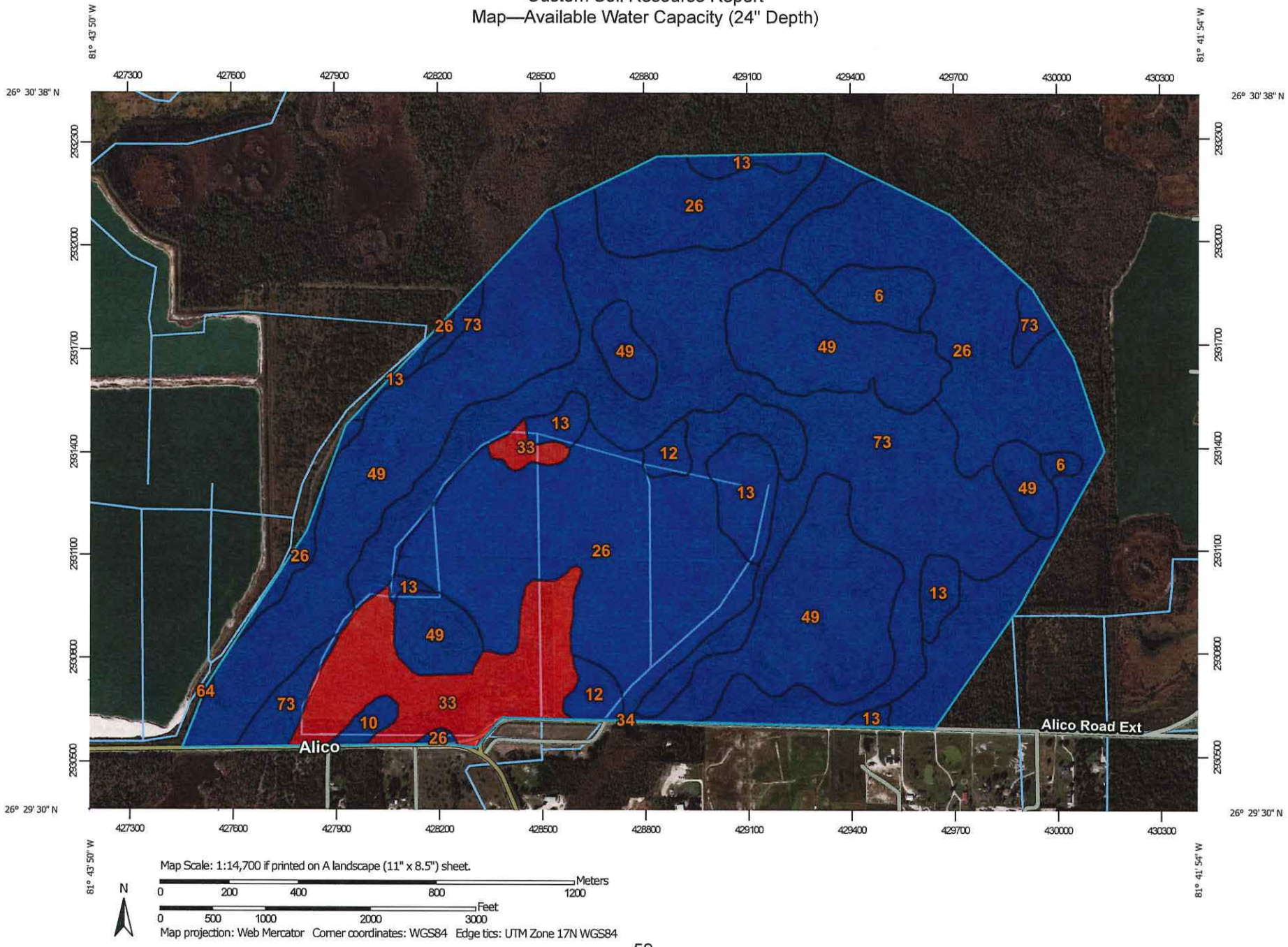
Available Water Capacity (24" Depth)

Available water capacity (AWC) refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in centimeters of water per centimeter of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure, with corrections for salinity and rock fragments. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. It is not an estimate of the quantity of water actually available to plants at any given time.

Available water supply (AWS) is computed as AWC times the thickness of the soil. For example, if AWC is 0.15 cm/cm, the available water supply for 25 centimeters of soil would be 0.15 x 25, or 3.75 centimeters of water.

For each soil layer, AWC is recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Available Water Capacity (24" Depth)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- <= 0.04
- > 0.04 and <= 0.08
- Not rated or not available

Soil Rating Lines

- <= 0.04
- > 0.04 and <= 0.08
- Not rated or not available

Soil Rating Points

- <= 0.04
- > 0.04 and <= 0.08
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

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Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

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Table—Available Water Capacity (24" Depth)

Map unit symbol	Map unit name	Rating (centimeters per centimeter)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	0.08	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	0.08	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	0.08	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	0.08	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	0.08	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	0.04	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	0.08	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	0.08	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	0.08	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	0.08	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Available Water Capacity (24" Depth)

Units of Measure: centimeters per centimeter

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

Units of Measure: Centimeters

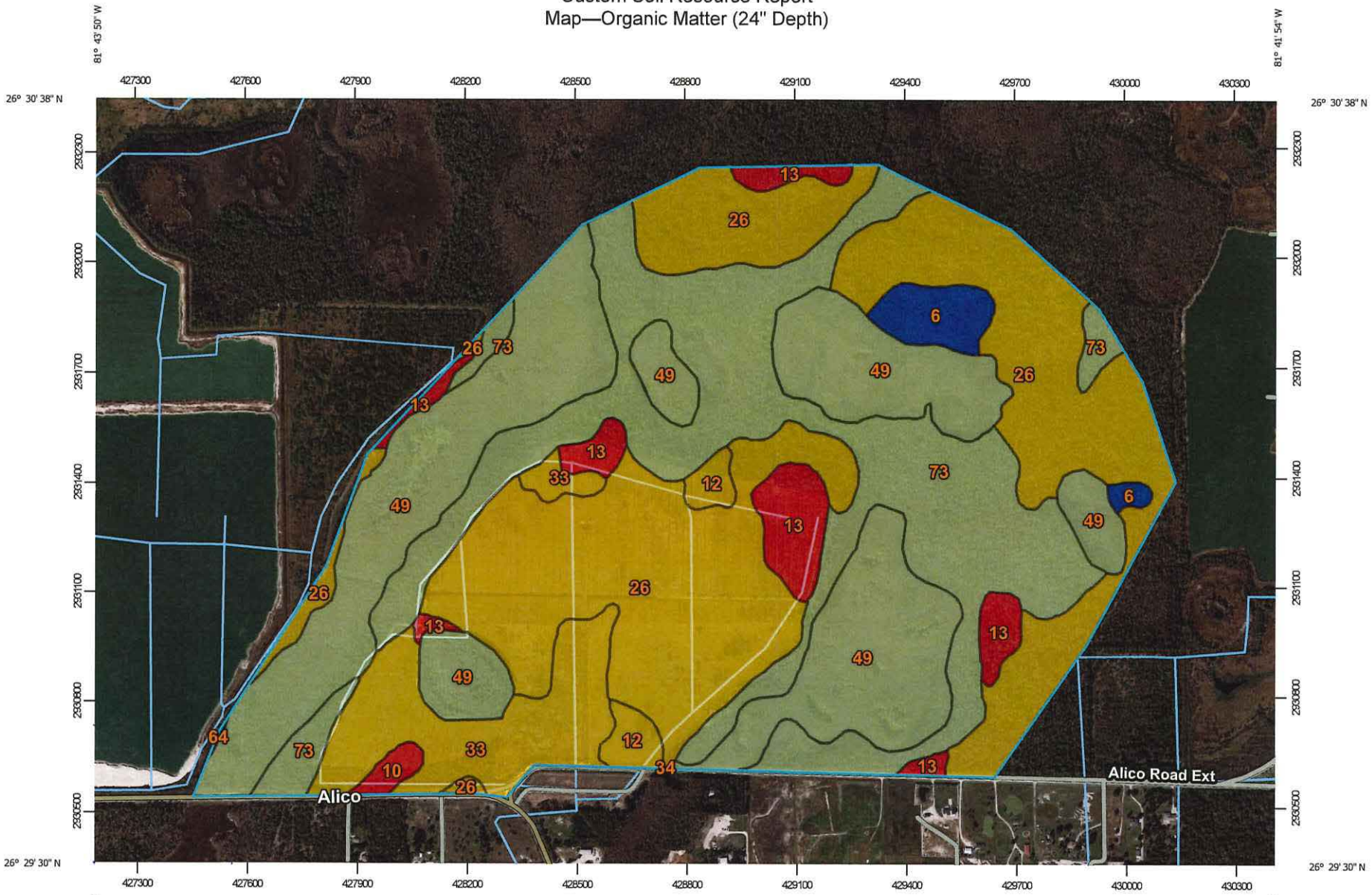
Organic Matter (24" Depth)

Organic matter is the plant and animal residue in the soil at various stages of decomposition. The estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms. An irregular distribution of organic carbon with depth may indicate different episodes of soil deposition or soil formation. Soils that are very high in organic matter have poor engineering properties and subside upon drying.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Organic Matter (24" Depth)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 0.41
- > 0.41 and <= 0.62
- > 0.62 and <= 0.83
- > 0.83 and <= 1.03
- > 1.03 and <= 1.33
- Not rated or not available

Soil Rating Lines
- <= 0.41
- > 0.41 and <= 0.62
- > 0.62 and <= 0.83
- > 0.83 and <= 1.03
- > 1.03 and <= 1.33
- Not rated or not available

Soil Rating Points
- <= 0.41
- > 0.41 and <= 0.62
- > 0.62 and <= 0.83
- > 0.83 and <= 1.03
- > 1.03 and <= 1.33
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

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Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

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Table—Organic Matter (24" Depth)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	1.33	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	0.41	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	0.62	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	0.41	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	0.58	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	0.56	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	1.03	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	0.77	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	1.33	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	0.83	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Organic Matter (24" Depth)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

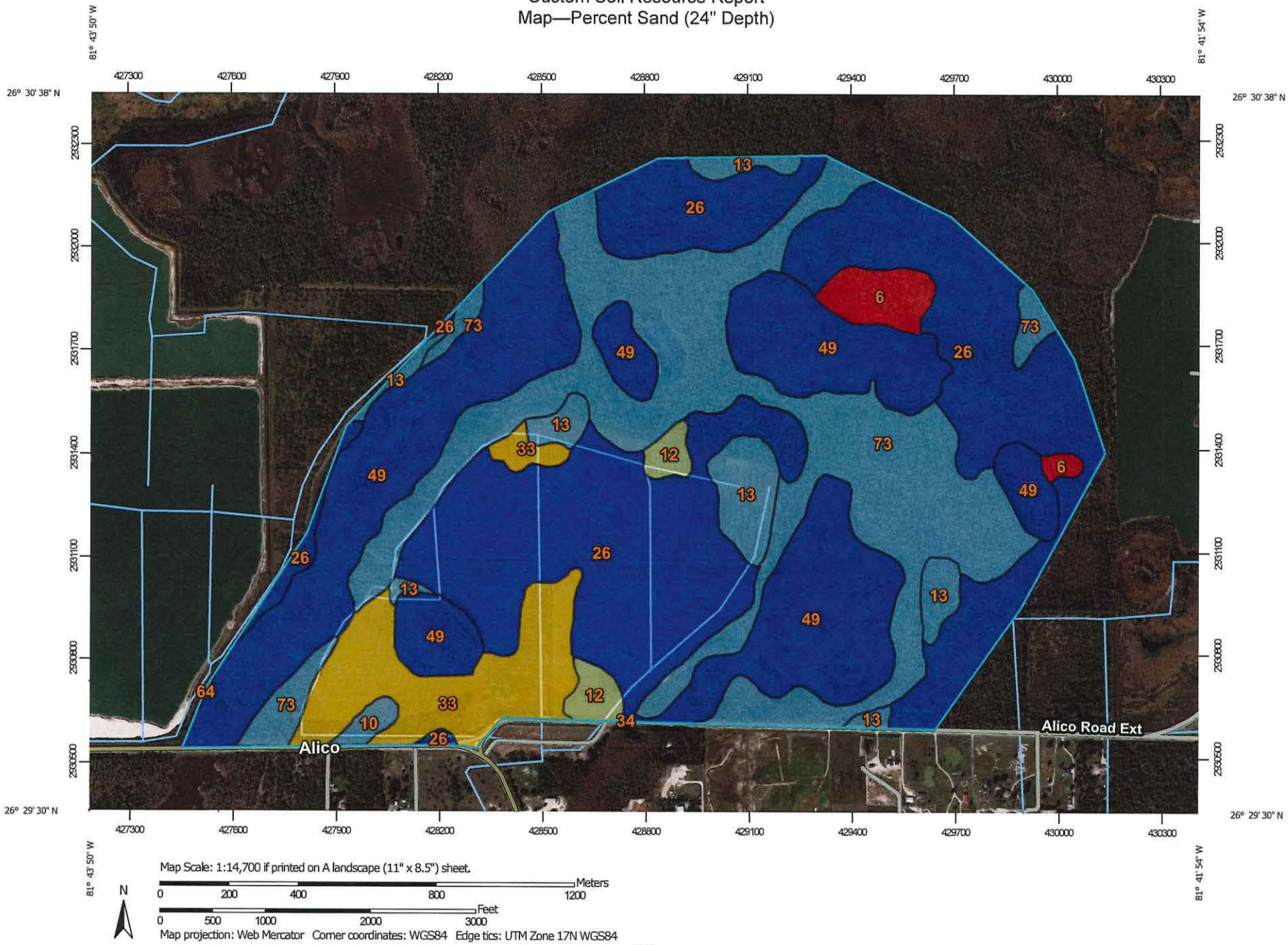
Units of Measure: Centimeters

Percent Sand (24" Depth)

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the database, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Percent Sand (24" Depth)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 94.2
- > 94.2 and <= 96.0
- > 96.0 and <= 97.0
- > 97.0 and <= 98.0
- > 98.0 and <= 98.6
- Not rated or not available

Soil Rating Lines
- <= 94.2
- > 94.2 and <= 96.0
- > 96.0 and <= 97.0
- > 97.0 and <= 98.0
- > 98.0 and <= 98.6
- Not rated or not available

Soil Rating Points
- <= 94.2
- > 94.2 and <= 96.0
- > 96.0 and <= 97.0
- > 97.0 and <= 98.0
- > 98.0 and <= 98.6
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 20, Sep 1, 2022

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Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

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Table—Percent Sand (24" Depth)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	94.2	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	98.0	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	97.0	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	97.6	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	98.3	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	96.0	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	98.4	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	98.6	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	94.2	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	97.8	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Percent Sand (24" Depth)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

Units of Measure: Centimeters

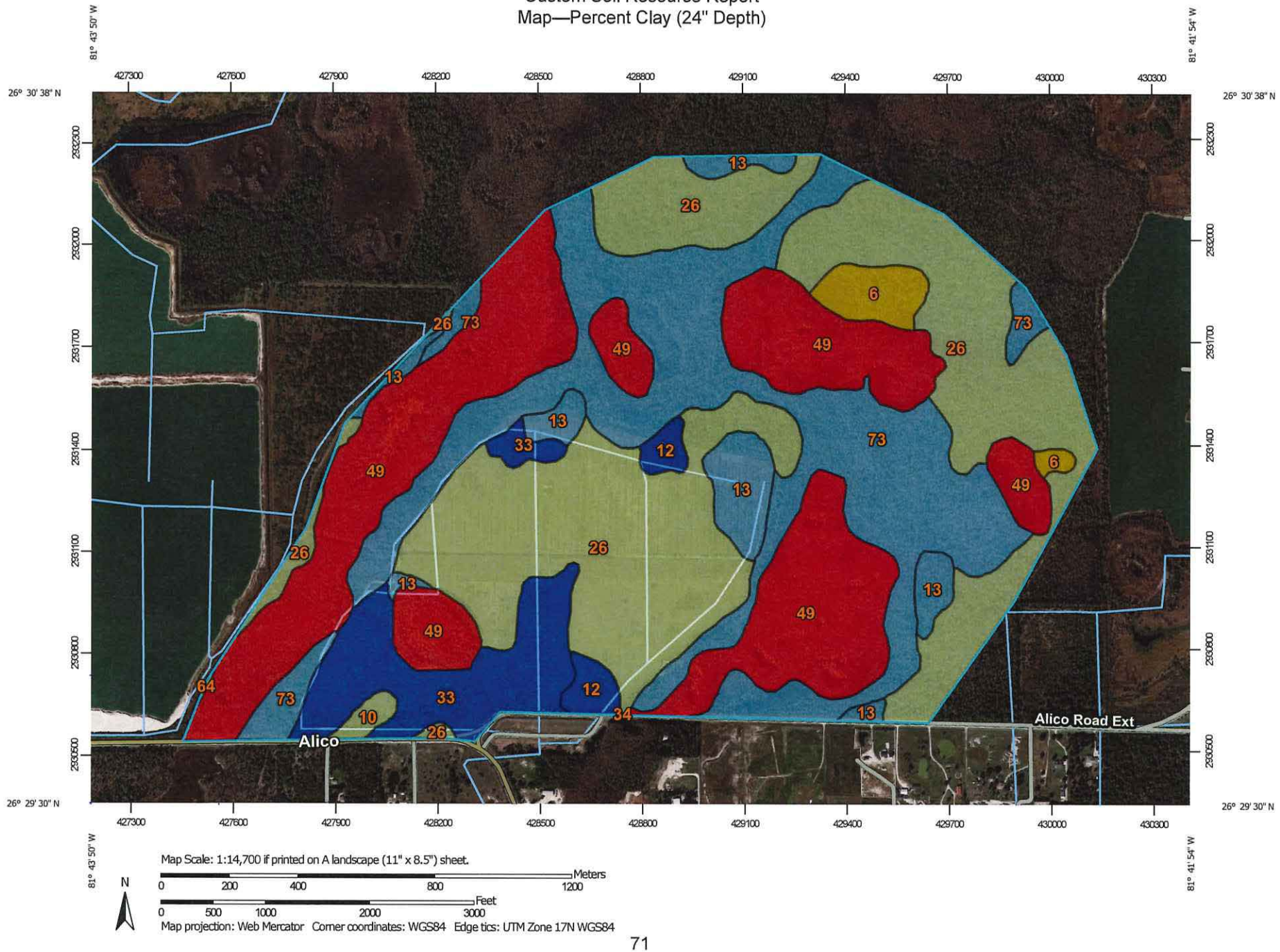
Percent Clay (24" Depth)

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Percent Clay (24" Depth)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 0.6
- > 0.6 and <= 0.9
- > 0.9 and <= 1.1
- > 1.1 and <= 1.4
- > 1.4 and <= 2.2
- Not rated or not available

Soil Rating Lines
- <= 0.6
- > 0.6 and <= 0.9
- > 0.9 and <= 1.1
- > 1.1 and <= 1.4
- > 1.4 and <= 2.2
- Not rated or not available

Soil Rating Points
- <= 0.6
- > 0.6 and <= 0.9
- > 0.9 and <= 1.1
- > 1.1 and <= 1.4
- > 1.4 and <= 2.2
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 20, Sep 1, 2022

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Table—Percent Clay (24" Depth)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	0.9	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	1.0	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	2.0	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	1.4	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	1.1	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	2.2	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	0.9	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	0.6	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	0.9	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	1.4	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Percent Clay (24" Depth)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 61

Units of Measure: Centimeters

Water Features

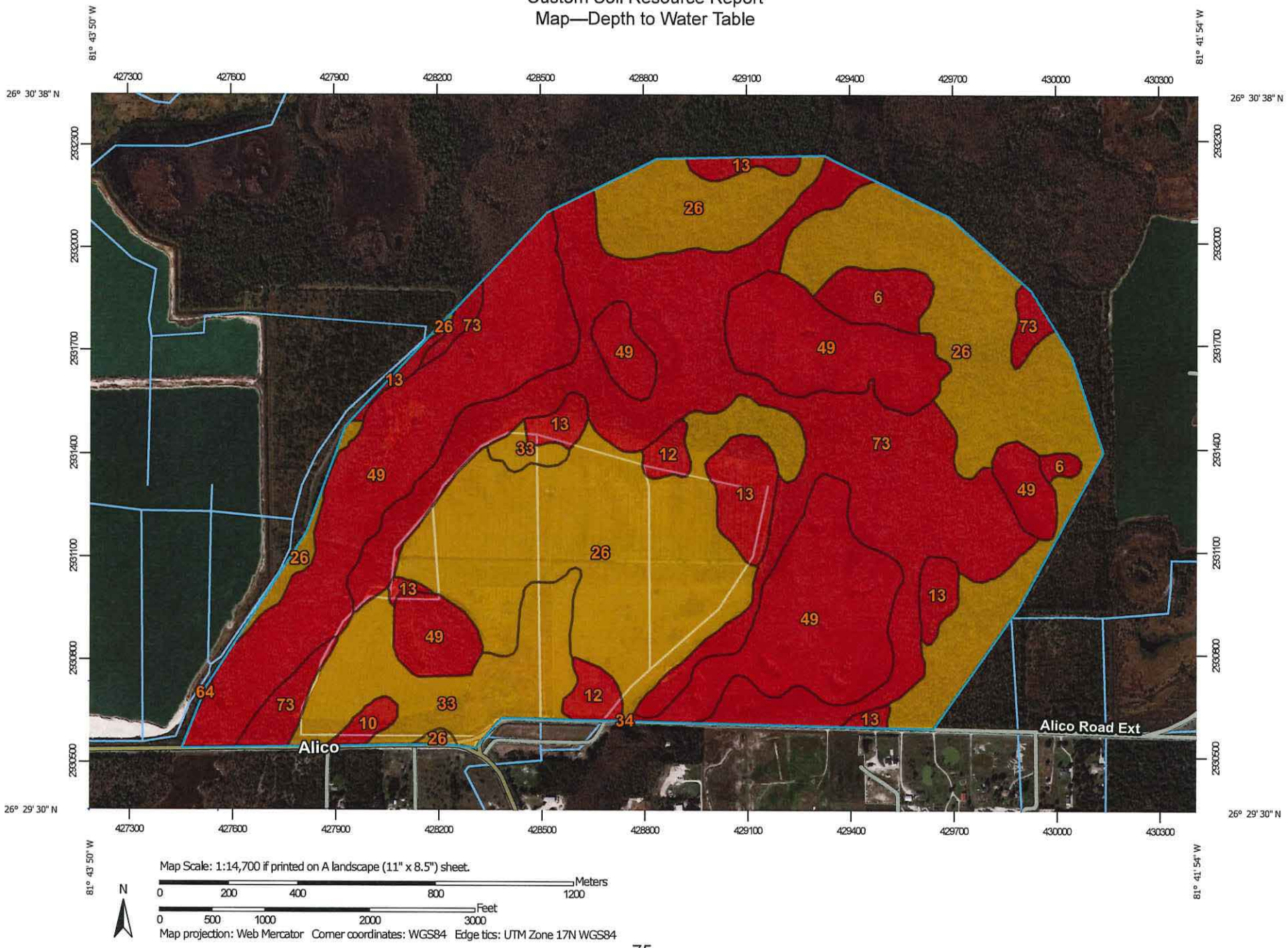
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Water Table



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lee County, Florida
Survey Area Data: Version 20, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2021—Nov 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
6	Brynwood fine sand, wet, 0 to 2 percent slopes	15	13.9	1.8%
10	Pompano fine sand, 0 to 2 percent slopes	15	3.6	0.5%
12	Felda fine sand, 0 to 2 percent slopes	15	9.7	1.2%
13	Cypress Lake fine sand, 0 to 2 percent slopes	15	32.3	4.1%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	30	266.9	33.9%
33	Oldsmar sand, 0 to 2 percent slopes	30	56.5	7.2%
34	Malabar fine sand, 0 to 2 percent slopes	15	0.0	0.0%
49	Felda fine sand, frequently ponded, 0 to 1 percent slopes	0	214.8	27.2%
64	Brynwood fine sand, wet-Urban land complex, 0 to 2 percent slopes	15	0.2	0.0%
73	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	0	190.3	24.1%
Totals for Area of Interest			**788.3**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

References

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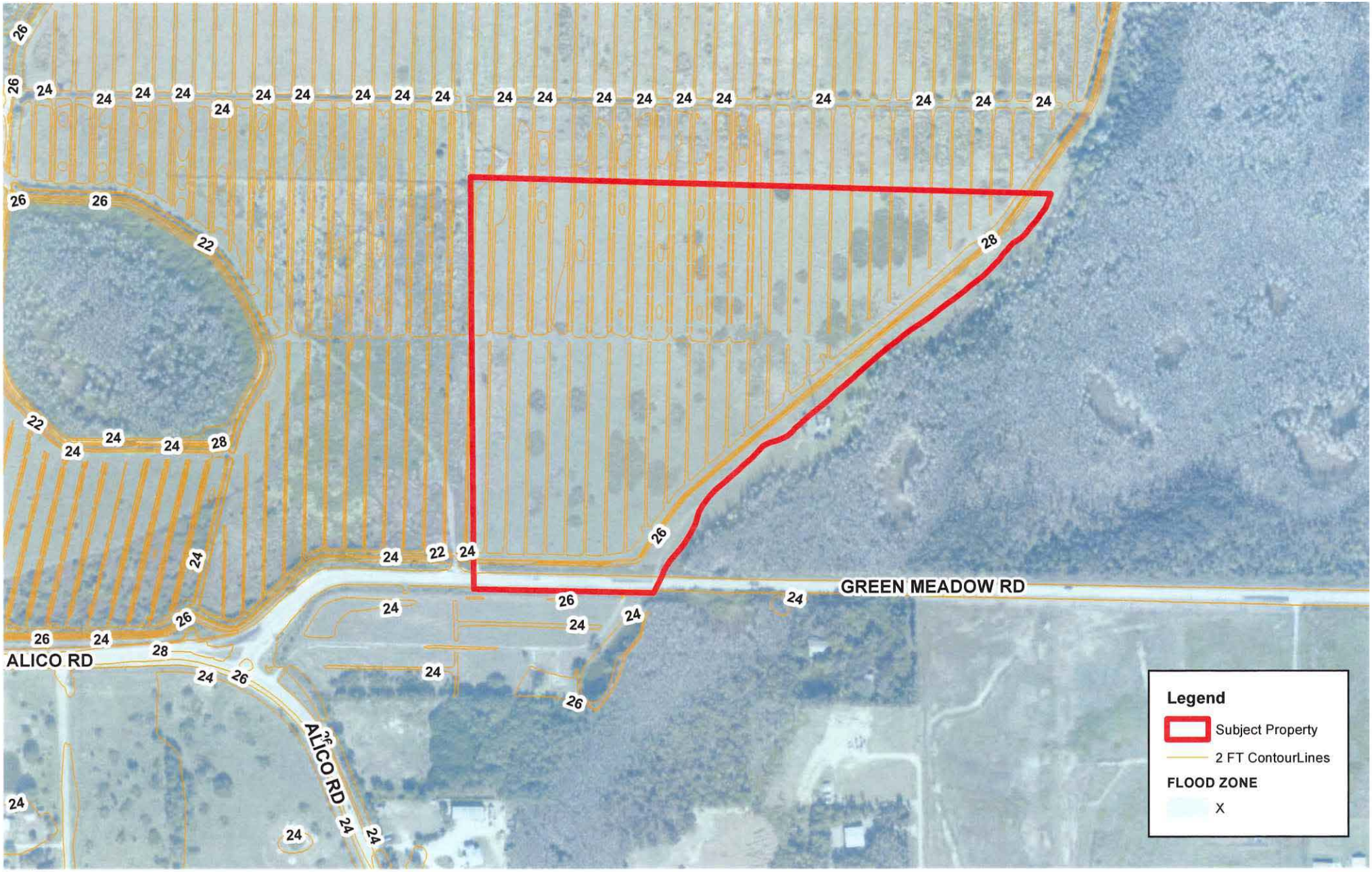
TOPOGRAPHIC MAP WITH 100- YEAR FLOOD PLAIN



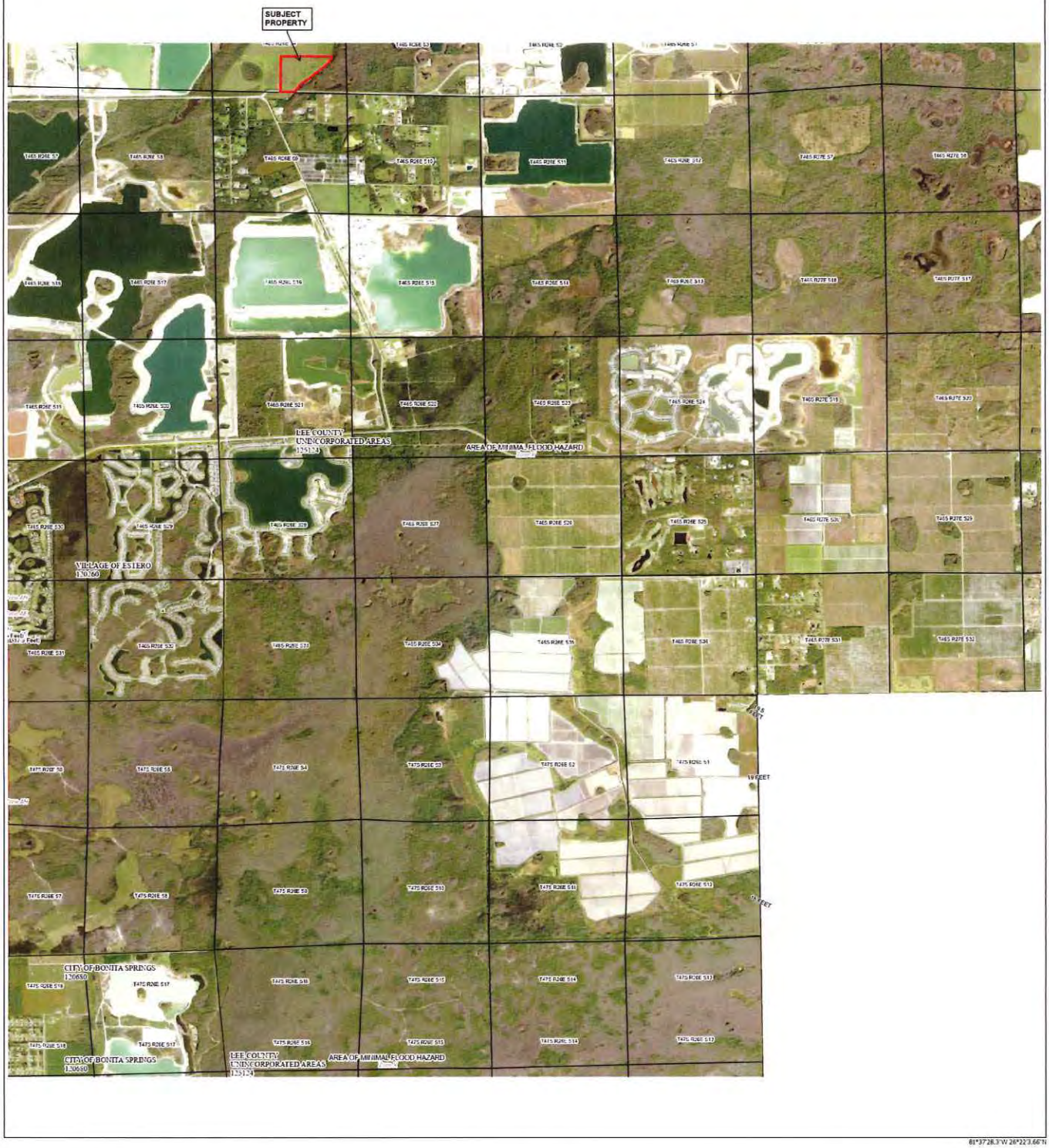
Southeast Advanced Water Reclamation Facility• **Topography and Flood Zone Map**

- Fort Myers, FL
- Date: 5/16/2023
- 22000368
- Lee County Utilities

RVi
28100 Bonita Grande Drive
Suite 305
Bonita Springs, Florida
34135
Tel: 239.405.7777

0 200 400
FEET

FLOOD INSURANCE MAP



81°37'28.3"W 26°22'3.66"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AH, AR, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 5/15/2023 4:53 PM, and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418.

This map complies with FEMA's standards for the use of digital flood maps if it is not voided as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: NAVD88

For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov.

1 inch = 2,000 feet 1:24,000

0 1,000 2,000 4,000 6,000 8,000 Feet

N

0 210 420 840 1,260 1,680 Meters

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

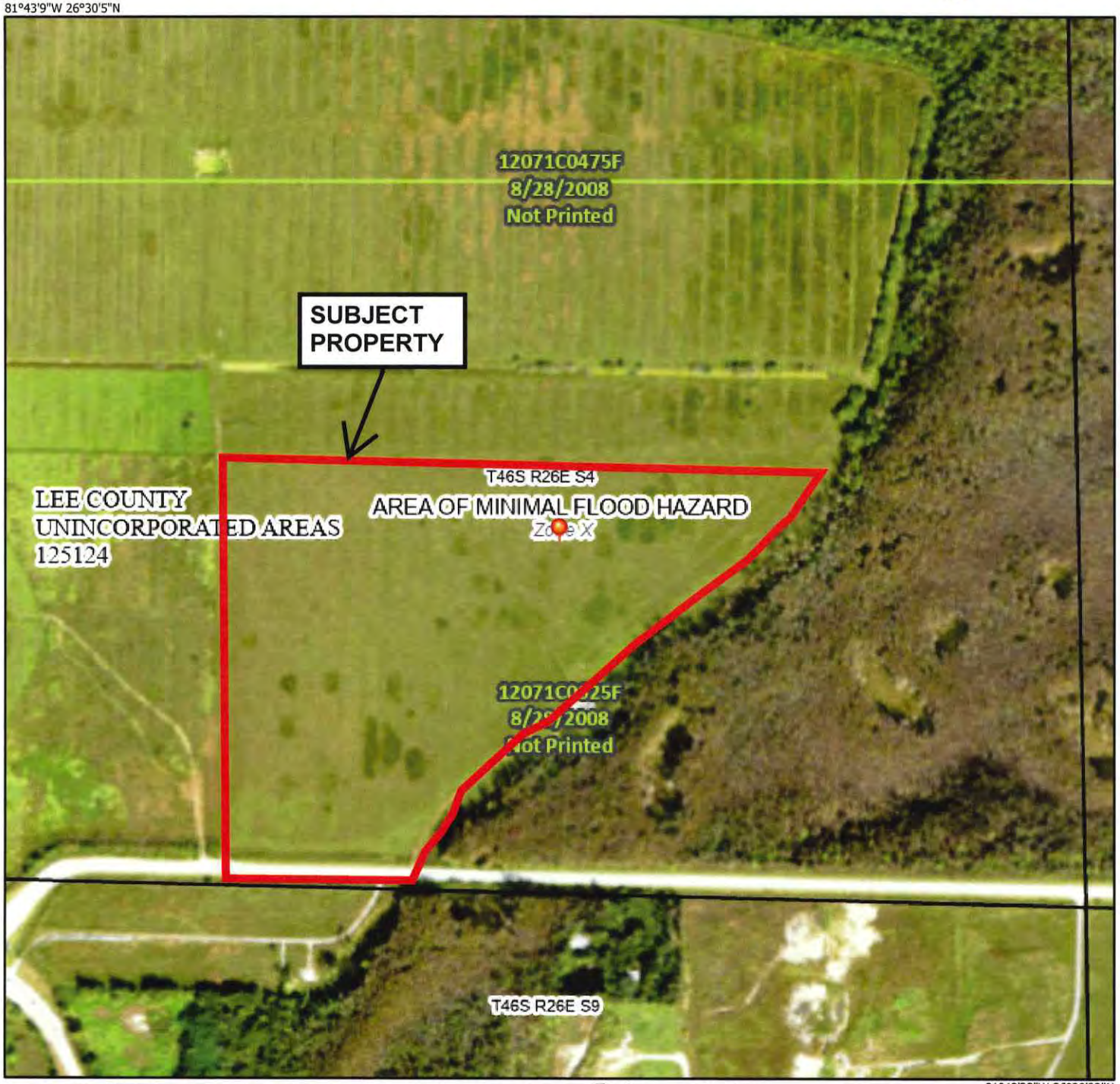
PANEL 625 OF 678

COMMUNITY	NUMBER	PANEL
LEE COUNTY	125124	0625
CITY OF BONITA SPRINGS	120680	0625
VILLAGE OF ESTERO	120060	0625
COLLIER COUNTY	120067	0625

MAP NUMBER
12071C0625F
EFFECTIVE DATE
August 28, 2008

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/16/2023 at 7:45 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

WATER QUALITY MONITORING PLAN

WATER QUALITY MONITORING PLAN

FOR

SOUTHEAST ADVANCED WATER RECLAMATION FACILITY

August 2023

Prepared for:

LEE COUNTY
SOUTHWEST FLORIDA

LEE COUNTY UTILITIES
1500 Monroe Street
Fort Myers, FL 33901

Prepared by:

JOHNSON
ENGINEERING

2122 Johnson Street
Fort Myers, Florida 33901
E B 642

20181232-000

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1.0 INTRODUCTION

Lee County is proposing to construct a new southeast advanced water reclamation facility (SEAWRF) to help serve existing and future wastewater flows in the southeast Lee County service area. The proposed site is on 112.2 acres of property located north of the intersection of Alico Road and Green Meadow Road in Lee County, Florida. The property contains a mix of uplands, wetlands, and ditches. The proposed SEAWRF will be constructed on the upland portion of the property. The eastern wetlands on the property will remain undeveloped. The project will include a deep injection well for effluent disposal. Monitoring of the injection well system will be carried out in accordance with all relevant legal requirements, as required by Florida Department of Environmental Protection (FDEP). This water quality management plan does not include monitoring for the deep well injection systems since the FDEP will oversee monitoring.

1.1 Purpose

This Water Quality Monitoring Plan is being initiated to monitor water level and water quality conditions at the project site. This plan includes sampling locations, frequency, reporting and evaluations of the water level and water quality within the SEAWRF project site. This Water Quality Monitoring Plan includes the following work elements:

- Locations of surface water and groundwater monitoring sites
- Water level monitoring plan
- Water quality monitoring plan
- Quality assurance measures
- Analysis and reporting
- Contingencies and corrective actions

1.2 Hydrology / Hydrogeology

The property's topography slopes generally from north to south or northeast to southwest, and this pattern directs the water flow in the same direction. The upland portion of the

site has undergone prior clearing and leveling to facilitate agricultural activities, including irrigated row crops and more recently, pastureland. Elevations in the upland area range from 24.0 to 24.5 feet NAVD 88.

Beneath the project site, three main aquifers contribute to the groundwater resources: the Surficial (water table), Intermediate (including Sandstone and Mid-Hawthorn), and the Floridian (including Lower Hawthorn and Suwannee) aquifers. The surficial and intermediate aquifers typically hold fresh groundwater with chloride concentrations generally below 250 milligrams per liter (mg/l), adhering to the secondary maximum contaminant level for drinking water. In general, the surface water and surficial aquifer flow of water is from the north to the south. The

2.0 MONITORING PLAN

2.1 Baseline Monitoring

Once the water monitoring stations are constructed, baseline water quality testing will be conducted. Pre-Construction background water quality samples will be collected from groundwater monitoring sites located at extreme opposites of the site, specifically in the northeast and southwest vicinity of the project area (refer to Figure 1 for station locations). The groundwater monitoring sites will be sampled a minimum 30 days prior to the start of construction. Additionally, the surface water outfall at the southwest corner of the property will undergo monitoring. The water sampling sites will be designated as follows:

- Northeast groundwater monitoring station
- Southwest groundwater monitoring station
- Southwest surface water outfall monitoring station

The wells will be constructed into the surficial aquifer. The wells will PVC screen wells with a screen depth from approximately 3 feet below natural ground to a depth of approximately 13 feet below natural ground or as determined by the site-specific geology to not penetrate a confining unit but maintain a water level within the well year-round.

The diameter of the wells will be no larger than 4-inches in diameter. The northeast groundwater monitoring station will serve mainly as a background monitoring site since it will be hydraulically upstream of the development. The surface water management lakes will be interconnected and flow towards the southwest lake prior to discharging offsite. The treatment of wastewater at the SEAWRF begins at the northwest portion of the site at the headworks where initial screening of the wastewater occurs. The final stage of treatment occurs at the eastern portion of the site where the effluent is chlorinated prior to storage within the aboveground storage tanks. A spill at the headworks or a wastewater force main break poses the greatest risk of an impact the surface water and therefore the groundwater monitoring and surface water outfall monitoring sites are appropriately sited to detect a contamination from the SEAWRF.

The parameters to be included in the monitoring process encompass temperature, pH, specific conductivity, nutrients, dissolved oxygen, chlorides, Chlorophyll a, and total dissolved solids. Reporting both groundwater and surface water will be required every 3 months.

Figure 1: Location of Monitoring Stations

2.2 Water Quality Monitoring

Annual reporting of water quality monitoring data is required and shall encompass a comprehensive report, including a comparison of state water quality standards, graphical representations of parameters, conclusive findings, and recommended actions. Additionally, the results must be submitted in a format approved by the Division of Natural Resources (LCDNR). The annual report will be based on the calendar year (January through December) and submitted within 90 days after lab results have been received for the final quarter sampling event.

Monitoring stations at SEAWRF will undergo quarterly sampling for selected laboratory analysis. After a period of five (5) years from the date of certification of construction of the stormwater management system, the applicant of its successor may request modifications to the Plan, subject to compliance with state water quality standards. Any request to reduce the frequency of surface monitoring will be subject to approval by the LCDNR.

Table 1: Water Monitoring Parameters

Water Monitoring Parameter	Minimum Detection Level (MDL)	Units	Monitoring Frequency
Ammonia as Nitrogen	0.014	mg/L	Quarterly
Background Specific Conductance	NA	µmhos/cm	Quarterly
Biochemical Oxygen Demand (BOD)	0.3	mg/L	Quarterly
Chlorophyll a (corrected for pheophytin)	0.5	mg/M3	Quarterly
Copper	1.0	µg/L	Quarterly
DO	0.1	mg/L	Quarterly
E. coli	1	MNP/100mL	Quarterly
Enterococci	1	MNP/100mL	Quarterly
Hardness	0.5	mg/L	Quarterly
Iron	0.4	mg/L	Quarterly
Nitrite + Nitrate as Nitrogen	0.01	mg/L	Quarterly
Orthophosphate	0.004	mg/L	Quarterly
pH	NA	unit	Quarterly
Specific Conductance	2	µmhos/cm	Quarterly
Temperature	NA	degree Celsius	Quarterly

Total Dissolved Solids	0.5	mg/L	Quarterly
Total Kjeldahl Nitrogen	0.05	mg/L	Quarterly
Total Nitrogen	0.05	mg/L	Quarterly
Total Phosphorus	0.006	mg/L	Quarterly
Total Suspended Solids (TSS)	6	mg/L	Quarterly
Turbidity	0.2	NTU	Quarterly
Water Table Elevation	NA	feet NAVD	Quarterly
Zinc	0.005	mg/L	Quarterly

2.3 Quality Assurance

Water samples will be collected and handled following protocols contained in FDEP Quality Assurance Rule F.A.C. 62-160 and adopted as the "Department of Environmental Protection Standard Operating Procedures for Field Activities DEP-SOP-001/01" effective 7/30/2014 (or most current). The samples will be collected from the monitor sites, and one field cleaned equipment blank will be taken during each sampling event for quality assurance purposes. Chain of custody forms and laboratory analysis reports will be provided to LCDNR in corresponding quarterly reports. To ensure accuracy, water samples will undergo testing by a certified laboratory under the National Environmental Laboratory Accreditation Program, using approved test methods and QA testing requirements (i.e., blanks, sample duplicates, surrogates, matrix spikes, etc.) as contained in F.A.C 62-160 QA Rules.

2.4 Data Analysis

The obtained laboratory analysis results for water samples will be promptly submitted to the LCDNR in a comma-delimited electronic format and/or other preferred format, within 30 days of receiving them from the laboratory. These results will then be compared to relevant target levels, if applicable, and parameters lacking numeric target levels will be assessed for trends. Comprehensive statistical analyses will be conducted on both surface water and groundwater laboratory results. As more data is accumulated, a 95% confidence interval and standard deviation values will be continually calculated and updated after each sampling event. In case any analytical result falls outside the 95% confidence interval, thorough assessment will be conducted to identify potential

anomalous data. Any variations due to seasonal factors will be considered, and the data will be segregated into seasonal sets. For each set, linear regression analysis will be conducted separately, following the above parameter.

2.5 Reporting

The Applicant will submit Quarterly Monitoring Reports to the LCDNR, providing water level and water quality data for each sampling event. Results of each quarterly water quality sampling will be shared with the LCDNR within 30 days. Data will be presented in LCDNR's comma-delimited electronic format and/or another preferred format. Reports will include cumulative results, conclusions, and recommendations. Any concerns regarding water level or water quality will be addressed in collaboration with the LCDNR for potential modifications to monitoring parameters, frequency, and reporting. The purpose of the quarterly reports is to provide a basic review of the data to date and determination if parameters of concern exist. The annual report will include the comprehensive complete data analysis.

3.0 CONTINGENCIES AND CORRECTIVE ACTIONS

If water level or water quality concerns are identified, whether through exceeding target levels or statistical trend analyses, immediate action will be taken within seven days. A thorough review and assessment of onsite and offsite activities and conditions will be conducted, and if necessary, additional samples will be collected. The LCDNR will be notified within 48 hours of any required corrective actions.

Moreover, a comprehensive notification process will be established to inform impacted residents and relevant authorities in case of any abnormality or exceedance of state water quality standards. The two most likely relevant authorities are the FDEP and the LCDNR. The FDEP will be notified using the FDEP website portal and instructions found at https://floridadep.gov/pollutionnotice. The LCDNR will be notified per the instruction at https://www.leegov.com/naturalresources/NPDES/cleanwaterviolations. All property owners within one mile will be notified be written letter via the United States Postal Service. Any other concerned citizens can be notified by the FDEP by subscribing to the FDEP's notification

system at https://prodenv.dep.state.fl.us/DepPNP/reports/addSubscriber. To address the possibility of contaminated water entering the water management system and its potential adverse impacts on surrounding areas and surface water systems, a contingency plan will be in place. The contingency plan will also cover leaching, treatment of contaminated stormwater, and corrective actions during major storm events. A preliminary contingency plan will be prepared, submitted, and approved by the LCDNR prior to the issuance of a Lee County Development Order Permit. The preliminary contingency plan will be updated and finalized based on the final design and construction of the SEAWRF and prior to certification of the Lee County Development Order Permit.

The Applicant will actively collaborate with the LCDNR to identify the root causes and explore potential modifications needed for monitoring parameters, frequency, and reporting to effectively address onsite concerns and activities. This collaborative approach will ensure prompt and effective responses to any identified issues.