



EXHIBIT - T1

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT - TEXT

Project Name: EEPCO Text Amendment

Project Description: Amend text of Policy 33.3.4 of the Lee Plan to establish criteria for stand-alone neighborhood commercial development and additional density within Tier 1 properties

State Review Process: State Coordinated Review Expedited State Review Small-Scale Text*

*Must be directly related to the implementation of small-scale map amendment as required by Florida Statutes.

APPLICANT – PLEASE NOTE:

A PRE-APPLICATION MEETING IS REQUIRED PRIOR TO THE SUBMITTAL OF THIS APPLICATION.

Submit 3 copies of the complete application and amendment support documentation, including maps, to the Lee County Department of Community Development.

Once staff has determined that 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, 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.

1. Name of Applicant: Verdana Land Investments, LLC
Address: 4954 Royal Gulf Circle
City, State, Zip: Fort Myers, FL 33966
Phone Number: _____ E-mail: _____

2. Name of Contact: Tina M. Ekblad, MPA, AICP, LEED AP o/b/o Morris-Depew Associates, Inc.
Address: 2914 Cleveland Ave
City, State, Zip: Fort Myers, FL 33901
Phone Number: 239-337-3993 E-mail: tekblad@m-da.com

3. Property Information: Provide an analysis of any property within Unincorporated Lee County that may be impacted by the proposed text amendment. Please see attached Exhibit – T5.

4a. Does the proposed change affect any of the following areas?

If located in one of the following areas, provide an analysis of the change to the affected area.

- Acquisition Area [Map 1 Page 4] Burnt Store Marina Village [Map 1 Page 2] Urban Infill and Redevelopment [Map 15]
 Agricultural Overlay [Map 30] Environmental Enhancement and Preservation Communities [Map 17] Urban Reserve Area [Map 1 Page 4]
 Airport Mitigation Lands [Map 3] Mixed Use Overlay [Map 1 Page 6] Water Dependent Overlay [Map 1 Page 2]
 Airport Noise Zone [Map 1 Page 5] Planning Communities Map [Map 1 Page 2] Private Recreational Facilities [Goal 16]

4b. Planning Communities/Community Plan Area Requirements

If located in one of the following planning communities/community plan areas, provide a meeting summary document of the required public informational session [Lee Plan Goal 17].

- N/A
- Bayshore [Goal 18]
- Boca Grande [Goal 19]
- Buckingham [Goal 20]
- Caloosahatchee Shores [Goal 21]
- Olga [Goal 22]
- Captiva [Goal 23]
- Greater Pine Island [Goal 24]
- Lehigh Acres [Goal 25]
- North Captiva [Goal 26]
- NE Lee County [Goal 27]
- Alva [Goal 28]
- North Olga [Goal 29]
- North Fort Myers [Goal 30]
- Page Park [Goal 31]
- San Carlos Island [Goal 32]
- Southeast Lee County [Goal 33]
- Tice [Goal 34]

Public Facilities Impacts

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

1. **Traffic Circulation Analysis:** Provide an analysis of the effect of the change on the Financially Feasible Transportation Plan/Map 3A (20-year horizon) and on the Capital Improvements Element (5-year horizon).
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

Environmental Impacts

Provide an overall analysis of potential environmental impacts (positive and negative).

Historic Resources Impacts

Provide an overall analysis of potential historic impacts (positive and negative).

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. This analysis should include an evaluation of all relevant policies under each goal and objective.
3. Describe how the proposal affects adjacent local governments and their comprehensive plans.
4. List State Policy Plan goals and policies, and Strategic Regional Policy Plan goals, strategies, 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.

SUBMITTAL REQUIREMENTS

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

MINIMUM SUBMITTAL ITEMS

<input checked="" type="checkbox"/>	Completed application (Exhibit – T1)
<input checked="" type="checkbox"/>	Filing Fee (Exhibit – T2)
<input checked="" type="checkbox"/>	Pre-Application Meeting (Exhibit – T3)
<input checked="" type="checkbox"/>	Proposed text changes (in strike through and underline format) (Exhibit – T4)
<input checked="" type="checkbox"/>	Analysis of impacts from proposed changes (Exhibit – T5)
<input checked="" type="checkbox"/>	Lee Plan Analysis (Exhibit – T6)
<input checked="" type="checkbox"/>	Environmental Impacts Analysis (Exhibit – T7)
<input checked="" type="checkbox"/>	Historic Resources Impacts Analysis (Exhibit – T8)
<input checked="" type="checkbox"/>	State Policy Plan Analysis (Exhibit – T9)
<input checked="" type="checkbox"/>	Strategic Regional Policy Plan Analysis (Exhibit – T10)

MORRIS

2891 Center Pointe Drive Unit 100 | Fort Myers, Florida 33916

DEPEW

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www.morris-depew.com

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LETTER OF AUTHORIZATION

TO WHOM IT MAY CONCERN:

PLEASE BE ADVISED THAT I, JOSEPH CAMERATTA (NAME) OF TPL-LAND-SUB, LLC (COMPANY) AM THE AUTHORIZED REPRESENTATIVE OF THE PROPERTY DESCRIBED BELOW AND THAT MORRIS-DEPEW ASSOCIATES, INC. HAS BEEN AUTHORIZED TO REPRESENT ME (US) FOR THE BELOW REFERENCED PARCEL(S) IN ALL MATTERS PERTAINING TO COMPREHENSIVE PLANNING, REZONING, OR DEVELOPMENT PERMITS. THIS AUTHORITY TO REPRESENT MY (OUR) INTEREST INCLUDES ANY AND ALL DOCUMENTS REQUIRED BY THE PLANNING, REZONING, OR PERMITTING REQUESTS SUBMITTED ON MY (OUR) BEHALF BY MORRIS-DEPEW ASSOCIATES, INC.

STRAP NUMBER OR LEGAL DESCRIPTION:

STRAP #: 30-46-27-00-00001.0000

OWNER NAME: JOSEPH CAMERATTA (AUTHORIZED MEMBER OF TPL-LAND-SUB, LLC)

SIGNATURE _____

STATE OF FLORIDA

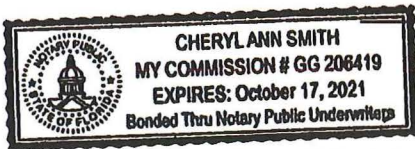
COUNTY OF Lee

The foregoing instrument was acknowledged before me this 6 day of June, 2019, by JOSEPH CAMERATTA, who is personally known to me or has produced _____ as identification and did not take an oath.

My Commission Expires:

Cheryl A. Smith
Notary Public

(Seal)



Notary Printed Name



Community Development/Public Works
www.leegov.com/econnect
Permitting Information Line 239-533-8329

Receipt # 1991144
Date Paid: 07/16/2019

Method	Payer	Check #/Auth #	Amount Paid
In Person Check	TPI-LAND-SUB LLC	1012	2,500.00

Property Address: 18500 CORKSCREW RD, ESTERO, FL 33928

Contractor:
License#

Case No.	Description	Amount Due	Amount Paid
CPA2019-00008	Text Amendment Flat Fee	2,500.00	2,500.00
Total Amount:		2,500.00	2,500.00



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Verdana Village

Text Amendment

Pre-Application Meeting (Exhibit – T3)

The proposed Text Amendment was discussed with Lee County Planning Staff on June 18, 2019 at 9:30 am.

A second meetings with Lee County Staff was held on June 25, 2019 at 3:30pm to discuss specific elements of the proposed Text Amendment and the concurrent Planned Development application.

Verdana Village Text Amendment

Commercial Uses & Residential in the EEPKO (Exhibit – T4)

POLICY 1.4.5: The Density Reduction/Groundwater Resource (DR/GR) 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 (except as provided in Policies 33.1.3 and 33.3.5) 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 may be submitted during the rezoning or development review processes.

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 density of one dwelling unit per ten acres (1 du/10 acres). See Policies 33.3.2, 33.3.3, and 33.3.4, ~~33.3.5 and 33.3.6~~ for potential density adjustments resulting from concentration or transfer of development rights.

a. For residential development, also see Objective 33.3 and following policies. Commercial and civic uses can be incorporated into Mixed-Use Communities, Environmental Enhancement and Preservation Communities, and rural Golf Course Communities that are depicted on Map 17 to the extent specifically provided in those policies.

Justification: The proposed text is to support the proposed amendment to permit commercial within the Tier 1 Properties that have been included in the EEPKO per Policy 33.3.4. Additional language (below) will appropriately limit the locations of neighborhood commercial to specific Tier 1 Properties.

b. Individual residential parcels may contain up to two acres of Wetlands without losing the right to have a dwelling unit, provided that no alterations are made to those wetland areas.

c. The Future Limerock Mining overlay (Map 14) identifies sufficient land near the traditional Alico Road industrial corridor for continued limerock mining to meet regional demands through the Lee Plan's planning horizon (currently 2030). See Objective 33.1 and following policies.

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 of the Lee Plan.

POLICY 6.1.2: Commercial development in non-urban future land use categories is limited to Minor Commercial except that:

- Neighborhood Commercial uses serving the Lee County Civic Center are permitted within one quarter mile of SR31 between North River Road and the Caloosahatchee River in the North Olga Community Planning Area ~~and Neighborhood Commercial~~ may be expanded to Community Commercial when approved as part of a planned development that is located at the intersection of two arterial roadways and has direct access to, or the ability to extend, existing water and sanitary sewer utilities.
- Neighborhood Commercial uses are permitted in the Southeast Lee County Planning Community as provided for in Objectives 13.3 and 33.3.

Minor Commercial development may include limited commercial uses serving rural areas and agricultural needs, and commercial marinas. Minor Commercial development must be located so that the retail use, including buildings and outdoor sales area, is located at the intersection (within 330 feet of the adjoining rights-of-way of the intersecting roads) of arterial and collector roads or two collector roads with direct access to both intersecting roads. Direct access may be achieved with an internal access road to either intersecting roads. On islands, without an intersecting network of collector and arterial roads, commercial development may be located at the intersection of local and collector, or local and arterial, or collector and collector roads.

Justification: This text amendment is proposed to exempt neighborhood commercial uses within Tier 1 Properties included in the EEPC Overlay per Policy 33.3.4 from the non-urban FLU limitation. It is expected that the remaining commercial policies of Goal 6 would apply to property within the EEPCO as discussed in the Lee Plan Consistency Analysis. Additional language (below) limits the location of neighborhood commercial to specific Tier 1 Properties.

POLICY 33.3.2: Map 17 identifies future locations for Mixed-Use Communities where development rights can be concentrated from large Southeast Lee County tracts into Traditional Neighborhood Developments. The preferred pattern for residential development is to cluster density within Mixed-Use Communities along existing roads and away from Future Limerock Mining areas.

1. Southeast Lee County Mixed-Use Communities must be concentrated from contiguous property owned under single ownership or control. Residential density is calculated from the upland and wetland acreage of the entire contiguous Southeast Lee County property. Increases in residential densities may be approved through incentives as specified in the LDC for permanent protection of indigenous native uplands on the contiguous tract (up to one extra dwelling unit allowed for each five acres of preserved or restored indigenous native uplands) and through the acquisition of TDUs from TDR sending areas within Southeast Lee County as provided in Objective 33.4.
 - a. The maximum gross density is 5 dwelling units per acre of total land designated as a Mixed-Use Community when TDUs are used.
 - b. Properties that concentrate development rights and/or use TDUs created from Southeast Lee County within the Mixed-Use Communities identified on Map 17 will be allowed to develop using permitted uses and the property development regulations for the C-2A zoning district.
 - ~~c. Additional intensity created using TDUs may not exceed 300,000 square feet of nonresidential floor area for the entire Mixed-Use Community.~~
2. Contiguous property under the same ownership may be developed as part of a Mixed-Use Community provided it does not extend more than 400 feet beyond the perimeter of the Mixed-Use Community as designated on Map 17.
3. Central water and wastewater services are required to develop a Mixed-Use Community.
4. Commercial uses developed a part of a Mixed-Use Community will be consistent with Policy 33.3.5 and will not exceed the allowable total square footage for commercial uses in Southeast Lee County.

Justification: Within the Southeast Lee County Planning Community, the proposed text would maintain the current maximum of 300,000 square feet of nonresidential floor area and permit this maximum commercial square footage to be developed through the various approved overlays.

POLICY 33.3.4: Lands that provide a significant regional hydrological and wildlife connection have the potential to improve, preserve, and restore regional surface and groundwater resources and indigenous wildlife habitats. These lands, located along Corkscrew and Alico Roads, can provide important hydrological connections to the Flint Pen Strand and the Stewart Cypress Slough as well as important wildlife habitat connections between existing CREW and Lee County properties. As an incentive to improve, preserve, and restore regional surface and groundwater resources and wildlife habitat of state and federally listed species additional densities and accessory

commercial uses ~~will~~ may be granted if the project is found consistent with and demonstrates through a planned development rezoning the following:

Justification: Removing the term “accessory” expands the types of commercial uses which may be implemented in Southeast Lee County. Additional text revisions later in the Policy identify the locations where commercial could be located within the EEPKO and limits the type of commercial that may be permitted. This language allows accessory commercial uses to still be permitted within the residential development to ensure existing approvals are still consistent with this policy.

1. These lands are within the “Environmental Enhancement and Preservation Communities” overlay as designated on Map 17 of the Plan. Lands eligible for designation on the Environmental Enhancement and Preservation Communities overlay must be consistent with the criteria below:

- Provide significant regional hydrological and wildlife connections and have the potential to improve, preserve, and restore regional surface and groundwater resources and indigenous wildlife habitats; and
- Be located west of Lee County 20/20 Imperial Marsh Preserve (Corkscrew Tract) and within one mile north or south of Corkscrew Road. Properties with frontage on Corkscrew Road designated as Tier 1 Priority Restoration Area may extend the overlay an additional mile south to include contiguous Tier 1 properties where the extension will result in regional environmental benefits by connecting protected habitat north of Corkscrew Road to land in Collier County used for conservation purposes; or,
- Be located west of the intersection of Alico Road and Corkscrew Road, north of Corkscrew Road and south of Alico Road.

2. The property is rezoned to a planned development that meets the following:

a. Planned development must include a minimum of 60 percent open space, not including previously mined lakes, which will be used to accommodate the following:

1. Restore and accommodate existing and historic regional flowways where they currently or previously existed;
2. Restore and accommodate existing and historic groundwater levels;
3. Restore and preserve wetlands;
4. Restore and preserve indigenous upland habitats;
5. Provide critical wildlife connections to adjacent conservation areas; and
6. Provide 100’ foot buffer along Corkscrew Road East of Alico Road.

b. Includes an enhanced lake management plan, that:

1. Applies best management practices for fertilizers and pesticides;
2. Provides erosion control and bank stabilization; and
3. Establishes lake maintenance requirements.

c. Develop a site specific ecological and hydrological restoration plan which includes at a minimum the following: preliminary excavation and grading plans, analysis of hydrological improvements and water budget narrative, replanting plan, habitat restoration plan, success criteria, long term monitoring and maintenance.

- d. Preservation areas must be platted in separate tracts and dedicated to an appropriate maintenance entity. For projects larger than 1,000 acres a Community Development District (CDD) or a master home owners association must be created that will accept responsibility for perpetually maintaining the preservation requirements identified in the planned development, prior to issuance of certificate of compliance (CC) for first local development order.
 - e. Record a Conservation Easement for a minimum of 55 percent of the planned development, not including previously mined lakes, to be dedicated to the appropriate maintenance entity that provides Lee County, or some other public agency acceptable to Lee County, with third party enforcement rights. All Conservation Easements required as part of the planned development must be recorded within 5 years from first development order approval.
 - f. Indigenous management plans must address human-wildlife coexistence.
 - g. Uses Florida Friendly Plantings with low irrigation requirements in Common Elements.
 - h. The stormwater management system must demonstrate through design or other means that water leaving the development meets state and federal water quality standards. The developer must obtain authorization from the Division of Natural Resources prior to discharge of stormwater from the development into the county's MS4 system directly or indirectly.
 - i. ~~Elimination of any agricultural uses, including the use of irrigation and fertilizers (or other chemicals) for agricultural purposes,~~ must be entirely eliminated at time of first development order approval for row crops and no later than 5 years from first development order approval for citrus groves. If cessation of citrus groves is to be phased, a phasing plan provided at the time of zoning must demonstrate regional environmental benefits, including but not limited to regional or historic surface water and wildlife connections, occurring with the first phase of development.
- Justification: The amendment is proposed to clarify that agricultural uses will cease at the time of first DO or within 5 years if a phasing plan is provided. Upon the cessation of the agricultural uses, the conservation easement for the restoration areas shall be recorded. Restoration work may continue within the area under easement. The applicant has provided a phasing plan as part of the Indigenous Habitat Management Plan included in the MPD zoning, DCI2019-0018 to demonstrate consistency with this policy.***
- j. Protects public wells through compliance with the requirements of the Well Field Protection Ordinance.
 - k. Each planned development within the Overlay will be required to mitigate the traffic impacts of the planned development and provide its proportionate share of the needed roadway improvements in accordance with Administrative Code 13-16. The proportionate share amount can be offset, in accordance with AC13-16, by the dedication of needed right of way or the construction of improvements that would measurably lessen the need for roadway improvements, or by payment of impact fees, or use of impact fee credits, or as otherwise set forth in a written agreement between Lee County and the Developer. Prior to a final determination of a Project's

proportionate share amount, compliance may be met through an enforceable instrument that obligates the property owners within a planned development to pay the Project's proportionate share, with said instrument being recorded prior to the issuance of any development order. For the developments known as WildBlue (CPA2014-00004) and Corkscrew Farms (CPA2015-01) if the instrument is recorded prior to the final determination of the proportionate share amount, the proportionate share payment may not exceed \$1,600 per unit above the road impact fee amount.

- l. Connect to public water and sewer service. Connect to reuse water if available at time of development order approval.
- m. Obtain written verification as to adequate public services for the planned development, from the sheriff, EMS, fire district, and Lee County School District.
- n. Demonstrate that the planned development will not result in significant detrimental impacts on present or future water resources.

3. In recognition of the preservation, enhancement, and protection of regional flowways and natural habitat corridors, the interconnection with existing off-site conservation areas, and the significant enhancement, preservation and protection of these lands, additional density may be approved through planned developments meeting the criteria and requirements outlined above as follows:

- a. Tier 1 lands within the Priority Restoration Strategy will be permitted a maximum density of 1 unit per acre.
- b. Tier 2 lands within the Priority Restoration Strategy will be permitted a maximum density of 1 unit per 2 acres.
- c. Other lands within the Environmental Enhancement and Preservation Overlay, outside of Tier 1 and Tier 2, meeting the requirements above will be permitted a maximum density of 1 unit per 3 acres.
- d. Density in the Environmental Enhancement and Preservation Overlay will be based upon the acreage of the entire planned development (i.e. all areas within the boundary of the planned development whether uplands, wetlands, or lakes).
- e. Additional dwelling units may be approved in the planned development by using any combination of the following: ~~meeting the requirements in subsection 2 of this Policy if transferred~~

1) Utilize the Southeast Lee County TDR program to transfer dwelling units from other Southeast Lee County lands located outside of the planned development pursuant to Policy 33.4.2. at the standard density of 1 unit per 10 acres for DR/GR lands and 1 unit per 20 acres for Wetlands future land use category if density rights are extinguished through an instrument acceptable to the County Attorney's Office. Dwelling units transferred from other Southeast Lee County lands will be counted against the 2,000 dwelling unit limitation for Southeast Lee County receiving parcels identified in the Southeast Lee County TDR program.

2) Provide all of the following as part of the planned development for a density increase of up to 15 percent:

- i. A minimum of 65 percent open space, not including previously mined lakes;
- ii. Significant regional hydrological connections that further Lee County's flood mitigation and flowway restoration efforts by providing:
 - a. Physical surface water connections to allow surface water to flow to and from adjacent properties and off-site flowways (to be considered site-related improvements); and
 - b. Enhanced on-site surface water storage and flood attenuation

4. Commercial uses may be approved as part of a mixed use planned development if the project is found consistent with all of the following:

- a. The project is a minimum of 2,000 acres;
- b. The project consists of both residential and commercial development and meets the minimum requirements of this policy;
- c. Wetlands may not be impacted by the commercial development area;
- d. The project will be consistent with Policy 33.3.5 and will not exceed the allowable total square footage for commercial uses in Southeast Lee County;
- e. Commercial uses and maximum floor area is limited to Neighborhood Commercial, as defined, and must not include any of the following uses: auto parts stores, lawn and garden supply stores, fuel pump stations, drycleaners (on-site), or any other use that is not compatible with protecting Southeast Lee County's environment.
- f. Commercial development within the 6-month, 1-year, 5-year, or 10-year travel zones of the Wellfield Protection Ordinance must provide a total of 1.5" of treatment, ½ -inch of which must be completed via dry pretreatment, at a minimum. The entire commercial portion of the project will be considered to be within the most restrictive wellfield protection zone as provided in the Wellfield Protection Ordinance. Ground water quality monitoring well(s) for the unconfined Surficial Aquifer System must be provided and located between Lee County's nearest production well(s) and the commercial development.
- g. The human wildlife coexistence plan required by subsection 2.f. of this policy must include a commercial component that at a minimum provides for bear-proof refuse containers, below ground grease traps, and prevents light spillage onto adjacent preserve areas.

Justification: This proposed additional text would require all of the elements of item #2 above to be provided in addition to additional information for large projects that desire additional density and/or commercial intensity.

The proposed text begins by requiring 2 criteria that must be met:

- 1. Project Acreage above 2,000 AC***
- 2. Zoning request submitted as part of a Mixed Use Planned Development***

Establishing the 2,000-acre baseline ensures the project has adequate land area to support the proposed uses as well as the additional enhancements.

The proposed text then establishes additional information that must be provided to support a request for additional residential density and neighborhood commercial uses.

- ***Commercial Location – the location of the Neighborhood Commercial as demonstrated on the Master Concept Plan may not impact any existing on-site indigenous habitat and be designed such that the impervious area does not exceed 65%.***
- ***Open Space & Area of Conservation – must provide additional open space and area under conservation easement***
- ***Restoration Plan – must provide the general location of interconnections between off-site conservation areas and proposed on-site flowways thereby ensuring interconnectivity is maintained. The plan must also demonstrate the design of the restored flowways can accommodate the volume of water associated with two (2) 100-year, 3-day sequential storm events occurring 15 days apart as occurred in 2017 with Invest 92L and hurricane Irma, and providing capacity for future off-site flows anticipated from a master Lee County regional flood mitigation study and increase the length of time surface water is retained within the flowways. The proposed design is well above what would be provided under the existing EEPKO. Constructing the language in this manner ensures that the additional storage is incorporated into the on-site flowways, a natural system promoting consistency with other policies of the Lee Plan.***
- ***Human Wildlife Coexistence Plan – additional details must be included in the required human wildlife coexistence plan to address neighborhood commercial uses if requested. This includes the disposal of commercial trash, grease traps, etc. promoting consistency with other policies of the Lee Plan.***
- ***Commercial Uses – the schedule of uses provided for the commercial development area must demonstrate consistency with the Wellfield Protection Ordinance.***

This text amendment is proposed to support the Verdana Village MPD, which combines the existing Pepperland Ranch and Verdana Planned Developments with the pending CAM40 Comprehensive Plan Amendment with a combined acreage of 2,138 acres. The 15% additional density would permit an additional 320 dwelling units on the property for a total maximum of 2,458, however the MPD application will limit the total density to 2,400 dwelling units. The Neighborhood Commercial would permit a maximum of 100,000 square feet of commercial uses.

Project	Approved	Proposed	Notes
	Dwelling Units	Dwelling Units	
Pepperland	638		Approved per Z-17-013
Verdana	1,460		Approved per Z-18-010
CAM40		40	Pending CPA Amendment
SubTotal	2,098	2,138	
15% Density		320.7	Proposed Text Amendment
TOTAL		2,458.7	Limited to 2,400 per Verdana Village MPD

Policy 33.3.5: Commercial uses may only be permitted if incorporated into a Mixed-Use Community, Environmental Enhancement and Preservation Community, or Rural Golf Course Community depicted on Map 17. The maximum commercial floor area that may be approved within the Southeast Lee County community plan area may not exceed 300,000 square feet.

Justification: This proposed language would maintain consistency with the proposed text changes throughout the application and the existing Lee Plan. This policy maintains the existing maximum commercial threshold of 300,000 square feet and establishes this maximum cannot be exceeded in Southeast Lee County but permits commercial uses within multiple overlays existing within Southeast Lee County to promote clustered development.

Policy 33.4.2: The Southeast Lee County TDR program will have the following characteristics:

1. Creation of Transferable Development Units (TDUs)
 - a. Up to one (1) TDU may be created per twenty (20) acres of preserved or indigenous wetlands.
 - b. Up to two (2) TDUs may be created from a single-family lot or parcel designated as wetlands that holds an affirmative Minimum Use Determination pursuant to Chapter XIII of the Lee Plan,
 - c. TDU credits may be established DR/GR designated as follows:
 - 1) Up to one TDU may be created for each ten upland acres encumbered by an agricultural easement that meets the requirements of section.
 - 2) Up to one TDU may be created for each 5 upland acres with indigenous native or restored vegetation encumbered by a conservation easement.
 - 3) For each TDU credit allowed by c(1) or c(2) above, up to two extra TDU credits may be created if the sending area land is designated as Tier 1, Tier 2, Tier 3, or the southerly two miles of Tier 5, 6 and 7 in the Priority Restoration Strategy (Lee Plan Map 1, Page 4).
2. Receiving area density and intensity equivalents of Southeast Lee County TDUs.
 - a. In Mixed-Use Communities in Southeast Lee County identified on Lee Plan Map 17, each Southeast Lee County TDU credit may be redeemed for a maximum of

- one (1) dwelling unit plus a maximum of 800 square feet of non-residential floor area.
- b. In Improved Residential Communities in Southeast Lee County identified on Lee Plan Map 17, each Southeast Lee County TDU credit may be redeemed for a maximum of one (1) dwelling unit.
 - c. In Rural Golf Course Communities in Southeast Lee County identified on Lee Plan Map 17, each Southeast Lee County TDU credit may be redeemed for a maximum of one (1) dwelling unit or two bed and breakfast bedrooms.
 - d. In Environmental Enhancement and Preservation Communities identified on Map 17, each Southeast Lee County TDU credit may be redeemed for a maximum of one (1) dwelling unit per 10 acres using credits from DR/GR sending areas and a maximum of one (1) dwelling unit per 20 acres using credits from wetland sending areas.
 - e. No more than 2,000 dwelling units may be placed on receiving parcels identified in subsections a. through de. above using the Southeast Lee County TDR program.
 - f. In the Intensive Development, Central Urban, Urban Community, or General Interchange future land use categories outside of Southeast Lee County, each Southeast Lee County TDU may be redeemed for up to two (2) dwelling units. Southeast Lee County TDUs may not be redeemed for non-residential floor area in these future urban areas.
 - g. Wetland TDUs may not be used to increase commercial intensity
3. The Land Development Code may include regulations that permit the county to evaluate the effectiveness of the Southeast Lee County TDR program and make changes that may further condition or restrict the use of Southeast Lee County TDUs.

Justification: The proposed text amendment establishes the Environmental Enhancement and Preservation Communities as a receiving area for TDUs. This is a relocation from existing Policy 33.3.4.

Future Non-Urban Areas – Those categories on the Future Land Use Map that are designated primarily for single use development with a density equal to or less than 1 unit per acres unless otherwise allowed within a special treatment area identified in Objective 1.7: Rural, Rural Community Preserve, Coastal Rural, Outer Island, Open Lands, Wetlands, Conservation Lands (upland and wetland), New Community within the North Olga Planning Community and Density Reduction/Groundwater Resource.

Justification: The proposed text amendment is specifically included to enable the 15% density increase for Tier 1 projects within the EEPKO that exceed 2,000 acres and can provide an on-site flowway restoration plan that meets two (2) 100 year, 3-day, sequential storm events occurring 15-days apart as occurred in 2017 with Invest 92L and hurricane Irma, and providing capacity for future off-site flows anticipated from a master Lee County regional flood mitigation study for surface water storage. However, Special Treatment Areas in general have

specific criteria that must be met for density to be achieved, which should be evaluated in addition to the underlying Future Land Use category.

Verdana Village

Commercial Uses & Residential in the EEP Project Narrative & Impact Analysis (Exhibit – T5)

I. Introduction

On August 5, 2015 the Lee County Board of County Commissioners adopted Ordinance 15-13, allowing for the creation of Policy 33.3.4 of the Lee Plan which describes the Environmental Enhancement and Preservation Communities Overlay (EEPCO) within the Density Reduction/Groundwater Resource Overlay (DR/GR). The EEP identifies properties which have the potential to restore important hydrological functions and wildlife connections. There are four (4) properties within the EEP which have zoning approvals; WildBlue, The Place, Pepperland Ranch, and Verdana. WildBlue is not a tiered property within the County's Priority Restoration Overlay, however, The Place, Pepperland Ranch and Verdana represent the three (3) remaining Tier 1 properties within the EEP, which individually are all under 2,000 acres and would not be eligible for the proposed text amendment.

The DR/GR is a future land use designation that was assigned to an area spanning approximately 82,560 acres in the southeast portion of Lee County. The adoption of this land use category was the result of direction from the Department of Economic Opportunity (at the time, Department of Community Affairs) to direct growth to areas where development and infrastructure were already in place as well as to implement a water management strategy in Lee County. The DR/GR future land use category limits residential development to one (1) unit per 10 acres and the Wetlands future land use category, which permeates throughout the DR/GR, limits residential development to one (1) unit per 20 acres. These two categories are the underlying FLU categories for the properties within the Tier 1 Priority Restoration Overlay. The EEP establishes additional densities available to properties with development criteria that promotes environmental preservation and restoration consistent with underlying goals of the DR/GR and Wetlands FLU.

A text amendment to Policy 33.3.4 of the Lee Plan is being proposed to allow for a maximum of 100,000 square feet of Neighborhood Commercial uses, as well as add an incentive to increase density by 15% for properties over 2,000 acres, designated as Tier 1 in Lee Plan Map 1 Page 4 of 7, and within the EEP. Additional design criteria related to vehicular access and enhanced surface water storage capacity are proposed for large acre properties that request neighborhood commercial and the density increase via the required planned development process. The existing criteria regarding clustered development and the preservation/restoration of natural resources are not proposed to be amended by this application.

II. Affected Areas

The EEP, east of Alico Road, is only available to Tier 1 properties within the Southeast Lee County Planning Community. The proposed text amendment would retain this restriction and

incorporate additional criteria that **only** properties over 2,000 acres are eligible for the additional benefits proposed. The EEPCO requires a planned development to establish the additional density and the proposed text amendment would continue to utilize this entitlement strategy. Currently all of the Tier 1 properties (The Place, Verdana and Pepperland Ranch) within the EEPCO have been rezoned to a planned development zoning district. However, none of the existing planned developments are eligible for the proposed Neighborhood Commercial uses or additional 15% residential density as they do not have the required 2,000 acres.

A map amendment is proposed and was recently transmitted to the state, CPA2019-00005 known as the CAM40 parcel, it expanded the EEPCO to include a 40 acre parcel between Pepperland Ranch and Verdana. This parcel individually is not eligible for the additional density or neighborhood commercial proposed as part of the text amendment. This parcel also has not been previously zoned to a planned development district.

The proposed text amendment has established a large acreage requirement specifically to necessitate the combination of 2 existing planned developments, Pepperland Ranch and Verdana, and the CAM40 parcel into a single planned development. The Verdana Village MPD is consistent with the proposed text amendment and was filed with Lee County in July of 2019.

It should be noted that while the existing planned developments are not eligible for the proposed neighborhood commercial, the approved units do contribute to the need for Neighborhood Commercial in this area of Lee County. Additional minor text amendments are proposed to other policies and the definitions to promote consistency with the intent of the amendment to policy 33.3.4. The following projects are currently approved by Planned Development within the EEPCO as Tier 1 properties.

a. The Place

The Place consists of **1,361 acres** and is zoned Residential Planned Development (RPD) per Z-15-025. The zoning approval allows for 1,325 dwelling units and 50,000 square feet of total building floor area in the Clubhouse/Amenity/Mail Kiosk area. The density in The Place is approximately .97 units per acre. The Schedule of Uses allows for an assortment of commercial uses as accessories to the clubhouse/amenity areas such as offices, food stores, health clubs/spas, restaurants, and specialty retail.

b. Pepperland Ranch

Pepperland Ranch consists of **637.5 acres** and is zoned Residential Planned Development (RPD) per Z-17-013. The zoning approval allows for 700 dwelling units and a 50,000 square foot amenity site, of which a maximum of 17,500 square feet can be utilized as accessory commercial floor area, consistent with LDC 34-935(2). The density in Pepperland Ranch is approximately 1.1 units per acre. The Schedule of Uses allows for an assortment of commercial uses within the Amenity Center Tract including offices, banks, dry cleaning, specialty retail, restaurants.

c. Verdana

Verdana consists of **1,460 acres** and is zoned Mixed Use Planned Development (MPD) per Z-18-010. The zoning approval allows for 1,460 dwelling units and 30,000 square feet of accessory commercial uses as well as 22 acres of amenity areas. The density in Verdana is 1 unit per acre. The Schedule of Uses allows for an assortment of commercial uses within the two (2) Recreational Facility/Clubhouse parcels. The Commercial parcel allows for commercial uses that are accessory to residential uses such as banks, day cares, restaurants, pharmacies, and specialty retail.

The three (3) properties allow for a total of 3,485 dwelling units along Corkscrew Road within the Southeast Lee Planning Community. Per 2018 US Census data, the average American household is expected to have an average of 2.53 people per household.¹ At this rate, the population within the Tier 1 EEPCO properties would be approximately 8,817 people at build out of the approved communities. This does not include the other estate residential neighborhoods along Corkscrew Road developed consistent with the underlying DR/GR FLU category. To service a residential corridor of that magnitude, the corridor's long-range resiliency should be considered. Smart growth practices would allow for commercial uses to service that population without adding significant vehicle miles traveled to the already constrained Corkscrew Road, ultimately "internalizing" movement within the corridor. A modest request for Neighborhood Commercial uses to service a population that is similar in size to the City of Sanibel and in a proximity of 3.2 miles will have a positive impact on the surrounding residential properties and Corkscrew Road. The proposed text amendment has been developed to require Neighborhood Commercial uses to share access from Corkscrew Road with residential uses. This connects the two (2) uses spatially and lessens any impacts external to the development, specifically it reduces the number of trips being taken on Corkscrew Road from the residential communities to the proposed commercial uses. Currently, the closest area featuring Neighborhood Commercial uses which may service residents of The Place, Pepperland Ranch, and Verdana is at the Corkscrew Road/I-75 Interchange which is approximately seven (7) miles away from the entrance of the closest development, The Place. Residents of this area have to travel 7 miles or more to purchase basic commercial goods and services, increasing the negative impacts to Corkscrew Road.

The proposed text amendment does not affect the existing approvals of The Place, Pepperland Ranch, or Verdana. Any new Neighborhood Commercial uses proposed in these areas would need to undergo the public hearing planned development process. It should be noted that the applicant for this text amendment is the developer of the Place. The applicant has closed on the Pepperland Ranch parcel and is under contract for Verdana; therefore, the proposed text amendment will only impact their own properties. Additionally, concurrent to this proposed text amendment, an application for a Mixed Use Planned Development (DCI2019-00018) has been submitted for the ±2,138-acre Verdana Village project that is being reviewed by Lee County Staff.

¹ US Census Bureau, America's Families and Living Arrangements: 2018, Table AVG1
<https://www.census.gov/data/tables/2018/demo/families/cps-2018.html>

Located within southeastern Lee County, the MPD has been designed to provide significant regional environmental benefits within the Imperial River Watershed and the Density Reduction/Groundwater Resource (DR/GR) Future Land Use area. Utilizing the proposed text amendment, the MPD proposes 2,400 single-family dwelling units as well as amenity features and 100,000 SF of neighborhood commercial uses. The commercial component of the development is proposed to include a grocery store that the companion ZTIS describes as generating a total of 500 trips. Of these, 320 trips are diverted trips, captured from those who would otherwise have to travel to the closest shopping plaza, The Shoppes at Grand Oak.

The proposed Master Concept Plan addresses the extensive list of requirements necessary for development within the EEPKO as described in Lee Plan Policy 33.3.4, as well as enhancements that exceed the requirements of previous zoning approvals and the current regulations of policy 33.3.4. Specifically, the site plan demonstrates the required 100-foot buffer along Corkscrew Road, 56% conservation easement, and 65% open space, excluding the open space that will be required on the amenity or commercial tracts, consistent with the proposed amendment to existing Policy 33.3.4. Additionally, the Master Concept Plan included with the MPD application proposes to preserve, enhance, and restore 1,195 acres of indigenous habitat as on-site flowways to integrate and restore two (2) historic regional flowways through the subject property.

The property is located in an area that historically has a large flowway conveying surface water flows from northeast to southwest. In the existing condition, the over 2,100-acre Verdana Village property that will be utilizing the proposed text amendment has active agriculture activities, with a network of farm ditches and berms. Surface water from the western portion of the property (Pepperland Ranch) currently leaves the property and enters the Six L's Farm Road roadside ditch, and the surface water collected on the eastern portion of the property (Verdana) leaves the property and enters the Audubon property adjacent to southern border. The small 40 acre centrally located parcel (CAM40) is currently vacant, heavily wooded, and discharges to the farm ditches on the eastern portion of the larger surrounding property.

In keeping with the intent of the existing EEPKO policy to restore regional hydrological and wildlife connections, the proposed development design, maintains the existing indigenous upland and wetland areas within Verdana Village and proposes to restore the surrounding areas to hydraulically re-connect and incorporate existing indigenous habitat into the proposed flowways. The project also proposes to construct 2 physical hydrological connections that would interconnect the proposed flowways on the subject property with surrounding properties and a third connection would be available for a future connection by Lee County.

1. An interconnection is proposed within the northwest corner of Verdana Village and aligns with the existing community, The Place. In this location at The Place is an eastern flowway, the applicant as part of the MPD application is proposing to construct flowway culverts under Corkscrew Road. This physical improvement will interconnect the existing flowway at The Place with the proposed flowway on Verdana Village.
2. An interconnection is proposed along the central portion of the eastern boundary of Verdana Village and aligns with the existing conditions along Carter Road. Physical

infrastructure is proposed under Carter Road to intercept surface water from a historical flowway and route it into the Verdana Village property instead of flooding roadside ditches along Carter Road.

3. Infrastructure supporting a future third interconnection has been offered along the northeast corner of the property boundary and can be made after Lee County constructs the appropriate water quality treatment infrastructure.

These interconnections and improvements are proposed by the applicant despite being included in the existing proportionate share calculation for the improvement of Corkscrew Road. The applicant will not seek reimbursement credit for providing these improvements. The interconnections to route off-site surface water into the Verdana Village flowways promote the restoration of regional flowways providing a regional benefit to the Imperial River Watershed. Additionally, the restoration of historic flowways with off-site connections promotes the appropriate direction and path for surface water rather than continuing to rely on the existing roadside ditches along Corkscrew and Carter Roads. It should also be noted that the existing outfall to Six L's Farm Road is proposed to be removed by the Verdana Village project also improving the existing conditions of the roadside ditches in this location.

The proposed flowways within the Verdana Village project travel down the eastern and western sides of the property around the development footprint, allowing surface water to be stored in the southern portion of the property, and ultimately discharge via a control structure to the public conservation lands to the south. While traveling through the property, surface water is proposed to be stored in a series of interconnected sub-basins which will increase the storage capacity of the subject property to be equal to two (2) 100 year, 3-day, sequential storm events occurring 15 days apart, well above the required 25-year, 3-day storm event criteria by Lee County and the South Florida Water Management District. It is expected that approximately 150,000,000 gallons of stormwater will be stored on the property above the standard design criteria. After a period of time the stored surface water will be discharged to the south into Panther Island Mitigation Bank via an electronically controlled weir rather than manual flashboards.

These enhancements improve conditions for upstream and downstream property when compared to the current berm and ditch systems adjacent to the surrounding roadway network. To fund these regional enhancements, the applicant is proposing a text amendment that will permit an increase of 15% residential density and the previously discussed 100,000 square feet of neighborhood commercial within the MPD. The proposed text amendment also requires projects seeking these additional development opportunities provide:

- A project consisting of 2,000 or more acres
- A minimum of 65% Open Space and 56% placed into Conservation Easement
- A site specific hydrological restoration plan identifying the off-site flowways connections and the additional surface water storage capacity equal to two (2) 100 year, 3-day sequential storm events occurring 15 days apart
- A Human Wildlife Coexistence Plan addressing the proposed commercial uses

- A development design demonstrating shared vehicular access for the residential and commercial uses
- A schedule of uses for the commercial development consistent with the Lee County Wellfield Protection Ordinance
- Lot restrictions requiring single-family (unattached) lots to be a minimum of 150ft deep with a 40-foot front yard setback

In addition to these design characteristics, as a result of the proposed development the following ancillary benefits will also be provided.

- Elimination of all farming activities and corresponding fertilizer applications
- Ground and Surface Water Monitoring
- Professional Abandonment of more than 35 existing wells on-site for the existing agricultural irrigation
- Elimination and removal of more than 25 diesel tanks on-site for the existing agricultural activities

III. Public Facilities Analysis

The analysis below provides existing and future conditions for public facilities as related to the proposed text amendment to allow 100,000 square feet of Neighborhood Commercial uses, as well as add an incentive to increase density by 15% for Tier 1 properties within the EEPCO and over 2,000 acres that provide enhanced surface water storage to meet two (2) 100 year, 3-day, sequential storm events occurring 15 days apart.

a. Sanitary Sewer

The affected areas are located within the Lee County Utilities Future Sewer Service Areas as demonstrated on Lee Plan Map 7. Per Lee Plan Policy 95.1.3, an average treatment and disposal capacity of 200 gallons per day per Equivalent Residential Connection (ERC) is required. The 2018 Lee County Concurrency Report indicates that Sanitary Sewer available at a capacity of 328 gallons average per day per ERC. Per Lee County Utilities, sewer capacity is available at the prescribed LOS rate.

The 100,000 SF of Neighborhood Commercial uses and up to 2,459 single-family homes are supported by Lee County Utilities per the attached letter dated 06/20/2019.

b. Potable Water

The affected areas are located within the Lee County Utilities Future Water Service Areas as demonstrated on Lee Plan Map 6. Per Lee Plan Policy 95.1.3, an average treatment and disposal capacity of 250 gallons per day per Equivalent Residential Connection (ERC) is required. The 2018 Lee County Concurrency Report indicates that Potable Water is available at a capacity of 289 gallons average per day per ERC. Per Lee County Utilities, sewer capacity is available at the prescribed LOS rate.

The 100,000 SF of Neighborhood Commercial uses and up to 2,459 single-family homes proposed by the Verdana Village MPD are supported by Lee County Utilities per the attached letter dated 06/20/2019.

c. Surface Water/Drainage Basins

The regulatory standards described in Policy 95.1.3(4)(c) require new development to be designed to South Florida Water Management District (SFWMD) standards to detain or retain excess stormwater to match the predevelopment discharge rate for the 25-year, 3-day storm event. The proposed text amendment requires projects over 2,000 acres requesting Neighborhood Commercial uses and the 15% density increase to demonstrate surface water storage for two (2) 100 year, 3-day, sequential storm events occurring 15 days apart – well in excess of Policy 95.1.3.

d. Parks, Recreation, and Open Space

The non-regulatory standards described in Policy 95.1.3(6)(a & b) require six (6) acres of developed regional park land open for public use per 1000 total seasonal county population for all of Lee County and .8 acres of developed community park land open for public use per 1,000 unincorporated Lee County permanent population. The 2018 Lee County Concurrency Report indicates that there are a total required 4,944 acres of regional parks and 280 acres of community parks and that the available capacity lists 7,081 acres of regional parks and 743 acres of community parks therefore there is available capacity to meet the adopted LOS standard.

e. Public Schools

The affected areas are located within the Lee County School District's South Zone, S3. The 2018 Lee County Concurrency Report indicates that the total available capacity for elementary schools was 901 and that the total available capacity for middle schools was 329. There was a deficit of 440 seats for high schools however, this inventory list did not take into account the 500 seats programmed at Bonita Springs High School which opened for the 2018-2019 school year. This results in 60 seats of available high school capacity for the south zone in the 2018-2019 school year.

A letter from the Lee County School District dated June 25, 2019 confirms that the additional units generated by the proposed text amendment do not cause a deficit in school capacity. Additionally, the letter includes a Concurrency Analysis demonstrating capacity for elementary, middle, and high schools.

f. Fire

A Letter of Availability dated August 21, 2019 from the Estero Fire Rescue, located at 21500 Three Oaks Parkway Estero, FL 33928 confirms that the station is available to provide fire suppression and non-transport ALS emergency medical services to the areas affected by the text amendment given the proposed increase in density and intensity. It should be noted, that a fire station is planned in proximity to the Property during the next 3-5 years.

g. Sheriff

A Letter of Availability dated June 18, 2019 from the Lee County Sheriff's Office confirms that law enforcement services are available, primarily from the South District Office in Bonita Springs, at the density/intensity described in the proposed request. The letter assures that the increase in units and commercial development does not affect the ability of the Lee County Sheriff's Office to provide core services at this time.

h. EMS

A Letter of Availability was requested from Lee County's Division of Emergency Medical Services however, the response letter dated June 17, 2019 indicates that EMS service availability is not adequate at this time. The primary ambulance for the location is Medic 21 which is located 10 miles west, this distance triggers the level of EMS service to fall below the existing service standard as described in County Ordinance 08-16. However, a fire station is planned in proximity to the Property in the next 3-5 years and EMS services are expected to be co-located at this location.

i. Solid Waste

Lee County utilizes third party contractors to collect solid waste from residential developments and bring the material to the Lee County Resource Recovery Facility. If needed, material can also be brought to the Lee-Hendry Landfill. Service is available to the subject property as demonstrated in a Letter of Availability from the Lee County Solid Waste Division dated June 6, 2019.

IV. Conclusion

The proposed text amendment to Policy 33.3.4 of the Lee Plan will allow for a maximum of 100,000 square feet of Neighborhood Commercial uses as well as a 15% density increase, for projects over 2,000 acres for properties designated as Tier 1 in Lee Plan Map 1 Page 4 of 7 and within the EEPCO. The proposed text amendment would service the residential population contained within the boundaries of the currently approved residential planned developments of The Place, Pepperland Ranch, and Verdana, (and the CAM40 parcel pending CPA2019-00005) and has the capacity to service the additional 15% increase in units incentivized at projects over 2,000 acres through the proposed text amendment, as well as the surrounding estate residential units located within Southeast Lee County. The proposed incentive would allow 2,459 units to be located within the Verdana Village project, however, the companion Mixed Use Planned Development (MPD) would limit development to 2,400 units. These areas will see a positive impact as the need to travel west to the Corkscrew Road/I-75 Interchange will be reduced by the provision of neighborhood commercial within the EEPCO.

Greater regional benefits will be provided for in the proposed text amendment which would allow a 15% increase in the allowable density and 100,000 square feet of neighborhood commercial uses for properties over 2,000 acres that provide surface water storage for two (2) 100 year, 3-day, sequential storm events. The incentives promote regional benefits for surface

water storage that exceed current approvals at the prescribed location. The criteria of Policy 33.3.4 continues to promote the rural character of the area by requiring a 100-foot buffer along Corkscrew Road, 55% indigenous preservation, 60% open space, and a clear intent to promote the environmental health of the area by properly accommodating the cohabitation between people and wildlife.

The proposed text amendment also includes language to protect the existing character of Corkscrew Road by requiring the Neighborhood Commercial uses to share a point of access on the roadway with the residential uses it services. Additionally, the procedures and requirements by which to obtain residential density incentives in the EEPKO as described in Policy 33.3.4 have not been removed therefore no negative impacts to water resources or the environment are anticipated or proposed through this amendment. The proposed text amendment will benefit the communities of the southwestern DR/GR without negatively impacting public health, safety, and welfare.

EEPCO Amendment

Lee Plan Analysis (Exhibit – T6)

The requested text amendments will permit neighborhood commercial and a percentage density increase if the development provides enhanced surface water storage area to support a large residential development within the Environmental Enhancement Preservation Conservation Overlay. Minor text amendments are proposed to Policies 1.4.5 and 6.1.2 to ensure consistency with the substantive text amendment to Policy 33.3.4 and establish a new Policy 33.3.5. A justification is included for each proposed amendment with the strike thru and underlined version of the text amendment. For purposes of this analysis, it is assumed that the text amendment is supported and implemented.

FUTURE LAND USE ELEMENT

Properties within Southeast Lee County subject to the Environmental Enhancement Preservation Conservation Overlay (EEPCO) retain the underlying Density Reduction Groundwater Resource and Wetland Future Land Use. As a result, the pattern for future development implemented by the Future Land Use Map, Planning Communities Map and Table 1(b) remain in place. Specifically, Table 1(b) currently allocates ±68 acres of commercial and 4,015 acres of residential within the Southeast Lee Planning Community consistent with Policies 1.1.1 and 1.7.6 which requires a demonstration of compliance with the provided acreages at the time of Development Order for any permitted uses. The requested text amendment will utilize this existing acreage for the proposed commercial and residential uses consistent with Policy 1.1.1. An amendment to Policy 1.4.5 is proposed to permit neighborhood commercial uses within the DR/GR only when associated with the EEPCO and a Planned Development with over 2,000 acres which will ensure that any future development is consistent with Policy 1.4.5 and Policies 33.3.4 and 33.3.5.

The amendment to include neighborhood commercial and an additional 15% residential density within properties over 2,000 acres included in the EEPCO will not negatively impact wetlands or the Wetland FLU, as all requirements of the EEPCO will continue to be achieved or exceeded. As part of the Planned Development required by Policy 33.3.4, a FLUCCS map and associated Protected Species Survey and Indigenous Habitat Management Plan must be submitted identifying the wetlands and other indigenous habitat on-site. The FLUCCS map can be utilized to update the FLU Map and ensures the preservation of high quality wetlands.

In addition, enabling supporting neighborhood commercial uses within EEPCO developments over 2,000 acres and requiring a shared access point with the residential use, promotes a compact growth pattern and a mix of uses that minimizes traffic impacts and vehicle miles traveled consistent with objective 2.1 and its implementing policies. The requirements of Policy

33.3.4 that the development be adjacent to Corkscrew Road, provide central utilities, and secure letters of availability from public service providers ensures that necessary public facilities are available to support the residential and commercial uses consistent with objective 2.2 and the implementing policies as well as Standard 4.1.1 and 4.1.2.

The requested 15% increase in residential density for projects over 2,000 acres that provide surface water storage for two (2) 100 year, 3-day, sequential storm events occurring 15 days apart as occurred with Invest 92L and hurricane Irma and providing capacity for future offsite flows anticipated from a master Lee County regional flood mitigation study, and is consistent with Goal 5 and the implementing policies for residential land uses. Policy 1.7.13 establishes the Southeast Lee County Planning Community has various overlays for different development opportunities, including the Environmental Enhancement and Preservation Communities Overlay (EEPCO). Policy 33.3.4 outlines the EEPCO and establishes that additional residential densities are available to properties included within the overlay if it is demonstrated that regional hydrological and wildlife connections can be supported. The densities awarded are “linked” to the Tiers of the Priority Restoration Lands, which also has the effect of directing residential densities to specific locations consistent with the Priority Restoration Tier. By virtue of these various elements working together, Tier 1 Priority Restoration Lands within the EEPCO have been identified as appropriate locations for residential development. It is important to note that all existing Tier 1 properties have been placed into the EEPCO already and are not of an adequate size (2,000 acres) to be eligible for the proposed additional 15% residential density. Only the proposed Verdana Village MPD meets the size criteria, over 2,000 acres, to be eligible for the additional density and commercial intensity proposed in the text amendment. The proposed amendment does not alter this direction and continues to support the clustering of residential development on the Tier 1 lands consistent with Goal 5 and the supporting objectives and policies as well as.

Goal 5: Residential Land Uses. To provide sufficient land in appropriate locations on the Future Land Use Map to accommodate the projected population of Lee County in the year 2030 in attractive and safe neighborhoods with a variety of price ranges and housing types.

The proposed amendment will allow additional densities for Tier 1 properties within the EEPCO that are over 2,000 acres and which provide surface water storage capacity for two (2) 100 year, 3-day, sequential storm events, occurring 15 days apart as occurred with Invest 92L and hurricane Irma and providing capacity for future offsite flows anticipated from a master Lee County regional flood mitigation study through the preservation, enhancement and restoration of on-site flowways ensuring consistency is maintained with policy 5.1.5. Consistent with policy 5.1.1, a planned development is required to develop properties within the EEPCO and the zoning process will enable the evaluation of the specific development plan to maintain consistency with policy 5.1.2.

The proposed amendment will also allow neighborhood commercial uses to be established within Southeast Lee County to support the existing and future residential development of the area.

The Corkscrew Road corridor, generally east of Ben Hill Griffin Parkway to Wildcat Farms within a 5 mile radius of the Verdana Village MPD, has or will have over 8,700 residential dwelling units. Commercial goods and services are not available within a 5-mile radius of these residences requiring longer trip lengths on Corkscrew Road to the intersection of Ben Hill Griffin Parkway and Corkscrew Road or farther. The addition of Neighborhood Commercial directly supports the existing growth of residential in the area and identifies specific locations for the commercial development consistent with policy 6.1.7 and is an appropriate addition to meet the commercial policies of the Lee Plan.

POLICY 6.1.7: Prohibit commercial developments from locating in such a way as to open new areas to premature, scattered, or strip development; but permit commercial development to infill on small parcels in areas where existing commercial development would make a residential use clearly unreasonable.

By including the potential for neighborhood commercial as part of policies 33.3.4 and 33.3.5, the use will be co-located with residential development in the EEPKO or other overlays in Southeast Lee County promoting clustered development. To secure approval for both uses within the EEPKO, planned development zoning is still required ensuring an evaluation of the commercial uses consistency with policy 6.1.3 will occur. **None of the properties currently approved as Planned Developments within the EEPKO would be eligible for the neighborhood commercial due to the size of the existing projects.** All of the existing Tier 1 properties have been placed into the EEPKO and the Verdana Village MPD is the only project that can meet the proposed size criteria, over 2,000 acres, to be eligible for the proposed Neighborhood Commercial Uses included in the text amendment.

POLICY 6.1.3: Commercial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as commercial planned developments designed to arrange uses in an integrated and cohesive unit in order to:

- *provide visual harmony and screening;*
- *reduce dependence on the automobile;*
- *promote pedestrian movement within the development;*
- *utilize joint parking, access and loading facilities;*
- *avoid negative impacts on surrounding land uses and traffic circulation;*
- *protect natural resources; and*
- *provide necessary services and facilities where they are inadequate to serve the proposed use.*

The design requirements of policy 33.3.4 will remain in effect which includes the 100-foot buffer for properties adjacent to Corkscrew Road, east of Alico, and the text amendment proposes additional provisions for projects requesting additional residential density and neighborhood commercial uses to provide 56% of the project area in conservation easement, and 65% open space. These requirements are in excess of the current EEPKO requirements and will ensure the

continuance of visual harmony and screening as well as the protection of natural resources as originally intended by the EEPKO and promoted by policy 6.1.6. These design characteristics will also ensure the residential and commercial development is clustered in a manner that promotes compatibility with the varying adjacent land uses as required by policy 6.1.4.

POLICY 6.1.6: The land development regulations will require that commercial development provide adequate and appropriate landscaping, open space, and buffering. Such development is encouraged to be architecturally designed so as to enhance the appearance of structures and parking areas and blend with the character of existing or planned surrounding land uses.

POLICY 6.1.4: Commercial development will be approved only when compatible with adjacent existing and proposed land uses and with existing and programmed public services and facilities.

Policy 33.3.4 requires letters of availability to be provided that demonstrate the availability of public services to support the development at the time of zoning. Additionally, connection to central water and sewer service is required. These requirements are not proposed to be amended and ensure future development of neighborhood commercial uses and the supporting residential are consistent with policy 6.1.4.

In addition to requiring the proposed neighborhood commercial to be located on large acreage property, the requested amendment also requires the neighborhood commercial to be located on an access shared by the residential development, spatially connecting the two uses. Together these requirements promote internal capture and protect the carrying capacity of streets consistent with policy 6.1.5.

POLICY 6.1.5: The land development regulations will require that commercial development be designed to protect the traffic-carrying capacity of roads and streets. Methods to achieve this include, but are not limited to:

- *frontage roads;*
- *clustering of activities;*
- *limiting access;*
- *sharing access;*
- *setbacks from existing rights-of-way;*
- *acceleration, deceleration and right-turn-only lanes; and*
- *signalization and intersection improvements*

The requested text amendment to increase residential density and promote neighborhood commercial uses within Southeast Lee County does not diminish the existing requirements but rather enhances the original intent of the overlay. Currently, the surface water management criteria for a planned development to be approved within the EEPKO states that a hydrological

restoration plan and water quality meeting state and federal standards is required. The proposed text amendment would enhance these elements by requiring:

- A project location within the Tier 1 Priority Restoration & a project area over 2,000 acres
- 65% Open Space and 56% placed into Conservation Easement
- Site Specific Hydrological Restoration Plan that identifies connections with off-site flowways and has enhanced storage and flood attenuation
- Human Wildlife Coexistence Plan addressing the requested commercial uses
- Commercial uses consistent with the Lee County Wellfield Protection Ordinance and located in a manner that does not impact wetlands or native habitat

Beyond these characteristics written into the proposed text amendment, the applicant has also committed to providing additional surface water storage for two (2) 100 year, 3-day, sequential storm events occurring 15 days apart (as occurred in 2017 with Invest 92L and Hurricane Irma, and providing capacity for future off-site flows anticipated from a master Lee County regional flood mitigation study. As well as a design for the Planned Development that shares the vehicular access between the commercial and residential uses and single-family lot regulations that have a minimum 150ft in depth and front yard setback of 40 feet.

Crafting the Text Amended utilizing this criteria with the additional commitments ensures the project seeking neighborhood commercial uses and additional residential has adequate land area to address the required enhanced surface water storage and appropriately addresses the requested commercial uses as it related to wildlife and water resources consistent with Objective 63.1 and its supporting policies. Two (2) 100 year, 3-day, sequential storm events, occurring 15 days apart as occurred with Invest 92L and Hurricane Irma and providing capacity for future offsite flows anticipated from a master Lee County regional flood mitigation study, promotes larger amounts of water quality treatment and storage volume to be provided. Requiring the storage to be incorporated into the on-site flowways and demonstrated in the hydrological restoration plan ensures the developed surface water system mimics a natural system while providing the water quality treatment and storage benefits of two (2) 100 year 3-Day, sequential storm events occurring 15 days apart as occurred with Invest 92L and hurricane Irma and providing capacity for future offsite flows anticipated from a master Lee County regional flood mitigation study. Additionally, it is expected that the water quality treatment provided by the on-site flowway restoration is in addition to the water quality treatment provided within the residential and commercial portions of the surface water management system.

Flowway Restoration

The proposed text amendment will be utilized by a concurrent rezoning application, DCI2019-00018, for an over 2,000 acre mixed use planned development. The property is located in an area that historically had a large flowway conveying surface water flows from northeast to southwest. This historical flowway was intersected by a smaller, less defined north/south flowway. Collectively these flows establish a flowway system that historically drained and provided stormwater flows to the on-site wetlands and lands located north and east of Verdana Village.

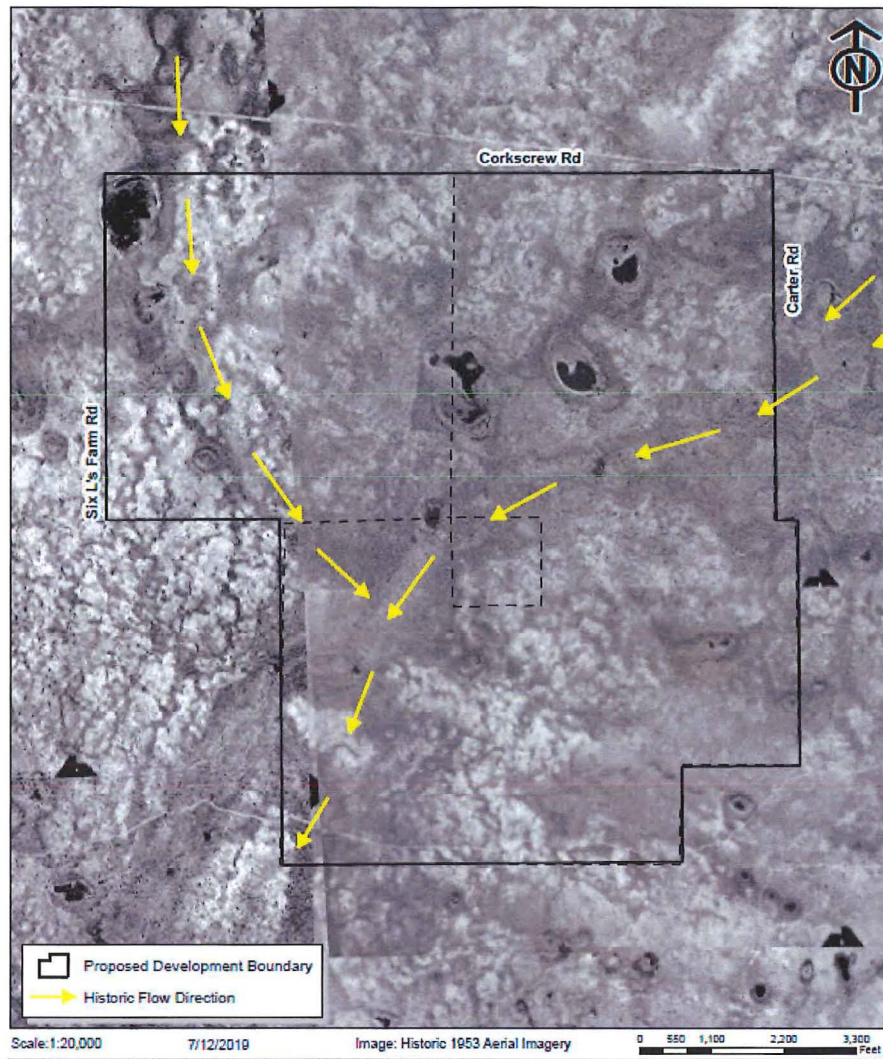


Figure 1. Historical Flow

In the existing condition, the over 2,100-acre Verdana Village property that will be utilizing this text amendment has active agriculture activities, with a network of farm ditches and berms. Surface water from the western portion of the property (Pepperland Ranch) currently leaves the property and enters the Six L's Farm Road roadside ditch, and the surface water collected on the eastern portion of the property (Verdana) leaves the property and enters the Audubon property adjacent to southern border. There is small 40 acre centrally located parcel (CAM40) which is currently vacant, heavily wooded, and discharges to the ditches on the eastern portion of the larger surrounding property.

Due to the historical flowway pattern across the property and the existing active agricultural use, the property was identified as a Tier 1 Priority Restoration area in March 2010. At that time, the concept was for public and nonprofit agencies to prioritize the purchase and restoration of properties identified as Tier 1.

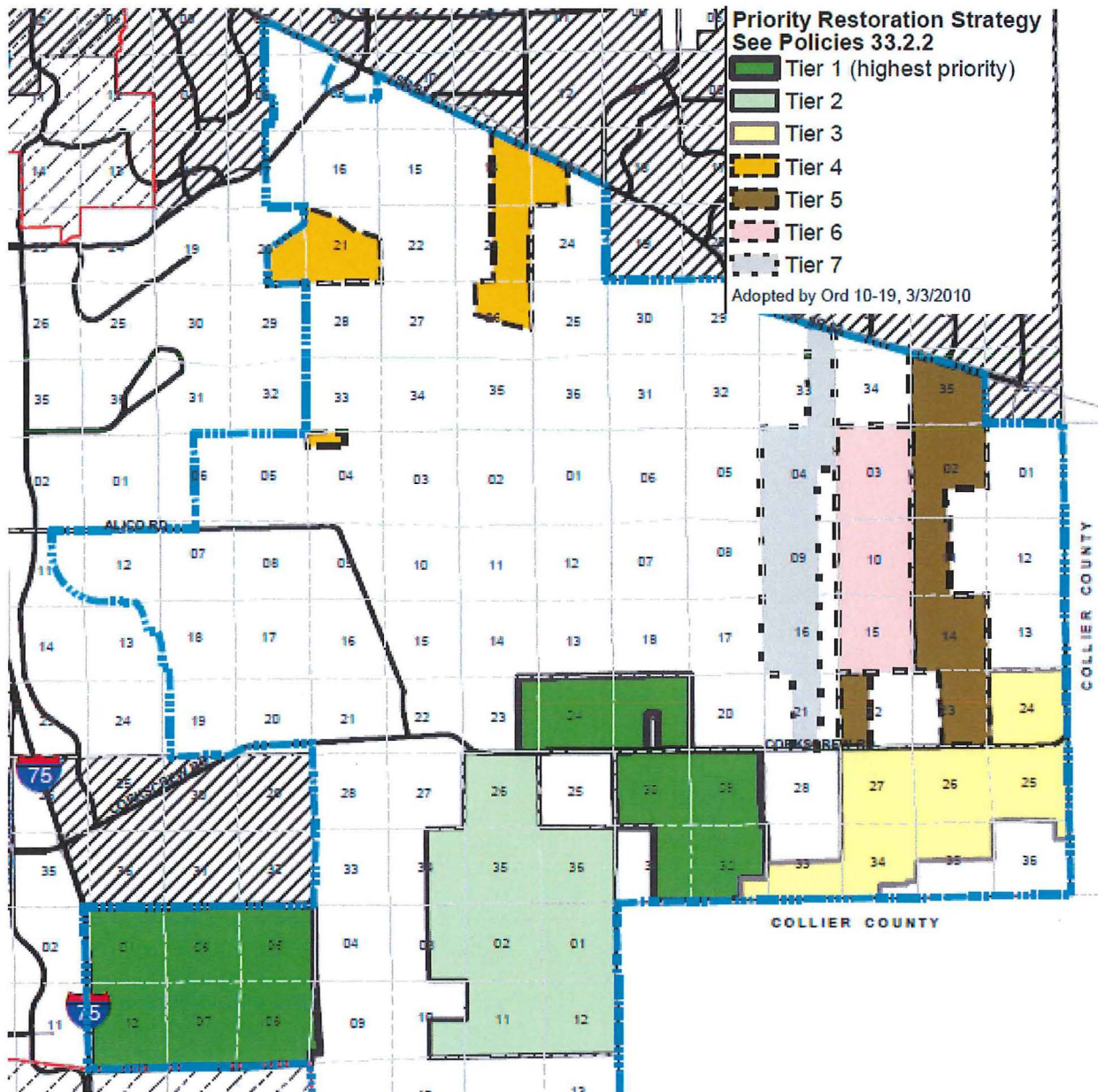


Figure 2. Priority Restoration Tiers

However, all of the Tier 1 Properties were owned by private entities and by 2012 no restoration had occurred. As a result of private landowners of Tier 1 properties seeking development entitlements, the Environmental Enhancement Preservation Communities Overlay was adopted into the Lee Plan in 2015. The Overlay and its supporting objectives and policies capitalizes on the original intent of the Tier 1 Priority designation to establish an incentive program for the private landowners to restore these large tracts of land in exchange for residential density. Since that time, a majority of the Tier 1 Properties have been included within the EEPC Overlay via privately initiated Map Amendments to the Lee Plan. The final 40-acre (CAM40) piece was transmitted for state review on September 18th 2019 and was adopted on November 20th 2019.

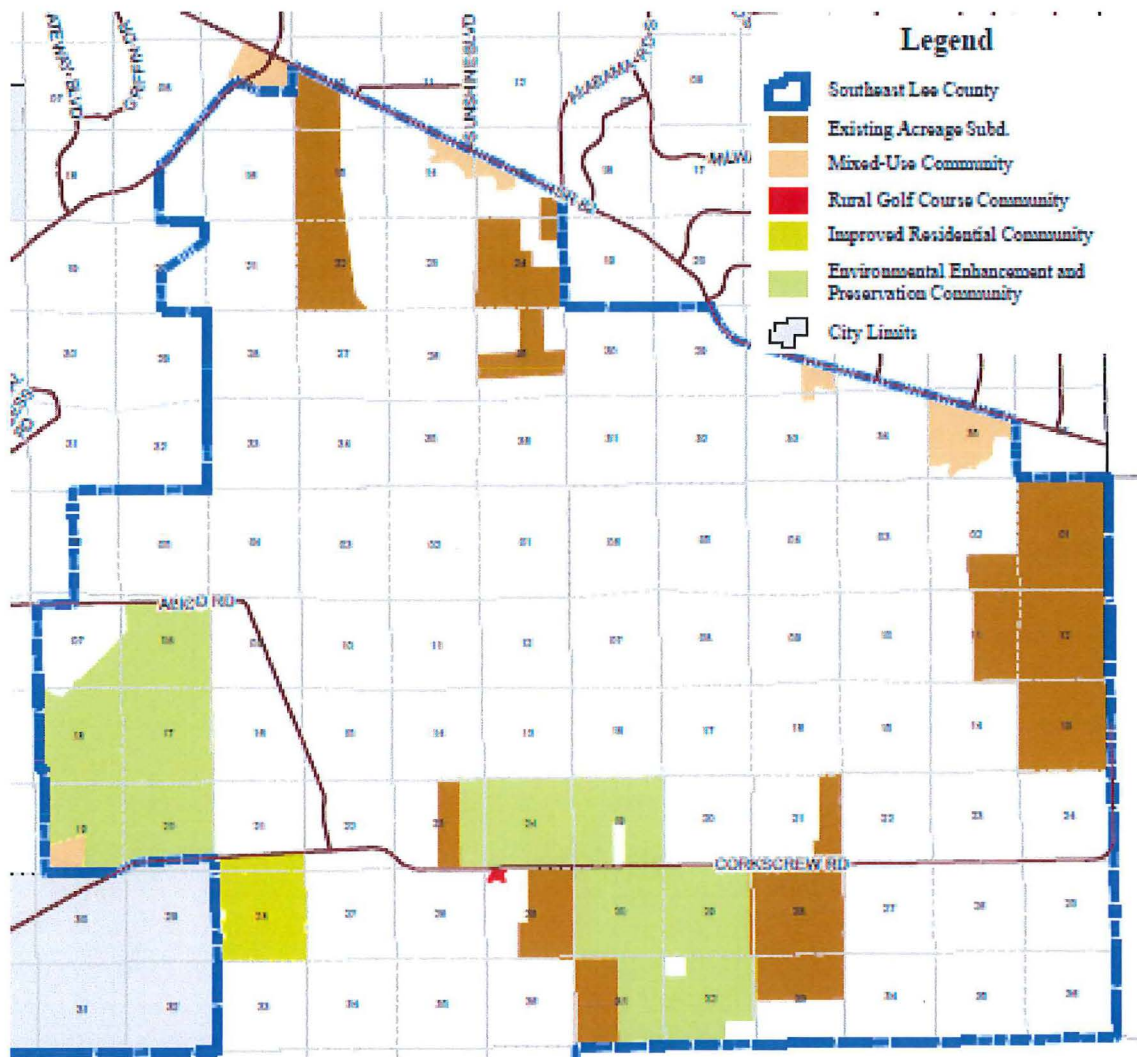


Figure 3. Southeast DR/GR Residential Overlay

In keeping with the intent of the EEPKO to restore regional hydrological and wildlife connections, the proposed development design for DCI2019-00018, maintains the existing indigenous upland and wetland areas within Verdana Village and proposes to restore the surrounding areas to hydrologically re-connect and incorporate existing indigenous habitat into the proposed flowways consistent with Policies 54.1.2., 60.4.2., 61.2.4., 123.2.6 and Objective 61.2. The project also proposes to construct 3 physical hydraulic connections that would interconnect the proposed flowways on the subject property with surrounding properties consistent with policy 123.1.5.

1. An interconnection is proposed within the northwest corner of Verdana Village and aligns with the existing community, The Place. In this location at The Place is an eastern flowway, and the applicant, as part of the MPD application, is proposing to construct flowway culverts under Corkscrew Road. This physical improvement will interconnect the existing east flowway at The Place with the proposed flowway within Verdana Village.

2. An interconnection is proposed along the central portion of the eastern boundary of Verdana Village and aligns with the existing off-site historic flow path along Carter Road. Physical infrastructure is proposed under Carter Road to intercept surface water from a historical flowway and route it into the Verdana Village property instead of flooding roadside ditches along Carter Road.
3. Infrastructure supporting a future third interconnection has been offered along the northeast property boundary and can be made after Lee County constructs the appropriate water quality treatment infrastructure.

These hydraulic interconnections and improvements are consistent with policy 123.1.5 and are proposed by the applicant despite being included in the existing proportionate share calculation for the improvement of Corkscrew Road. The interconnections to route off-site surface water into the Verdana Village flowways promote the restoration of regional flowways providing a regional benefit to the Imperial River Watershed. Additionally, the restoration of historic flowways with off-site connections promotes the appropriate direction and path for surface water rather than continuing to rely on the existing roadside ditches along Corkscrew and Carter Roads. It should also be noted that the existing outfall to Six L's Farm Road is proposed to be removed by the Verdana Village project also improving the existing conditions of the roadside ditches in this location.

The proposed main flowways within the Verdana Village project travel down the eastern and western sides of the property around the development footprint and a hydraulic connection will be provided in the middle of the project. Surface water will be stored in the southern portion of the property, and ultimately discharge via a control structure to the public conservation lands to the south consistent with 123.1.5.

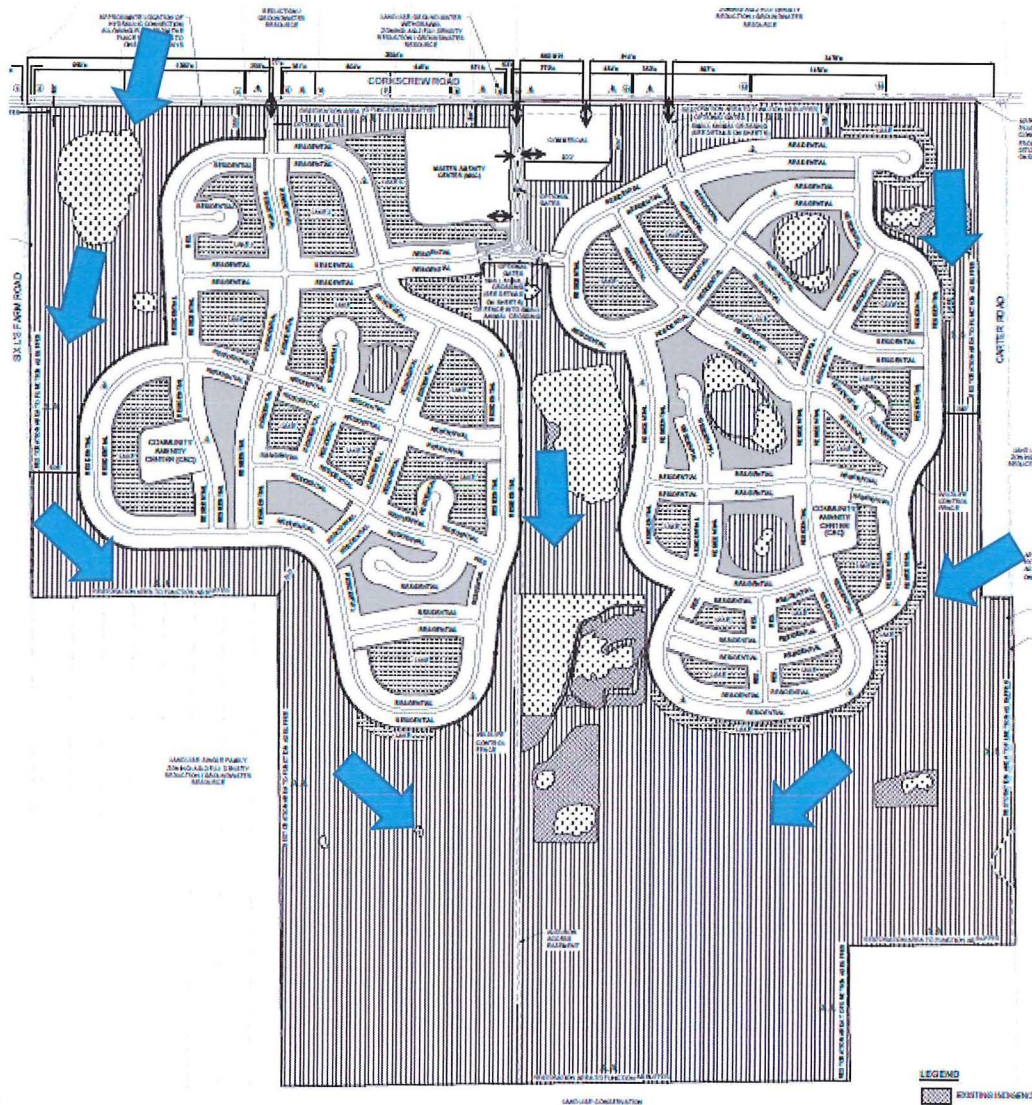


Figure 4. Verdana Village Master Concept Plan – Proposed Flowways

The proposed residential and commercial development areas will have a surface water management system comprised of swales, lakes, and dry detention areas. These features will collect, store, treat, and control discharge of the runoff generated within the development pods to the proposed flowways. Surrounding the overall residential and commercial development pods is a flowway restoration area comprised of the existing preserved indigenous habitat and multiple basins designed to further treat, detain, and convey water consistent with polies 60.1.3, 60.4.1., and 123.1.1

After surface water is stored within the southern portion of the Verdana Village project, it will be discharged south into the Panther Island Mitigation Bank. At this point, a wier and stormwater control mechanism is proposed to control the release of water to acceptable levels. Maintenance of the wier and control mechanism will be assigned to the Verdana Village CDD allowing Lee

County to control the weir operation and stormwater discharge – also a regional benefit to the Imperial River Watershed.

Increased Benefits

The proposed flowway design utilizes the existing EEPKO policies and standards as a baseline and enhances these requirements by providing additional storage of surface water for longer periods of time before leaving the property.



Figure 5. Verdana Village Indigenous Habitat Management Plan

As demonstrated by the Indigenous Habitat Management Plan submitted with DCI2019-00018 the existing indigenous areas are preserved and included within the proposed flowways consistent with policies 123.3.1 and 123.3.1. The physical design of the flowways includes multiple individual basins which are separated by a berm and control weir, helping to maintain water levels consistent with those seen prior to the agricultural development. This design is in excess of the current EEPKO policies and supports the intent of policies 60.1.3, 60.4.2, 61.3.1. and 61.3.6. Locations for the flowways were determined by analyzing historic photos to

determine the locations of flow corridors prior to the primarily agricultural development in the area consistent with policy 60.1.2., 60.4.3 These flowways have been designed to mimic the historic flow patterns of the region, reconnect flow paths that were altered during the previous agricultural development of the properties, and increase water levels back to estimated historic levels. It is expected that these flowways will also be utilized as wildlife corridors, providing interconnections from the north and east, through the subject property and the Panther Island Mitigation Bank to the south. Restoring the flowways with indigenous plantings to promote wildlife habitat is consistent with the intent of the EEPKO as well as policy 123.12.1

The flowway basins are designed to accommodate two (2), 100-year, 3-day sequential storm events occurring 15 days apart as occurred with Invest 92L and hurricane Irma to provide capacity for future offsite flows anticipated from a master Lee County regional flood mitigation study. The vision of Goal 59 is promoted by this design concept by allowing significant volumes of water to be held on-site above and beyond what is typically required, protecting life and property within the watershed as well as increasing groundwater recharge consistent with policy 60.1.1. As a result, surface water will be held longer on-site by controlling discharges between flowway basins, and off-site from the project providing flood control for downstream properties during severe storm events which is a regional benefit.

In comparison, the existing projects within the EEPKO that are not seeking to qualify for additional residential density or neighborhood commercial are only required to:

1. Identify historic flow pattern
2. Establish the volume of surface water entering the property based on existing conditions
3. Design a path of flow for on-site surface water
4. Calculate the volume of surface water leaving the property
5. Seek approval from Lee County to discharge water into the MS4 System

This process ensures water leaving the property does not flood downstream properties or have negative effects to upstream properties. However, it does not require additional storage of stormwater over longer periods of time to positively benefit wetland hydroperiods, floodplain management, and treatment of stormwater. These requirements also do not include the accommodation of future flows anticipated through the project's flow corridors.

Utility Service

A majority of the subject property is located within the Lee County Utilities Service Area as depicted on Lee Plan Maps 6 and 7 consistent with Policies 53.1.1 and 56.1.1. The 40 acre CAM40 parcel, is not within the service area; however this parcel is being environmentally restored to support the proposed flowways and utility service is not needed. A letter of availability has been received from Lee County Utilities indicating capacity is available to provide service to the project consistent with Policies 53.1.2 and 56.1.2. Maintaining the provision of central water and sewer also ensures consistency with Goal 63 by ensuring groundwater levels are not reduced in close proximity to the existing county wellfields. The applicant has agreed to connect to reuse service if available at the time of the first development order consistent with the intent of the EEPKO Overlay as well as Policies 54.1.6 and 54.1.11.

To reduce the consumption of potable water and generation of wastewater, the applicant has proposed a project design and conditions that prioritizes native habitat consistent with the intent of the EEPCO. The residential areas are clustered in a smaller footprint and generally small lot size to reduce irrigation area and water usage. Additionally, a central irrigation system is proposed to be controlled by the future HOA to eliminate overuse of water resources consistent with Goal 57. Over 1,000 acres of restoration are provided via the on-site flowways as described by DCI2019-00018. These areas will be restored through grading and indigenous plantings, which will not require irrigation. Additionally, the applicant has proposed conditions which ensures a minimum 75% native plantings are utilized in all required planting areas. These design features are consistent with Goal 57 to conserve water resources as well as policy 54.1.3.

After the restoration of the flowways, a conservation easement will be recorded protecting the area in perpetuity and maintenance will be assigned to the property association or CDD ensuring the long term management of exotic vegetation consistent with policy 123.2.9. While the proposed grading and indigenous plantings promote the flowways on the subject property, these areas are also expected to be used as wildlife habitat consistent with policies 123.4.1., 124.4.4., 123.10.3 and 123.11.5 To appropriately address wildlife expected to utilize the property, a human wildlife coexistence plan has been prepared for the indigenous preserve areas and includes compatibility with the neighborhood commercial uses consistent with policies 123.3.3., 123.11.7, and 123.12.2. A protected species management plan has also been provided for gopher tortoise and wood stork demonstrating consistency with policies 123.8.1 and 123.10.2.

The proposed text amendment interlinks the residential units of the EEPCO and the neighborhood commercial to ensure an appropriate number of roof tops are available to support the commercial. The Lee Plan Glossary defines neighborhood commercial as uses that provide for the sale of convenience goods and personal services with a maximum of 100,000 SF. Including this text in this location of the policy, requires the neighborhood commercial and the residential units to be permitted together, presumably through a Mixed Use Planned Development due to the number of residential units required and the SF range for neighborhood commercial. As a result, at the time of the planned development, staff will be able to review the location of the commercial uses and determine the appropriate orientation to Corkscrew Road and the proposed residential. Finally, the requirements for a 100 ft buffer adjacent to Corkscrew Road and 65% open space in the overall project, along with the restoration requirements, will remain in effect for the overall MPD. The companion MPD, DCI2019-00018, demonstrates that portions of the northern development areas are within Lee County's wellfield protection zones. Consistent with Objective 63.1, the proposed text amendment includes language to clarify that commercial uses must be consistent with the Lee County Wellfield Ordinance. Additionally, the MPD application clarifies that pretreatment will be provided for residential lakes 1, 2 and 3, as shown on the Master Concept Plan, to maintain consistency with the Lee County Wellfield Protection Ordinance. Additionally, a detailed proposed water quality monitoring program has been included in the companion zoning case to ensure the proposed development maintains consistency with Goal 63 and its supporting objectives and policies.

Neighborhood Commercial

To support the requested text amendment, a Needs Analysis for the Neighborhood Commercial proposed by the text amendment was prepared by Maxwell, Hendry & Simmons and is included in the supporting data and analysis. The analysis evaluated a maximum of 100,000 square feet consistent with the proposed text amendment as well as an additional 100,000 square feet that is pending a concurrent comprehensive plan and planned development rezoning in a separate application. The analysis utilizes a regional methodology to evaluate the number of units (at build out) and the anticipated population within the 5-mile radius. The report describes the number of units of the permitted residential planned developments and surrounding estate residential communities as approximately 8,700 dwelling units. Demographic data from the current development pattern in this area is provided to support the conclusion that the primary residents of the area are anticipated to be families, not retirees. Utilizing a household size of 2.75 persons per household, which reflects a family with children, the expected population of the East Corkscrew area is approximately 24,000 people at build-out. Without the proposed text amendment this population will drive a minimum of 7 miles to obtain neighborhood commercial goods and services, putting additional trips on Corkscrew Road into the heart of the Village of Estero.

As described by the Maxwell, Hendry & Simmons analysis, the population is sufficient to support a ratio of 450 square feet of commercial space per household or 3.9 million square feet of commercial for the 5,600 dwelling units. Therefore, the potential 200,000 square feet of neighborhood commercial can be supported by the expected residential in the area. Consistent with Goal 158 and its supporting objectives and policies, the proposed text amendment would be fiscally beneficial to the area which has a demonstrated need for more commercial space. The proposed text amendment would also support a positive business climate by increasing the number of employment opportunities available in Southeast Lee County.

The permitting of the neighborhood commercial uses with the residential density promotes the co-location of uses that support each other and promotes a 25% internal capture rate. The neighborhood commercial uses will improve existing and future traffic on Corkscrew Road by providing an alternative for commercial trips. The neighborhood commercial would reduce the traffic to the existing commercial plaza at Ben Hill Griffin Parkway and Corkscrew Road through the diversion of trips to less congested segments. Additionally, the traffic light installed at Bella Terra and WildBlue will further improve traffic on Corkscrew Road by allowing Bella Terra residents to safely exit their community and requiring safer speeds on the Corkscrew corridor. The mix of uses and intensity that will be established by the proposed text amendment is consistent with objective 33.2 and its supporting Lee Plan policies.

EEPCO Commercial Text Amendment

State Policy Plan Analysis (Exhibit – T9)

The following analysis demonstrates how the proposed text amendment to Lee Plan Policy 33.3.4 is consistent with the goals and policies of the State Comprehensive Plan, as adopted by the State of Florida in F.S. § 187.201.

HEALTH

F.S. § 187.201(5) provides the goals and policies for the State’s vision of residents’ health. While a majority of these policies are related directly to health care, some policies advocate for environmental health. The proposed text amendment supports these policies. The proposed text amendment to Policy 33.3.4 does not impact the regulatory language regarding the environmental restoration and enhancement provisions of the EEPCO Tier 1 properties therefore it supports clustered development and restoration of historical flowways to promote the protection and enhancement of natural resources and ensure a healthy environment consistent with FS §187.201(5)(b)1.2.a. through d.

WATER RESOURCES

The State of Florida seeks to ensure an adequate water supply and maintenance of natural systems to improve/maintain water quality through the policies of F.S. § 187.201(7)(a). The proposed text amendment will not alter the regulatory language of Policy 33.3.4 requiring connections to potable water and sanitary sewer service within the EEPCO. The policy’s existing language promotes the restoration of historic water levels. A Letter of Availability has been received from Lee County Utilities confirming capacity to service the additional 100,000 square feet of Neighborhood Commercial uses demonstrating consistency with FS §187.201(7)(a)5.

NATURAL SYSTEMS AND RECREATIONAL LANDS

The County’s Tiered Priority Restoration Area program is consistent with F.S. § 187.201(9)(b)7 which seeks to protect and restore the ecological function of wetlands and explicitly states “Protect and restore the ecological functions of wetlands systems to ensure their long-term environmental, economic, and recreational value.” The Tier 1 properties have been identified as key locations to establish ecological connections that restore functions to wetlands, the incentives for restoring wildlife and wetland connections have not been removed nor has any of the regulatory language regarding restoration criteria.

LAND USE

F.S. § 187.201(15)(a) states that development should be focused in areas that have the resources and public services to accommodate growth while also preserving natural resources. The proposed text amendment’s applicability is limited to the Tier 1 properties of the EEPCO, an area that is expected to

grow due to the incentives provided in the Lee Plan which will also requires the preservation of natural resources to obtain the incentives. Letters of Availability have been received demonstrating service providers have the capacity to serve the maximum 100,000 square feet of Neighborhood Commercial to be established in the EEPCO consistent with F.S. § 187.201(15)(b)1 and 2 and F.S. § 187.201(15)(b)6.

TRANSPORTATION

The State of Florida Comprehensive Plan seeks to promote a balanced transportation system that meets local, regional and state needs. The County's existing transportation policies are consistent with the State Comprehensive Plan. The requested amendment does not impact the County's long-range transportation plans or Level of Service on Corkscrew Road; therefore, consistency with the State Comprehensive Plan Transportation policies will be maintained.

EPCO Commercial Text Amendment

Strategic Regional Policy Plan Analysis (Exhibit – T10)

The following analysis demonstrates how the proposed text amendment to Lee Plan Policy 33.3.4 is consistent with the goals, strategies, and actions of the Strategic Regional Policy Plan as adopted by the Southwest Florida Regional Planning Council in 2002.

ECONOMIC DEVELOPMENT ELEMENT

The economic development element of the Regional Policy Plan details the economic infrastructure and growth opportunities to support the public facilities of the region. If the region “maximizes the uses of existing public facilities through increased capacity, they can serve additional development more efficiently.” The requested text amendment will utilize the existing public facilities and emergency services of Lee County which, as demonstrated by the attached Letters of Availability, has the capacity to serve the proposed amendment to allow 100,000 square feet of Neighborhood Commercial uses. Therefore, the requested amendment is consistent with the overall economic development goals of the Regional Policy Plan.

Specifically, Goal 1 seeks to provide a well-maintained social, health, and educational infrastructure to support business and industry in Southwest Florida by assisting local governments and state agencies in planning for future support service facilities, before the need arises. Lee County is consistent with Goal 1 by providing a yearly concurrency report and maintaining and updated Comprehensive Plan with Capital Improvements Program. The proposed text amendment will not cause public services or facilities to fall under the acceptable established Level of Service (LOS).

The Regional Policy plan acknowledges that future growth and development will occur in Southwest Florida to accommodate natural population growth as well as expansion of existing businesses and/or the creation of new business. Goal 3 of the Regional Policy Plan seeks to balance business and population growth with the existing quality of life offered by the natural resources of Southwest Florida. Lee County is consistent with this goal by creating programs that incentivize and guide development within the County to specific locations while also protecting and/or restoring natural resources. The Environmental Enhancement and Preservation Communities Overlay (EPCO) is an example of balancing demands related to population growth with the desire to preserve natural resources. The proposed text amendment is also consistent with this goal as it supplements the livability in the area by establishing proximate goods and services.

NATURAL RESOURCES ELEMENT

The Regional Policy Plan states in the Natural Resources Element that “Southwest Florida has an abundance of natural resources that, along with a favorable climate, creates economic opportunities, recreational opportunities and a quality of life that is important to the citizens and visitors to the region. The protection of these resources creates a challenge to planners, managers and decision makers in a rapidly growing region that must utilize these resources for economic reasons and to create housing for our population.” The Lee Plan through various policies and maps identifies critical lands in the County and enacts regulatory language applicable to those areas. This includes the Priority Restoration Areas, which are prioritized by Tiers to demonstrate the restoration priority of the critical area. The text amendment only applies to Tier 1 properties within the EEPCO. This designation demonstrates the County has identified this area as one of the most important restoration areas within the County. The requested text amendment will continue to support this designation.

REGIONAL TRANSPORTATION ELEMENT

The Regional Policy Plan states that “a regional transportation plan will be an integral component of the future overall regional quality of life” and opportunities exist across the region to coordinate regionally on transportation related issues. Lee County is already implementing solutions to maintain and improve quality of life as related to transportation on Corkscrew Road. As part of the EEPCO, policies have been included in the Lee Plan to evaluate transportation impacts. Additionally, a study has been conducted for Corkscrew Road to determine needed improvements to address future growth within this corridor. These activities are consistent with the vision for Regional Transportation as outlined in the Regional Policy Plan. The Traffic Analysis provided with the application demonstrates that amendments are not needed to the 2040 Long Range Transportation Plan and the Level of Service on Corkscrew Road will not be impacted by the requested text amendment. Therefore, the requested text amendment is also consistent with the Regional Transportation Element of the Regional Policy Plan.

PRINCIPALS

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 Lawrence L. Smith, Jr.



September 10, 2019

DRMP Job #:

Nathan Beals
 Lee County Utilities
 1500 Monroe Street
 Fort Myers, FL 33901

Subject: Hydraulic Analysis Verdana Village and The Corkscrew Road Force Main to the Pinewoods Master Pump Station

Dear Mr. Beals:

This Report is to provide the results of the hydraulic model that DRMP prepared to determine the effects of the proposed sewer flow from Verdana Village through the force main system on Corkscrew Road and emptying into the Pinewoods Master Pump Station (MPS). We performed the modeling using Water CAD Version 8. Lee County Utilities (LCU) provided the following guidelines some of which were revised from those guidelines that were used to design the Pinewoods MPS. These guidelines include the following:

- Use a peaking Factor of 2.5 (per the Utilities Design Manual). This is a revision to the Pinewoods MPS modeling.
- Use a C-Factor on the 10" and 12" force mains of 130 (due to the material and age). This is a revision to the Pinewoods MPS modeling.
- Create a model with the 60% flow condition and not with the additional caveat of 60% pump stations operating.
- Assume a 10-inch force main to extend from Verdana Village to the existing 10-inch main at the entrance to The Place. The remainder of the force main system is existing and would not be altered for the modeling.
- Do not address the effects of the Verdana Village flows on the pump stations downstream of the Pinewoods MPS.

We were provided instructions to evaluate the system with the following scenarios:

1. 100% of Verdana Peak Flows only.
2. Sufficient number of pump stations running to the Pinewoods MPS to pump at least 60% of the total peak flow.

The following chart was used establish the 100% and 60% flows and is based on the requirements for establishing flow found in the Lee County Design Manual. The Design Manual states that the number of residents per multi-family units is 2.0, the number of residents per single family units is 2.5, and the flow per resident is 100 GPD.

Table 1 – Design Flows

<i>Name of Development</i>	<i>Multi Family Units #</i>	<i>Single Family Units #</i>	<i>Population</i>	<i>ADF (GPD)</i>	<i>Peak Hour Factor</i>	<i>100% Peak Hour Flow (GPM)</i>	<i>60% PHF (GPM)</i>
Verdana Village*		2400	6000	610000	2.50	1059	635
The Place		1325	3312.5	331250	2.50	575	345
Corkscrew Shores		647	1617.5	161750	2.50	281	169
Corkscrew Preserve		441	1102.5	110250	2.50	191	115
Bella Terra	336	1563	4579.5	457950	2.50	795	477
Wildcat Run	98	351	1073.5	107350	2.50	186	112
Grandeza		169	422.5	42250	2.50	73	44
WildBlue		700	1750	175000	2.50	304	182
Total Projected Flow			12108	1210800		3465	2079

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*Includes 10,000 GPD from 100,000 SF of Retail. F.A.C. requires 0.1 gpd/sf. LCU requires scenarios where a minimum of 60% of the flow be maintained in the Corkscrew Sewer System. From the table above, the 60% flow is required is 2079 GPM.

Background

Verdana Village is a proposed development on Corkscrew Road approximately 11,000 linear feet east of the existing development called The Place. At buildout Verdana Village will have 2400 single family units and 100,000 SF of retail space. A 10-inch force main has already been approved to be constructed in the Corkscrew Road ROW to connect from Verdana Village to the existing 10-inch force main that serves The Place. At this point, the flow from The Place is transmitted through a combination of 10-inch and 12-inch force mains to the newly constructed Pinewoods Master Pump Station (MPS). For purposes of this analysis, LCU did not require any modeling on the effects of the additional flow from Verdana Village on the Pinewoods MPS nor any of the downstream force main system. It is our understanding that any issues caused by the additional flow from Verdana Village affecting the Pinewoods MPS or the transmission system downstream of the MPS would be the responsibility of LCU to identify and correct. We are also aware that LCU is proposing a new Wastewater Facility (WWTF) in the area, most likely on Alico Road, and that ultimately the wastewater will end up being transmitted to this new WWTF. This future scenario is not part of this report.

Analysis

The model created depicts the force main system in Corkscrew Road from Verdana Village to the Pinewoods MPS as well as a master pump station for each of the seven developments along the way. Five different scenarios were created in this modeling effort to depict various pump station interfaces and they are described below. Also, in each section we provide the results of the modeling scenario and call out any adverse situations. The modeling is based on the following assumptions:

- We are treating the flow out of the Verdana Village Development as a single Master Pump Station. There may be two MPSs at Verdana Village.
- VFD drives will be installed in the Verdana Village MPS to reflect the varying pressures to overcome and flows to be delivered.
- The 60% flow condition was determined to be met by showing that 60% of the overall flow was being delivered to the Pinewoods MPS and not necessarily 60% flow from each of applicable developments. For instance, the 60% flow condition for Wildcat Run is 112 GPM, but in effect when the Wildcat Run MPS is operational, it pumps over 600 GPM. This is because the pumps were designed to pump all the way to the Three Oaks WWTF and with the addition of the Pinewoods MPS, the pumping distance and the dynamic head have been dramatically decreased.
- The Verdana Village MPS was modeled using an elevated reservoir. The MPS has not been designed nor the pumps selected. Modeling it with a reservoir provides the design parameters necessary for modeling purposes. Raising and lowering the reservoir reflects a pump with a VFD.
- The LCU maximum acceptable velocity in a pipe is 8.0 ft/s.
- The design capacity at the Pinewoods MPS is 2500 GPM with two pumps operating at full speed.

The results of the modeling are provided in the descriptions below and in the Exhibits attached. As stated above, the pump stations near the Pinewoods MPS pump much more flow than originally designed because they were designed to pump all the way to the Three Oaks Wastewater Treatment Facility and now they have a much shorter distance to pump. However, at some point, these pump stations will have to pump to the proposed new East Wastewater Facility and the operating points for these pumps may be closer to their original design points.

Scenario 1

Scenario 1 is a single Verdana Village MPS delivering 100% flow with no other pump stations operating. While there may eventually be two pump stations at Verdana Village, the concern of this modeling exercise is the pipe sizes on Corkscrew Road so for simplicities sake, only one MPS was included for Verdana Village delivering all the flow. To deliver 100% of the Peak Hour Flow of 1059 GPM, it will be necessary to have a pump that while operating at full speed can operate at a Total Dynamic Head (TDH) of 247 feet. At this flow and head the velocity in all pipes are within acceptable limits.



Scenario 2

Scenario 2 is a 60% flow scenario with the following pump stations operating: Wildcat Run, Bella Terra, and Corkscrew Preserve Pump Stations 1 and 2. All other Pump Stations are off. The required 60% flow from Verdana Village is 635 GPM and the head that the VFD drives will be pumping against to achieve this flow is 171 feet. In this scenario the total flow from the four operating pump stations and the flow from Verdana Village is 2390 GPM. Here are the results:

Table 2
Scenario - 60% Run 1

ID	Label	60%	60% Run 1		
		Design Flow (gpm)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	Off	0	0
1006	Grandeza East	44	Off	0	0
939	Wildcat Run	112	On	624	46.6
1000	Bella Terra	477	On	527	96.47
2085	Wild Blue 1	182	Off	0	0
2092	Wild Blue 2		Off	0	0
1082	Cork Preserve 1	115	On	304	124.28
1081	Cork Preserve 2		On	300	101.59
2045	The Place MPS	345	Off	0	0
	Verdana Village	625		635	171
	Total			2390	

The results meet the LCU requirements of 60% flow with Verdana Village operating at 60%. No pipes exceeded 8 ft/s.

Scenario 3

Scenario 3 is a 60% flow scenario with the following pump stations operating: Corkscrew Shores, Bella Terra, WildBlue #2, and Corkscrew Preserve 1. All other Pump Stations are off. The required 60% flow from Verdana Village is 635 GPM and the head that the VFD drives will be pumping against to achieve this flow is 207 feet. In this scenario the total flow from the three operating pump stations with the flow from Verdana Village is 2484 GPM. Here are the results:

Table 3
Scenario 3 - 60% Run 2

ID	Label	60%	60% Run 1		
		Design Flow (gpm)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	On	746	132.4
1006	Grandeza East	44	Off	0	0
939	Wildcat Run	112	Off	0	0
1000	Bella Terra	477	On	399	123.91
2085	Wild Blue 1	182	Off	0	0
2092	Wild Blue 2		On	416	172.87
1082	Cork Preserve 1	115	On	288	127.67
1081	Cork Preserve 2		Off	0	0
2045	The Place MPS	345	Off	0	0
	Verdana Village	625		635	207
	Total			2484	

The results meet the LCU requirements of 60% flow with Verdana Village operating at 60%. No pipes exceeded 8 ft/s. The flow approaches the maximum capacity of the Pinewoods MP of 2500 GPM.

Scenario 4



Scenario 4 is a 60% flow scenario with the following pump stations operating: Grandezza East, Wildcat Run, and Bella Terra. All other Pump Stations are off. The required 60% flow from Verdana Village is 635 GPM and the head that the VFD drives will be pumping against to achieve this flow is 145 feet. In this scenario the total flow from the three operating pump stations and the flow from Verdana Village is 2559 GPM. The reason we ran this scenario was to show that if certain Pump Stations operate at the same time, the two-pump operating capacity of the pumps in the Pinewoods MPS might be exceeded. There is a third pump in the Pinewoods MPS for extreme flows. Also, please note that the pump stations that are on are all operating well above their design flow and this will only be a short-term operating condition. The following are the results:

Table 4
Scenario 4- 60% Run 3

ID	Label	60%	60% Run 1		
		Design Flow (gpm)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	Off	0	0
1006	Grandezza East	44	On	668	53.15
939	Wildcat Run	112	On	613	47.13
1000	Bella Terra	477	On	643	72.12
2085	Wild Blue 1	182	Off	0	0
2092	Wild Blue 2		Off	0	0
1082	Cork Preserve 1	115	Off	0	0
1081	Cork Preserve 2		Off	0	0
2045	The Place MPS	345	Off	0	0
	Verdana Village			635	145.00
	Total			2559	

Although the Pinewoods design flow was slightly exceeded, the results for the upstream system meet the LCU requirements of 60% flow with Verdana Village operating at 60%. No pipes exceeded 8 ft/s.

Scenario 5

Scenario 5 is a 60% flow scenario with the following pump stations operating: Wildcat Run, Bella Terra, and The Place. We wanted to see what happens with the MPS at the Place when it is in operation and to see what happens to the velocity in 10-inch main to the west of The Place when we modeled the both the MPS of The Place and Verdana Village MPS both in operation. To achieve the 60% flow of 635 GPM at Veranda Village which a peak TDH of 249.5-feet is required under this scenario. In this scenario the total flow from the three operating pump stations and from Verdana Village is 2250 GPM. Here are the results:

Table 5
Scenario 5- 60% Run 4

ID	Label	60%	60% Run 4		
		Design Flow (gpm)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	Off	0	0
1006	Grandezza East	44	Off	0	0
939	Wildcat Run	112	On	632	46.19
1000	Bella Terra	477	On	543	93.06
2085	Wild Blue 1	182	Off	0	0
2092	Wild Blue 2		Off	0	0
1082	Cork Preserve 1	115	Off	0	0
1081	Cork Preserve 2		Off	0	0
2045	The Place MPS	345	On	440	213.37
	Verdana Village			635	249.5
	Total			2250	



In this scenario the MPS at The Place will pump 440 GPM @ 213.37' of head. This is more than the required 60% flow of 345 GPM. The Verdana Village MPS operating at a head of 249.5 feet will deliver 635 GPM is the required 60% of the peak design flow. The velocity in the 10-inch force main in front of The Place is 4.49 ft/s which is very acceptable.

By using the following LCU approved modeling inputs:

- Reduction of the peak factor from the variable "10 States Standards" to a fixed 2.5,
- Increasing the C factor to 130 from previous models, and
- Modifying the design criteria from 60% of the downstream lift stations being on to 60% of the downstream peak flow being considered

we believe that the 10-inch and 12-inch force main system from Verdana Village to the Pinewoods MPS meet the LCU design standards as provided in the LCU Design Manual. However, it is apparent that in the scenarios above some of the pump stations are pumping well above the required design flow. This is due to the fact that the Pinewoods MPS is much closer than the Three Oaks WWTF to which they were originally designed to pump. However, when the new Alico Road WWTF is constructed, these pumps may return to functioning as intended.

If you have any questions, please feel free to call at 239 206-5093.

Sincerely,
DRMP, Inc.

A handwritten signature in blue ink that reads "Patrick J. Day".

Patrick Day, P.E. # 56709, BCEE
Senior Engineer

CC: Ray Blacksmith, Cameratta Companies, LLC

Upstream Flow Development for Pinewoods MPS

<i>Name of Development</i>	<i>Commer- cial* sf</i>	<i>Multl Family Units #</i>	<i>Single Family Units #</i>	<i>Popu- lation #</i>	<i>ADF (GPD)</i>	<i>Peak Hour Factor</i>	<i>Peak Hour (GPM)</i>	<i>60% PHF (GPM)</i>	<i>Accum. Pop. #</i>	<i>Accum Flow GPD</i>	<i>Accum PHF</i>	<i>Peak Hour Flow (GPM)</i>
Verdana Village	100,000		2400	6000	610000	2.50	1059	635	6000	610000	2.50	1059
The Place			1325	3312.5	331250	2.50	575	345	3312.5	941250	2.50	1634
Corkscrew Shores			647	1617.5	161750	2.50	281	168	4930	1103000	2.50	1915
Corkscrew Preserve			441	1102.5	110250	2.50	191	115	6032.5	1213250	2.50	2106
Bella Terra		336	1563	4579.5	457950	2.50	795	477	10612	1671200	2.50	2901
Wildcat Run		98	351	1073.5	107350	2.50	186	112	11685.5	1778550	2.50	3088
Grandezza			169	422.5	42250	2.50	73	44	12108	1820800	2.50	3161
WildBlue			700	1750	175000	2.50	304	182	13858	1995800	2.50	3465
Total Projected Flow				12108	1210800		3465	2079				3465

*Florida Administrative Code Requires 0.1 GPD/SF of retail space

Verdana Village Model Results for Sewer Flow to Pinewoods MPS

ID	Label	60% Design Flow (gpm)	Verdana Only			60% Run 1			60% Run 2		
			Status (Initial)	Flow (gpm)	Pump Head (ft)	Status (Initial)	Flow (gpm)	Pump Head (ft)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	Off	0	0	Off	0	0	On	746	132.4
1006	Grand East	44	Off	0	0	Off	0	0	Off	0	0
939	Wildcat Run	112	Off	0	0	On	624	46.6	Off	0	0
1000	Bella Terra	477	Off	0	0	On	527	96.47	On	399	123.91
2085	Wild Blue 1	182	Off	0	0	Off	0	0	Off	0	0
2092	Wild Blue 2		Off	0	0	Off	0	0	On	416	172.87
1082	Cork Preserve 1	115	Off	0	0	On	304	124.28	On	288	127.67
1081	Cork Preserve 2		Off	0	0	On	300	101.59	Off	0	0
2045	The Place MPS	345	Off	0	0	Off	0	0	Off	0	0
	Verdana Village	635		1058	247		635	171		635	207
	Totals	2079		1058			2390			2484	

ID	Label	60% Design Flow (gpm)	60% Run 3			60% Run 4		
			Status (Initial)	Flow (gpm)	Pump Head (ft)	Status (Initial)	Flow (gpm)	Pump Head (ft)
2009	Corkscrew Shores MPS	169	Off	0	0	Off	0	0
1006	Grand East	44	On	668	53.15	Off	0	0
939	Wildcat Run	112	On	613	47.13	On	632	46.19
1000	Bella Terra	477	On	643	72.12	On	543	93.06
2085	Wild Blue 1	182	Off	0	0	Off	0	0
2092	Wild Blue 2		Off	0	0	Off	0	0
1082	Cork Preserve 1	115	Off	0	0	Off	0	0
1081	Cork Preserve 2		Off	0	0	Off	0	0
2045	The Place MPS	345	Off	0	0	On	440	213.37
	Verdana Village	635		635	145		635	249.5
	Total	2079		2559			2250	

Pipe Velocity Verdana Only
Crokscrew Road Force Main System

ID	Label	Length (Scaled)	Diameter (in)	Flow (gpm)	Velocity (ft/s)
1305	DP-7720	103.9	8	0	0
1560	DP-7800	92.83	6	0	0
1565	DP-7823	98.56	9.9	0	0
1932	DP-7843	149.34	6	0	0
1931	DP-7844	163.96	6	0	0
1375	DP-PIN	42.75	8	0	0
1210	FP-7720	56.93	9.9	0	0
1559	FP-7800	83.01	9.9	0	0
1537	FP-7823	94.17	9.9	0	0
1930	FP-7843	122.43	9.9	0	0
1927	FP-7844	128.02	9.9	0	0
1376	FP-PIN	121.99	9.9	0	0
1972	P-8	3,327.65	11.7	1,058	3.16
1995	P-17	3,642.59	9.9	-1,058	4.42
1997	P-18	2,178.16	11.7	-1,058	3.16
1928	P-23	2,461.37	8	0	0
2010	P-24	207.12	8	0	0
2012	P-25	68.01	9.9	0	0
1933	P-26	2,504.63	6	0	0
2044	P-37	37.05	9.9	0	0
2047	P-38	54.84	9.9	0	0
2048	P-39	301.79	9.9	0	0
2051	P-40	59.87	9.9	0	0
2053	P-41	39.23	9.9	0	0
2058	P-42	33.9	10.3	-1,058	4.08
2059	P-43	12,593.62	9.9	-1,058	4.42
2062	P-44	34.72	16	1,058	1.69
2073	P-46	5,872.08	6.1	0	0
2075	P-47	1,780.05	6.1	0	0
2086	P-49	42.25	4	0	0
2088	P-50	55.27	9.9	0	0
2093	P-52	81.39	3.9	0	0
2095	P-53	63.01	9.9	0	0
2113	P-58	11,024.25	9.9	1,058	4.41
2116	P-60	5,584.39	6.1	0	0
2117	P-61	14.13	6	0	0
1304	P-7720a	3,993.56	8	0	0
1373	P-7720b	990.65	11.7	1,058	3.16
1561	P-7800a	446.08	6	0	0
1566	P-7823a	1,277.35	9.9	0	0
1463	P-7823b	1,867.57	11.7	1,058	3.16
1753	P-7823c	696.42	11.7	1,058	3.16
1759	P-7823i	3,174.33	11.7	1,058	3.16
1929	P-7843a	64.19	6	0	0
1374	P-PINa	533.12	11.7	0	0

Pipe Velocity Run 1
Crokscrew Road Force Main System

ID	Label	Length (Sc	Diameter (i	Flow (gpm)	Velocity (ft)	Headloss Gradient (ft/ft)
1305	DP-7720	103.9	8	-624	3.98	0.043
1560	DP-7800	92.83	6	0	0	0
1565	DP-7823	98.56	9.9	527	2.2	0.014
1932	DP-7843	149.34	6	300	3.41	0.037
1931	DP-7844	163.96	6	304	3.45	0.038
1375	DP-PIN	42.75	8	0	0	0
1210	FP-7720	56.93	99	-624	0.03	0
1559	FP-7800	83.01	99	0	0	0
1537	FP-7823	94.17	99	527	0.02	0
1930	FP-7843	122.43	99	300	0.01	0
1927	FP-7844	128.02	99	304	0.01	0
1376	FP-PIN	121.99	99	0	0	0
1972	P-8	3,327.65	11.7	1,765	5.27	0.008
1995	P-17	3,642.59	9.9	-634	2.65	0.003
1997	P-18	2,178.16	11.7	-634	1.89	0.001
1928	P-23	2,461.37	8	605	3.86	0.007
2010	P-24	207.12	8	0	0	0
2012	P-25	68.01	99	0	0	0
1933	P-26	2,504.63	6	304	3.45	0.008
2044	P-37	37.05	99	0	0	0
2047	P-38	54.84	9.9	0	0	0
2048	P-39	301.79	9.9	0	0	0
2051	P-40	59.87	9.9	0	0	0
2053	P-41	39.23	99	0	0	0
2058	P-42	33.9	10.3	-634	2.44	0.011
2059	P-43	12,593.62	9.9	-634	2.65	0.003
2062	P-44	34.72	16	2,389	3.81	0.143
2073	P-46	5,872.08	6.1	0	0	0
2075	P-47	1,780.05	6.1	0	0	0
2086	P-49	42.25	4	0	0	0
2088	P-50	55.27	99	0	0	0
2093	P-52	81.39	3.9	0	0	0
2095	P-53	63.01	99	0	0	0
2113	P-58	11,024.25	9.9	634	2.64	0.003
2116	P-60	5,584.39	6.1	0	0	0
2117	P-61	14.13	6	0	0	0
1304	P-7720a	3,993.56	8	-624	3.98	0.008
1373	P-7720b	990.65	11.7	2,389	7.13	0.015 Corkscrew Road prior to MPS
1561	P-7800a	446.08	6	0	0	0
1566	P-7823a	1,277.35	9.9	527	2.2	0.002
1463	P-7823b	1,867.57	11.7	1,161	3.46	0.004
1753	P-7823c	696.42	11.7	1,765	5.27	0.009
1759	P-7823i	3,174.33	11.7	1,765	5.27	0.009
1929	P-7843a	64.19	6	300	3.41	0.016
1374	P-PINa	533.12	11.7	0	0	0

Pipe Velocity Run 2
Corkscrew Road Force Main System

ID	Label	Length (Sc	Diameter (i	Hazen-Will	Flow (gpm)	Velocity (ft)	Headloss	Gradient (ft/ft)
1305	DP-7720	103.9	8	130	0	0	0	
1560	DP-7800	92.83	6	130	0	0	0	
1565	DP-7823	98.56	9.9	130	399	1.66	0.008	
1932	DP-7843	149.34	6	130	0	0	0	
1931	DP-7844	163.96	6	130	288	3.27	0.034	
1375	DP-PIN	42.75	8	130	0	0	0	
1210	FP-7720	56.93	99	130	0	0	0	
1559	FP-7800	83.01	99	130	0	0	0	
1537	FP-7823	94.17	99	130	399	0.02	0	
1930	FP-7843	122.43	99	130	0	0	0	
1927	FP-7844	128.02	99	130	288	0.01	0	
1376	FP-PIN	121.99	99	130	0	0	0	
1972	P-8	3,327.65	11.70	130	2,057	6.14	0.011	Bend in Corkscrew
1995	P-17	3,642.59	9.90	130	-624	2.61	0.003	
1997	P-18	2,178.16	11.70	130	-1,370	4.09	0.005	
1928	P-23	2,461.37	8.00	130	288	1.84	0.002	
2010	P-24	207.12	8	130	746	4.76	0.016	
2012	P-25	68.01	99	130	-746	0.03	0	
1933	P-26	2,504.63	6.00	130	288	3.27	0.007	
2044	P-37	37.05	99	130	0	0	0	
2047	P-38	54.84	9.9	130	0	0	0	
2048	P-39	301.79	9.9	130	0	0	0	
2051	P-40	59.87	9.9	130	0	0	0	
2053	P-41	39.23	99	130	0	0	0	
2058	P-42	33.9	10.3	130	-624	2.4	0.011	
2059	P-43	12,593.62	9.90	130	-624	2.61	0.003	
2062	P-44	34.72	16	130	2,473	3.95	0.153	
2073	P-46	5,872.08	6.10	130	416	4.57	0.014	
2075	P-47	1,780.05	6.10	130	0	0	0	
2086	P-49	42.25	4	130	0	0	0	WildBlue header
2088	P-50	55.27	99	130	0	0	0	
2093	P-52	81.39	3.9	130	416	11.19	0.368	
2095	P-53	63.01	99	130	-416	0.02	0	
2113	P-58	11,024.25	9.90	130	624	2.6	0.003	
2116	P-60	5,584.39	6.10	130	-416	4.51	0.013	
2117	P-61	14.13	6	130	416	4.73	0.092	
1304	P-7720a	3,993.56	8.00	130	0	0	0	
1373	P-7720b	990.65	11.7	130	2,057	6.14	0.011	Corkscrew Road prior
1561	P-7800a	446.08	6	130	0	0	0	
1566	P-7823a	1,277.35	9.90	130	399	1.66	0.001	
1463	P-7823b	1,867.57	11.70	130	1,769	5.28	0.008	
1753	P-7823c	696.42	11.7	150	2,057	6.14	0.012	Corkscrew prior to ben
1759	P-7823i	3,174.33	11.70	130	2,057	6.14	0.012	Corkscrew after bend
1929	P-7843a	64.19	6	130	0	0	0	
1374	P-PINa	533.12	11.7	130	0	0	0	

Pipe Velocity Run 3
Corkscrew Road Force Main System

ID	Label	Length (Scaled)	Hazen-Williams	Flow (gpm)	Velocity (ft/s)	Notes
1305	DP-7720	103.9	130	-613	3.91	
1560	DP-7800	92.83	130	668	7.57	
1565	DP-7823	98.56	130	643	2.68	
1932	DP-7843	149.34	130	0	0	
1931	DP-7844	163.96	130	0	0	
1375	DP-PIN	42.75	130	0	0	
1210	FP-7720	56.93	130	-613	0.03	
1559	FP-7800	83.01	130	668	0.03	
1537	FP-7823	94.17	130	643	0.03	
1930	FP-7843	122.43	130	0	0	
1927	FP-7844	128.02	130	0	0	
1376	FP-PIN	121.99	130	0	0	
1972	P-8	3,327.65	130	1,278	3.81	Bend in Corkscrew
1995	P-17	3,642.59	130	-635	2.65	
1997	P-18	2,178.16	130	-635	1.9	
1928	P-23	2,461.37	130	0	0	
2010	P-24	207.12	130	0	0	
2012	P-25	68.01	130	0	0	
1933	P-26	2,504.63	130	0	0	
2044	P-37	37.05	130	0	0	
2047	P-38	54.84	130	0	0	
2048	P-39	301.79	130	0	0	
2051	P-40	59.87	130	0	0	
2053	P-41	39.23	130	0	0	
2058	P-42	33.9	130	-635	2.45	
2059	P-43	12,593.62	130	-635	2.65	
2062	P-44	34.72	130	2,559	4.08	
2073	P-46	5,872.08	130	0	0	
2075	P-47	1,780.05	130	0	0	
2086	P-49	42.25	130	0	0	WildBlue header
2088	P-50	55.27	130	0	0	
2093	P-52	81.39	130	0	0	
2095	P-53	63.01	130	0	0	
2113	P-58	11,024.25	130	635	2.65	
2116	P-60	5,584.39	130	0	0	
2117	P-61	14.13	130	0	0	
1304	P-7720a	3,993.56	130	-613	3.91	
1373	P-7720b	990.65	130	2,559	7.64	Corkscrew Road prior to A
1561	P-7800a	446.08	130	668	7.57	
1566	P-7823a	1,277.35	130	643	2.68	
1463	P-7823b	1,867.57	130	1,278	3.81	
1753	P-7823c	696.42	150	1,278	3.81	Corkscrew prior to bend
1759	P-7823i	3,174.33	130	1,278	3.81	Corkscrew after bend
1929	P-7843a	64.19	130	0	0	
1374	P-PINa	533.12	130	0	0	

Pipe Velocity Run 4
Corkscrew Road Force Main System

ID	Label	Length (Scaled)	Diameter (in)	Flow (gpm)	Velocity (ft/s)	Notes
1305	DP-7720	103.9	8	-632	4.03	
1560	DP-7800	92.83	6	0	0	
1565	DP-7823	98.56	9.9	543	2.26	
1932	DP-7843	149.34	6	0	0	
1931	DP-7844	163.96	6	0	0	
1375	DP-PIN	42.75	8	0	0	
1210	FP-7720	56.93	99	-632	0.03	
1559	FP-7800	83.01	99	0	0	
1537	FP-7823	94.17	99	543	0.02	
1930	FP-7843	122.43	99	0	0	
1927	FP-7844	128.02	99	0	0	
1376	FP-PIN	121.99	99	0	0	
1972	P-8	3,327.65	11.7	1,618	4.83	Bend in Corkscrew
1995	P-17	3,642.59	9.9	-1,075	4.49	
1997	P-18	2,178.16	11.7	-1,075	3.21	
1928	P-23	2,461.37	8	0	0	
2010	P-24	207.12	8	0	0	
2012	P-25	68.01	99	0	0	
1933	P-26	2,504.63	6	0	0	
2044	P-37	37.05	99	-440	0.02	
2047	P-38	54.84	9.9	440	1.84	
2048	P-39	301.79	9.9	440	1.84	
2051	P-40	59.87	9.9	0	0	
2053	P-41	39.23	99	0	0	
2058	P-42	33.9	10.3	-1,075	4.14	
2059	P-43	12,593.62	9.9	-1,075	4.49	
2062	P-44	34.72	16	2,250	3.59	
2073	P-46	5,872.08	6.1	0	0	
2075	P-47	1,780.05	6.1	0	0	
2086	P-49	42.25	4	0	0	WildBlue header
2088	P-50	55.27	99	0	0	
2093	P-52	81.39	3.9	0	0	
2095	P-53	63.01	99	0	0	
2113	P-58	11,024.25	9.9	635	2.65	
2116	P-60	5,584.39	6.1	0	0	
2117	P-61	14.13	6	0	0	
1304	P-7720a	3,993.56	8	-632	4.03	
1373	P-7720b	990.65	11.7	2,250	6.71	Corkscrew Road prior to h
1561	P-7800a	446.08	6	0	0	
1566	P-7823a	1,277.35	9.9	543	2.26	
1463	P-7823b	1,867.57	11.7	1,618	4.83	
1753	P-7823c	696.42	11.7	1,618	4.83	Corkscrew prior to bend
1759	P-7823i	3,174.33	11.7	1,618	4.83	Corkscrew after bend
1929	P-7843a	64.19	6	0	0	
1374	P-PINa	533.12	11.7	0	0	



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 850-245-6333 for project review information.

September 6, 2019



Cindy Leal Brizuela
Morris-Depew
2914 Cleveland Ave.
Fort Myers, FL 33901
Phone: 239.337.3993
Email: cbrizuela@M-DA.com

In response to your inquiry of September 6, 2019, the Florida Master Site File lists no previously recorded cultural or historical resources found in the following section of Lee County:

Area outlined by provided shapefile with a 500 foot buffer as shown on the corresponding map.

When interpreting the results of our 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 850-245-6333.**

Please do not hesitate to contact us if you have any questions regarding the results of this search.

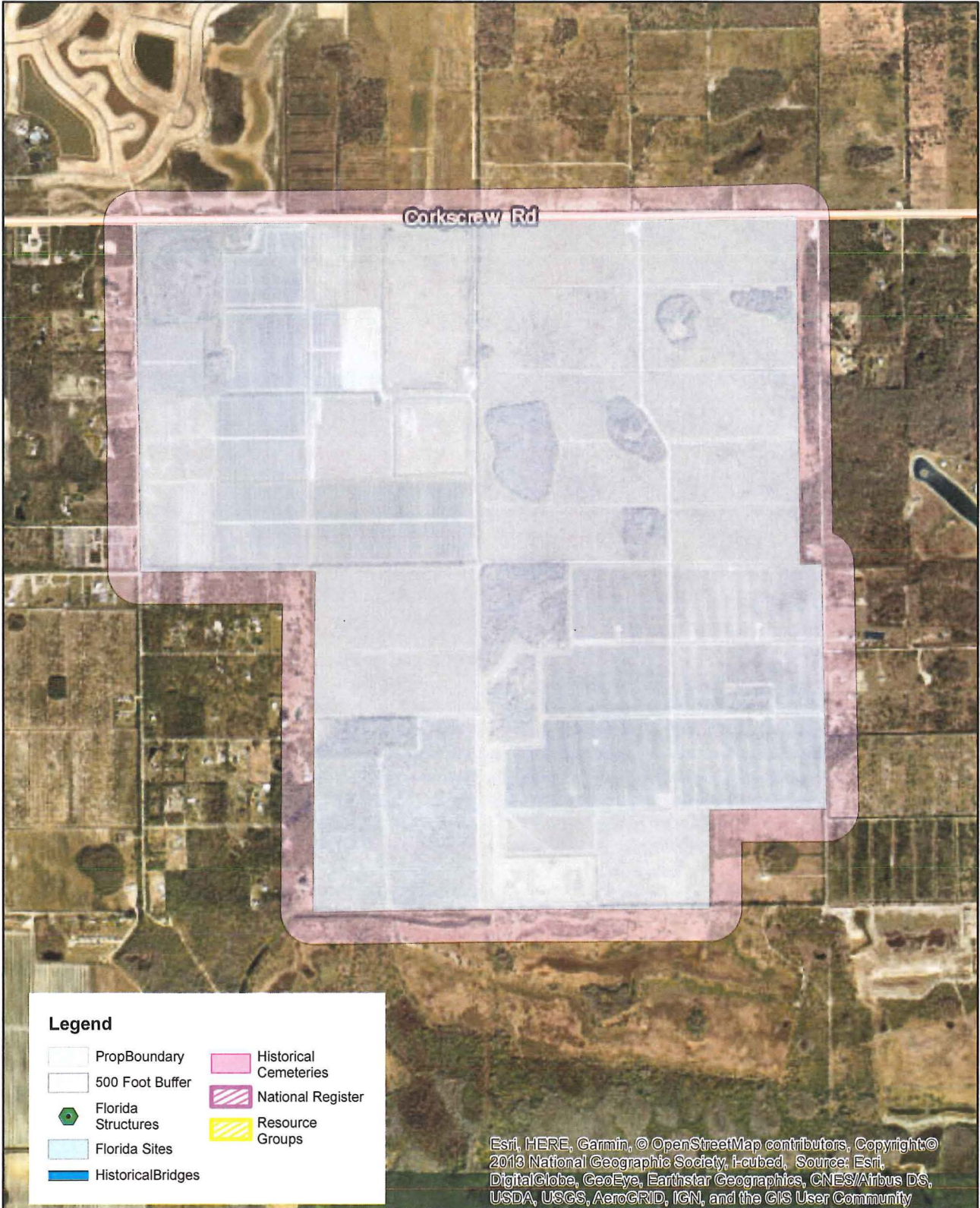
Sincerely,

Cody VanderPloeg
Archaeological Data Analyst
Florida Master Site File
Cody.VanderPloeg@dos.myflorida.com

Cultural Resource Search

500 Foot Buffer

Lee County



0 0.15 0.3 0.6 0.9 1.2 Miles

September 2019

Verdana Village – Traffic Benefits

The proposed text amendment seeks to permit 100,000 square feet of Neighborhood Commercial uses in association with projects over 2,000 acres. It is the intent of the applicant that the concurrent Vardana Village MPD will utilize the square footage allowed by the text amendment to establish a grocery anchored retail center, which will be a community destination expected to capture its primary and secondary market area within 5 and 7 miles of the site, respectively. Vardana Village is ideally situated on east Corkscrew Road away from the high traffic area of the Ben Hill Griffin Parkway intersection located more than 8 miles to the west. The only existing grocery store within the Corkscrew Road corridor is located at Shoppes of Grande Oak off Ben Hill Griffin Parkway. With the continuous growth of new developments east of Bella Terra, over 4,523 dwelling units are currently approved within the EEPCO, the proposed grocery anchored retail center at Vardana Village is needed and will not only serve the EEPCO developments but will also offer shopping opportunities for over 5,400 dwelling units in the existing residential communities east of Ben Hill Griffin Parkway.

As the proposed Master Concept Plan for the Vardana Village MPD demonstrates, the site identified for the Neighborhood Commercial development is easily accessible and is enhanced by the existing and emerging traffic circulation patterns along the Corkscrew Road corridor:

1. The EEPCO developments (WildBlue, The Place and Vardana Village) alone, will add 4,825 new residential units in the immediate vicinity of Vardana Village.
2. The current grocery store site at Shoppes of Grande Oak, requires customers traveling from the Vardana Village site to the east to negotiate a left-turn at the Ben Hill Griffin entrance followed by another left-turn at the congested Ben Hill Griffin/Corkscrew Road intersection to make the over 8 mile return trip east on Corkscrew Road.
3. The proposed grocery store at Vardana Village is expected to alleviate existing and future traffic on Corkscrew Road by providing an alternative to the existing grocery store at Shoppes of Grande Oak and reduces the travel distance by half.
4. With the buildout of Vardana Village, it is projected that 369 existing and future trips (PM peak hour) would potentially be diverted away from the high traffic areas near Ben Hill Griffin Parkway and towards moderate traffic areas of Corkscrew Road to the east.
5. The ZTIS estimates that 32% of the total external ITE trip generation to and from Vardana Village will remain east of Bella Terra and WildBlue.
6. The well balanced land use mix of retail and amenities offered at Vardana Village is expected to reach a 25% internal capture rate.
7. The signal at Bella Terra and WildBlue entrances will improve trip-making for these developments to and from the east.
8. Vardana Village will also provide new shopping opportunities and shorter drives for residents (WildBlue and Center Place) and for businesses from the eastern Alico Road corridor.
9. The proposed Publix retail center will be a convenient destination for employees/workers from adjacent construction sites and industries throughout the day.

VERDANA VILLAGE - EEPKO TEXT AMENDMENT
COMPREHENSIVE PLAN AMENDMENT
TRAFFIC STUDY

Project #19524

September 12, 2019

Prepared by:
DAVID PLUMMER & ASSOCIATES, INC.
2149 McGregor Boulevard
Fort Myers, Florida 33901



Since 1978

VERDANA VILLAGE - EEPKO TEXT AMENDMENT
COMPREHENSIVE PLAN AMENDMENT
TRAFFIC STUDY

Introduction

The Verdana Village – EEPKO Text Amendment (the Project) is located on Corkscrew Road, east of Alico Road in Lee County, Florida. The Project includes the Pepperland, Verdana, and CAM40 properties, Exhibit 1.

The applicant is requesting a comprehensive plan amendment (CPA) to allow a maximum residential density of 2,520 single-family residential units, and 100,000 square feet of commercial uses. The purpose of this report is to provide a traffic analysis in support of the proposed CPA application.

Executive Summary

The results of this CPA transportation assessment are as follows.

1. The Long Range – 20-year horizon analysis identified that no modifications to the Lee County MPO 2040 Needs Plan or Lee Plan Map 3A are needed as a result of the proposed CPA.
2. The requested development associated with the CPA is anticipated to occur after Year 2024. As such, there would be no development or impacts within the Short Range – 5-year CIP horizon.

Transportation Methodology

The traffic study has been prepared in accordance with requirements including: i) The Lee Plan; ii) Lee County Application for a Comprehensive Plan Amendment; iii) Lee County MPO 2040 Transportation Plan; and iv) Chapter 163.3180 Concurrency, F.S.

Consistent with Lee County’s Application for a Comprehensive Plan Amendment (Appendix A), this CPA traffic study provides a Long Range – 20-year horizon analysis. The Long Range – 20-year horizon analysis provides a comparison of future road segment traffic conditions in Year 2040 on the Lee County MPO’s 2040 LRTP Highway Cost Feasible Plan network both “without” and “with” the proposed CPA.

The purpose of the Short Range – 5-year CIP horizon analysis is to evaluate future road segment traffic conditions to determine the effect of the land use change on the Capital Improvements Element. In this case, however, the Short Range – 5-year CIP horizon analysis is not applicable as

the requested development associated with the CPA is anticipated to occur after 2024. As such, there would be no changes to the existing approved development and impacts within the Short Range – 5-year CIP horizon.

Study Area

In accordance with Lee County’s Application for a Comprehensive Plan Amendment, the study includes a review of projected roadway conditions within a 3-mile radius of the site. The study area therefore extends west along Corkscrew Road to Alico Road and east along Corkscrew Road for three miles.

Existing Road Network

The existing road network is shown in Exhibit 1. The primary east-west road serving the area is Corkscrew Road, which connects US 41 in Lee County with SR 82 in Collier County. Alico Road extends from Corkscrew Road north to Green Meadows Road and then west to US 41. Both of these roads are two-lane roads within the study area.

Scheduled and Planned Road Improvements

The Lee County MPO 2040 LRTP consists of two highway transportation plans: 1) the 2040 Highway Needs Plan; and 2) the 2040 Highway Cost Feasible Plan. The two highway plans are the subject of this CPA traffic analysis and described below.

2040 Highway Needs Plan

The MPO 2040 LRTP Highway Needs Plan identifies improvements that are considered to be the future roadway “needs” to support the anticipated county-wide demands. Currently, there are no planned improvements identified in the 2040 LRTP Highway Needs Plan within the three-mile study area.

2040 Highway Cost Feasible Plan

The MPO 2040 LRTP Highway Cost Feasible Plan identifies the needed improvements listed above that are considered to be financially feasible for construction, based on anticipated priorities and future revenues.

The adopted 2040 Cost Feasible Plan roadway improvements in the study area included the following.

2040 Cost Feasible Plan Improvements

<u>Roadway</u>	<u>From</u>	<u>To</u>	<u># of Lanes</u>
Alico Road	Airport Haul Rd.	Alico Connector	2L to 4L
Alico Connector	Alico Rd.	SR 82	0L to 4L
Corkscrew Road	Grande Oak Wy.	Bella Terra Blvd.	2L to 4L
	Bella Terra Blvd.	Alico Rd.	2L to 4L

Land Use Parameters

The proposed CPA increases the maximum allowable development to a total of 2,520 single-family residential units, and 100,000 square feet of commercial uses. Accessory/ancillary commercial uses (amenities located behind community gated entrances) are not considered for this transportation assessment and are conservatively assumed to have no effect on the Project’s net new external trip generation (i.e. reduced internal capture).

For the Long Range – 20-year horizon analysis, full build-out of the Project was assumed. Traffic Analysis Zone #3345 was used to represent this development in the FDOT District 1 Regional Planning Model (DIRPM). This new zone connects with Corkscrew Road about four miles east of Alico Road.

Development Parameters

<u>Land Use</u>	<u>Without CPA</u>	<u>With CPA</u>	<u>Net Change</u>
Single Family (d.u.)	2,200	2,520	+320
Commercial (sq. ft.)	0	100,000	+100,000

In regards to the CPA Short Range – 5-year CIP horizon analysis, the Project is not anticipated to be developed within the next 5-year period. As such, there would be no changes to the existing approved development and impacts within the Short Range – 5-year CIP horizon.

Level of Service Standards

Roadway level of service (LOS) standards generally vary depending upon whether the road is a State, County or City road and whether the road is in an urban or rural area. Furthermore, State roads on the FDOT Strategic Intermodal System (SIS) generally have more stringent LOS standards than other roads.

The Florida DOT LOS standards will apply to State-maintained facilities. For County roads, the LOS standards adopted in the Lee Plan will apply. Those standards, identified in the Lee Plan, are as follows.

Level of Service Standards

<u>Roadway</u>	<u>LOS Standard</u>
State Roads (Urban)	D
State Roads (Transitioning, Rural)	C
County Roads	E

Long Range – 20-Year Horizon (Year 2040) Comparative Travel Model Assignments

The adopted Lee County MPO travel model was used to project future 2040 traffic conditions, both without and with the proposed CPA. The future road network used for these travel model assignments was the Lee County MPO 2040 Highway Cost Feasible Plan network.

The MPO 2040 model zonal data was adjusted to more closely reflect existing and approved developments along Corkscrew Road east of Ben Hill Griffin Parkway. These developments included Stoneybrook, Wildcat Run, Corkscrew Crossing, The Preserve at Corkscrew, Bella Terra and Corkscrew Shores. In addition, the developments in the EEPCO (Environmental Enhancement & Preservation Communities Overlay) Study were reflected in the model that included WildBlue, The Place, Pepperland and Verdana. The revisions to the MPO zonal data for the Corkscrew area developments are shown in Appendix B.

The CPA travel model is available for download from the following link:
ftp://ftpfm.dplummer.com/Public/19531_VerdanaVillageEEPCOTextAmendment

Year 2040 Traffic Conditions Without the CPA

The study area included roadway segments within a three-mile radius of the Project. Exhibit 2 provides the results of the year 2040 travel model assignment for without the proposed CPA. For each road segment, the most representative link volumes from the travel model assignment were used in the segment analysis. All analysis data are identified in Exhibit 2 and with documentation provided in Appendix C.

As shown in Exhibit 2, no road segments within the study area are expected to have level of service issues in 2040 without the proposed CPA.

Year 2040 Traffic Conditions With the CPA

The proposed CPA build-out parameters were converted to socioeconomic data for TAZ #3345 that represents the Project in the travel model, Appendix B. Based on the travel model, the proposed CPA generates 18,348 peak season, weekday, average daily traffic (PSWADT).

The study area included roadway segments within a three-mile radius of the Project. Exhibit 3 provides the results of the year 2040 travel model assignment with the proposed CPA. For each road segment, the most representative link volumes from the travel model assignment were used in the segment analysis. All link analysis data are identified in Exhibit 3 and with documentation provided in Appendix C.

As shown in Exhibit 3, no road segments within the study area are expected to have level of service issues in 2040 without the proposed CPA. Therefore, no modifications to the Lee County MPO 2040 Needs Plan or Lee Plan Map 3A are needed as a result of the proposed CPA.

Short Range – 5-Year (Year 2024) CIP Horizon Analysis

The Short Range – 5-year CIP horizon analysis is not required as the requested development associated with the CPA is anticipated to occur after 2024. As such, there would be no changes to the existing approved development and impacts within the Short Range – 5-year CIP horizon.

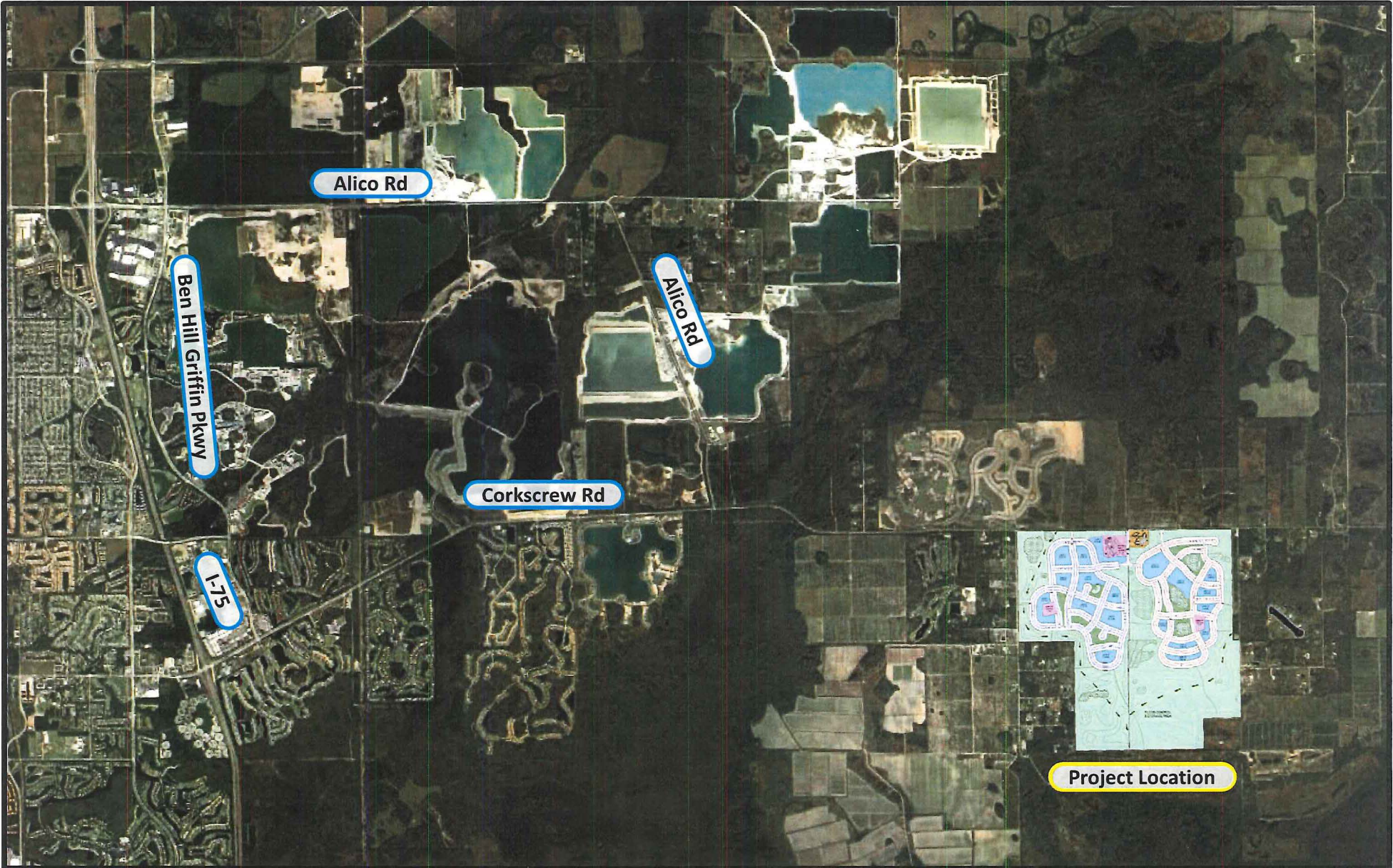
Traffic Mitigation

Traffic mitigation for the Project will be assessed as part of the zoning/development order review process.

Conclusions

The results of this CPA transportation assessment are as follows.

1. The Long Range – 20-year horizon analysis identified that no modifications to the Lee County MPO 2040 Needs Plan or Lee Plan Map 3A are needed as a result of the proposed CPA.
2. The requested development associated with the CPA is anticipated to occur after Year 2024. As such, there would be no development or impacts within the Short Range – 5-year CIP horizon.



EEPCO TEXT AMENDMENT

Project Location

19531/0919

EXHIBIT 2

**BEPCO TEXT AMENDMENT
FUTURE (2040) TRAFFIC CONDITIONS WITHOUT CPA
DIRECTIONAL PEAK HOUR, PEAK SEASON**

ROADWAY	FROM	TO	# of Lanes ¹	LOS Facility Type	LOS Std. ²	LC PCS ³	2040 PSWADT ⁴		AADT	K Factor ⁵	Two-way Peak Hour Volume	D Factor ⁶		Directional Peak Hr. Vol.		Directional Service Volumes ⁶					LOS V/C		2040 LOS				Directional Service Volumes ⁶				Lanes Needed	Additional Lanes Needed	
							MOCF ⁵	Traffic ⁴				Dir1	Dir2	Dir1	Dir2	LOS A	LOS B	LOS C	LOS D	LOS E	Std.	Dir1	Dir2	Dir1	Dir2	1	2	3	4	Lanes			Lanes
												NB/EB	SB/WB	NB/EB	SB/WB							NB/EB	SB/WB	NB/EB	SB/WB								
Corkscrew Rd	Alieo Rd	Corkscrew Farms	21U	LC_UFH_2L	E	PCS 70	22,623	0.867	19,600	0.093	1,820	0.56	0.44	1,020	800	130	420	850	1,210	1,640	1,640	0.62	0.49	D	C	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	Corkscrew Farms	Project	21U	LC_UFH_2L	E	PCS 70	16,975	0.867	14,700	0.093	1,370	0.56	0.44	770	600	130	420	850	1,210	1,640	1,640	0.47	0.37	C	C	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	Project	TPI Rd	21U	LC_UFH_2L	E	PCS 70	7,444	0.867	6,500	0.093	600	0.56	0.44	340	260	130	420	850	1,210	1,640	1,640	0.21	0.16	B	B	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	TPI Rd	East	21U	LC_UFH_2L	E	PCS 70	2,167	0.867	1,900	0.093	180	0.56	0.44	100	80	130	420	850	1,210	1,640	1,640	0.06	0.05	A	A	1,640	3,590	5,380	7,173	2	Add	0 L	

FOOTNOTES:

- (1) Lee County MPO 2040 Long Range Transportation Plan Highway Cost Feasible Plan number of lanes.
- (2) Lee County roadway LOS standard used for county roadways (LOS E), FDOT roadway LOS standard used for state roadways (LOS D for Urban and LOS C for Rural/Transitional).
- (3) Lee County permanent count station from [Lee County Traffic Count Report 2018](#).
- (4) PSWADT from 2040 travel model assignment without proposed CPA (current LU designation) on MPO 2040 Cost Feasible road network.
- (5) Adjustment factors per [Lee County Traffic Count Report 2018](#).
- (6) Lee County Generalized Peak Hour Service Volumes (April 2016) used for county roads. FDOT Generalized Peak Hour Directional Volumes (December 2012) used for state roads.

EXHIBIT 3

**EEPCO TEXT AMENDMENT
FUTURE (2040) TRAFFIC CONDITIONS WITH CPA
DIRECTIONAL PEAK HOUR, PEAK SEASON**

ROADWAY	FROM	TO	# of Lanes ¹	LOS Facility Type	LOS Std. ²	LC PCS ³	2040		AADT	K Factor ³	Two-way Peak Hour Volume	D Factor ⁵		Directional Peak Hr. Vol.		Directional Service Volumes ⁶					LOS V/C		2040 LOS				Directional Service Volumes ⁶				Lanes Needed	Additional Lanes Needed	
							PSWADT Traffic ⁴	MOCF ⁵				Dir1	Dir2	Dir1	Dir2	LOS A	LOS B	LOS C	LOS D	LOS E	Std.	Dir1	Dir2	Dir1	Dir2	Lane	Lanes	Lanes	Lanes	Lanes			Lanes
Corkscrew Rd	Alico Rd	Corkscrew Farms	2LU	LC_UFH_2L	E	PCS 70	23,106	0.867	20,000	0.093	1,860	0.56	0.44	1,040	820	130	420	850	1,210	1,640	1,640	0.63	0.50	D	C	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	Corkscrew Farms	Project	2LU	LC_UFH_2L	E	PCS 70	17,891	0.867	15,500	0.093	1,440	0.56	0.44	810	630	130	420	850	1,210	1,640	1,640	0.49	0.38	C	C	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	Project	TPI Rd	2LU	LC_UFH_2L	E	PCS 70	8,642	0.867	7,500	0.093	700	0.56	0.44	390	310	130	420	850	1,210	1,640	1,640	0.24	0.19	B	B	1,640	3,590	5,380	7,173	2	Add	0 L	
Corkscrew Rd	TPI Rd	East	2LU	LC_UFH_2L	E	PCS 70	2,906	0.867	2,500	0.093	230	0.56	0.44	130	100	130	420	850	1,210	1,640	1,640	0.08	0.06	B	A	1,640	3,590	5,380	7,173	2	Add	0 L	

FOOTNOTES:

- (1) Lee County MPO 2040 Long Range Transportation Plan Highway Cost Feasible Plan number of lanes.
- (2) Lee County roadway LOS standard used for county roadways (LOS E), FDOT roadway LOS standard used for state roadways (LOS D for Urban and LOS C for Rural/Transitioning).
- (3) Lee County permanent count station from [Lee County Traffic Count Report 2018](#).
- (4) PSWADT from 2040 travel model assignment with proposed CPA on MPO 2040 Cost Feasible road network.
- (5) Adjustment factors per [Lee County Traffic Count Report 2018](#).
- (6) Lee County Generalized Peak Hour Service Volumes (April 2016) used for county roads. FDOT Generalized Peak Hour Directional Volumes (December 2012) used for state roads.

APPENDIX A

LEE COUNTY CPA APPLICATION
(TRAFFIC CIRCULATION ANALYSIS)





Lee County Board of County Commissioners
 Department of Community Development
 Division of Planning
 Post Office Box 398
 Fort Myers, FL 33902-0398
 Telephone: (239) 533-8585
 FAX: (239) 485-8344

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT

PROJECT NAME: _____

PROJECT SUMMARY:

Plan Amendment Type: Normal Small Scale DRI

APPLICANT – PLEASE NOTE:

Answer all questions completely and accurately. Please print or type responses. If additional space is needed, number and attach additional sheets. The total number of sheets in your application is: _____

Submit **3** copies of the complete application and amendment support documentation, including maps, to the Lee County Division of Planning.

Once staff has determined that 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, Board of County Commissioners hearings, and State Reviewing Agencies. Staff will notify the applicant prior to each hearing or mail out.

I, the undersigned owner or authorized representative, hereby submit this application and the attached amendment support documentation. The information and documents provided are complete and accurate to the best of my knowledge.

 Signature of Owner or Authorized Representative

 Date

 Printed Name of Owner or Authorized Representative

I. APPLICANT/AGENT/OWNER INFORMATION (Name, address and qualification of additional planners, architects, engineers, environmental consultants, and other professionals providing information contained in this application.)

Applicant: _____
Address: _____
City, State, Zip: _____
Phone Number: _____ Email: _____

Agent*: _____
Address: _____
City, State, Zip: _____
Phone Number: _____ Email: _____

Owner(s) of Record: _____
Address: _____
City, State, Zip: _____
Phone Number: _____ Email: _____

* This will be the person contacted for all business relative to the application.

II. REQUESTED CHANGE

A. TYPE: (Check appropriate type)

- Text Amendment
- Future Land Use Map Series Amendment (Maps 1 thru 24)

List Number(s) of Map(s) to be amended: _____

1. Future Land Use Map amendments require the submittal of a complete list, map, and one set of mailing labels of all property owners and their mailing addresses, for all property within 500 feet of the perimeter of the subject parcel. The list and mailing labels may be obtained from the Property Appraisers office. The map must reference by number or other symbol the names of the surrounding property owners list. The applicant is responsible for the accuracy of the list and map.

At least 15 days before the Local Planning Agency (LPA) hearing, the applicant will be responsible for posting signs on the subject property, supplied by the Division of Planning, indicating the action requested, the date of the LPA hearing, and the case number. An affidavit of compliance with the posting requirements must be submitted to the Division of Planning prior to the LPA hearing. The signs must be maintained until after the final Board adoption hearing when a final decision is rendered.

III. PROPERTY SIZE AND LOCATION OF AFFECTED PROPERTY (for amendments affecting development potential of property)

A. Property Location:

1. Site Address: _____
2. STRAP(s): _____

B. Property Information:

- Total Acreage of Property: _____
Total Acreage included in Request: _____
Total Uplands: _____
Total Wetlands: _____
Current Zoning: _____
Current Future Land Use Designation: _____
Area of each Existing Future Land Use Category: _____
Existing Land Use: _____

C. State if the subject property is located in one of the following areas and if so how does the proposed change affect the area:

- Lehigh Acres Commercial Overlay: _____
Airport Noise Zone 2 or 3: _____
Acquisition Area: _____
Joint Planning Agreement Area (adjoining other jurisdictional lands): _____
Community Redevelopment Area: _____

D. Proposed change for the subject property:

E. Potential development of the subject property:

1. Calculation of maximum allowable development under existing FLUM:

- Residential Units/Density _____
Commercial intensity _____
Industrial intensity _____

2. Calculation of maximum allowable development under proposed FLUM:

- Residential Units/Density _____
Commercial intensity _____
Industrial intensity _____

IV. AMENDMENT SUPPORT DOCUMENTATION

At a minimum, the application shall include the following support data and analysis. These items are based on comprehensive plan amendment submittal requirements of the State of Florida, Department of Community Affairs, and policies contained in the Lee County Comprehensive Plan. Support documentation provided by the applicant will be used by staff as a basis for evaluating this request. To assist in the preparation of amendment packets, the applicant is encouraged to provide all data and analysis electronically. (Please contact the Division of Planning for currently accepted formats.)

A. General Information and Maps

NOTE: For each map submitted, the applicant will be required to provide a reduced map (8.5" x 11") for inclusion in public hearing packets.

The following pertains to all proposed amendments that will affect the development potential of properties (unless otherwise specified).

1. Provide any proposed text changes.
2. Provide a current Future Land Use Map at an appropriate scale showing the boundaries of the subject property, surrounding street network, surrounding designated future land uses, and natural resources.
3. Provide a proposed Future Land Use Map at an appropriate scale showing the boundaries of the subject property, surrounding street network, surrounding designated future land uses, and natural resources.
4. Map and describe existing land *uses* (not designations) of the subject property and surrounding properties. Description should discuss consistency of current uses with the proposed changes.
5. Map and describe existing zoning of the subject property and surrounding properties.
6. 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.
7. A copy of the deed(s) for the property subject to the requested change.
8. An aerial map showing the subject property and surrounding properties.
9. If applicant is not the owner, a letter from the owner of the property authorizing the applicant to represent the owner.

B. Public Facilities Impacts

NOTE: The applicant must calculate public facilities impacts based on a maximum development scenario (see Part II.H.).

1. Traffic Circulation Analysis: The analysis is intended to determine the effect of the land use change on the Financially Feasible Transportation Plan/Map 3A (20-year horizon) and on the Capital Improvements Element (5-year horizon). Toward that end, an applicant must submit the following information:

Long Range – 20-year Horizon:

- a. Working with Planning Division staff, identify the traffic analysis zone (TAZ) or zones that the subject property is in and the socio-economic data forecasts for that zone or zones;
- b. Determine whether the requested change requires a modification to the socio-economic data forecasts for the host zone or zones. The land uses for the proposed change should be expressed in the same format as the socio-economic forecasts (number of units by type/number of employees by type/etc.);
- c. If no modification of the forecasts is required, then no further analysis for the long range horizon is necessary. If modification is required, make the change and provide to Planning Division staff, for forwarding to DOT staff. DOT staff will rerun the FSUTMS model on the current adopted Financially Feasible Plan network and determine whether network modifications are necessary, based on a review of projected roadway conditions within a 3-mile radius of the site;
- d. If no modifications to the network are required, then no further analysis for the long range horizon is necessary. If modifications are necessary, DOT staff will determine the scope and cost of those modifications and the effect on the financial feasibility of the plan;
- e. An inability to accommodate the necessary modifications within the financially feasible limits of the plan will be a basis for denial of the requested land use change;
- f. If the proposal is based on a specific development plan, then the site plan should indicate how facilities from the current adopted Financially Feasible Plan and/or the Official Trafficways Map will be accommodated.

Short Range – 5-year CIP horizon:

- a. Besides the 20-year analysis, for those plan amendment proposals that include a specific and immediated development plan, identify the existing roadways serving the site and within a 3-mile radius (indicate laneage, functional classification, current LOS, and LOS standard);
- b. Identify the major road improvements within the 3-mile study area funded through the construction phase in adopted CIP's (County or Cities) and the State's adopted Five-Year Work Program;
Projected 2030 LOS under proposed designation (calculate anticipated number of trips and distribution on roadway network, and identify resulting changes to the projected LOS);
- c. For the five-year horizon, identify the projected roadway conditions (volumes and levels of service) on the roads within the 3-mile study area with the programmed improvements in place, with and without the proposed development project. A methodology meeting with DOT staff prior to submittal is required to reach agreement on the projection methodology;
- d. Identify the additional improvements needed on the network beyond those programmed in the five-year horizon due to the development proposal.

2. Provide an existing and future conditions analysis for (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 should include (but is not limited to) the following (see the Lee County Concurrency Management Report):

- Franchise Area, Basin, or District in which the property is located;
- Current LOS, and LOS standard of facilities serving the site;
- Projected 2030 LOS under existing designation;
- Projected 2030 LOS under proposed designation;
- Existing infrastructure, if any, in the immediate area with the potential to serve the subject property.
- Improvements/expansions currently programmed in 5 year CIP, 6-10 year CIP, and long range improvements; and
- Anticipated revisions to the Community Facilities and Services Element and/or Capital Improvements Element (state if these revisions are included in this amendment).
- Provide a letter of service availability from the appropriate utility for sanitary sewer and potable water.

In addition to the above analysis for Potable Water:

- 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.
- Include the current demand and the projected demand under the existing designation, and the projected demand under the proposed designation.
- Include the availability of treatment facilities and transmission lines for reclaimed water for irrigation.
- 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; and
 - f. Schools.

In reference to above, the applicant should supply the responding agency with the information from Section's II and III for their evaluation. This application should include the applicant's correspondence to the responding agency.

C. 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 use 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 Flood Insurance Rate Map effective August 2008.
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, state or 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).

D. Impacts on Historic Resources

List all historic resources (including structure, districts, and/or archeologically 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 archeological sensitivity map for Lee County.

E. Internal Consistency with the Lee Plan

1. Discuss how the proposal affects established Lee County population projections, Table 1(b) (Planning Community Year 2030 Allocations), 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. This analysis should include an evaluation of all relevant policies under each goal and objective.
3. Describe how the proposal affects adjacent local governments and their comprehensive plans.
4. List State Policy Plan and Regional Policy Plan goals and policies which are relevant to this plan amendment.

F. Additional Requirements for Specific Future Land Use Amendments

1. Requests involving Industrial and/or categories targeted by the Lee Plan as employment centers (to or from)
 - a. State whether the site is accessible to arterial roadways, rail lines, and cargo airport terminals,
 - b. Provide data and analysis required by Policy 2.4.4,
 - c. The affect of the proposed change on county's industrial employment goal specifically policy 7.1.4.

2. Requests moving lands from a Non-Urban Area to a Future Urban Area
 - a. Demonstrate why the proposed change does not constitute Urban Sprawl. Indicators of sprawl may include, but are not limited to: low-intensity, low-density, or single-use development; 'leap-frog' type development; radial, strip, isolated or ribbon pattern type development; a failure to protect or conserve natural resources or agricultural land; limited accessibility; the loss of large amounts of functional open space; and the installation of costly and duplicative infrastructure when opportunities for infill and redevelopment exist.
 3. Requests involving lands in critical areas for future water supply must be evaluated based on policy 2.4.2.
 4. Requests moving lands from Density Reduction/Groundwater Resource must fully address Policy 2.4.3 of the Lee Plan Future Land Use Element.
- G. Justify the proposed amendment based upon sound planning principles
Be sure to support all conclusions made in this justification with adequate data and analysis.
- H. Planning Communities/Community Plan Area Requirements
If located in one of the following planning communities/community plan areas, provide a meeting summary document of the required public informational session.
- Not Applicable
 - Alva Community Plan area [Lee Plan Objective 26.7]
 - Buckingham Planning Community [Lee Plan Objective 17.7]
 - Caloosahatchee Shores Community Plan area [Lee Plan Objective 21.6]
 - Captiva Planning Community [Lee Plan Policy 13.1.8]
 - North Captiva Community Plan area [Lee Plan Policy 25.6.2]
 - Estero Planning Community [Lee Plan Objective 19.5]
 - Lehigh Acres Planning Community [Lee Plan Objective 32.12]
 - Northeast Lee County Planning Community [Lee Plan Objective 34.5]
 - North Fort Myers Planning Community [Lee Plan Policy 28.6.1]
 - North Olga Community Plan area [Lee Plan Objective 35.10]
 - Page Park Community Plan area [Lee Plan Policy 27.10.1]
 - Palm Beach Boulevard Community Plan area [Lee Plan Objective 23.5]
 - Pine Island Planning Community [Lee Plan Objective 14.7]

AFFIDAVIT

I, _____, 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.

Signature of Applicant

Date

Printed Name of Applicant

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me on _____ (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

(Name typed, printed or stamped)

APPENDIX B

CORKSCREW AREA DEVELOPMENT – TRAFFIC ANALYSIS ZONES



APPENDIX

**CORKSCREW ROAD CORRIDOR
AREA TRAFFIC ANALYSIS ZONES**

	TAZ	Approved	LC Aerial Rooftops	MPO Zonal Data			ised Zonal
				2010	2026	2040	2040
Stoneybrook	3651						
SF		NA	634	979	1,057	1,126	903
MF		NA	382	248	314	372	382
Total		1,285	1,016	1,227	1,371	1,498	1,285
Industrial Employees							284
Commercial Employees		1,126	NA	130	84	44	1,126
Service Employees		360	NA	409	556	685	360
Total Employees							1,770
School Enrollments		1,200	NA	909	958	1,000	1,200
Hotel		125	0	0	0	0	125
Wildcat Run	3654						
SF		358	297	249	288	323	358
MF		292	108	63	72	79	292
Total		650	405	312	360	402	650
Industrial Employees							0
Commercial Employees		0	0	8	12	15	0
Service Employees		0	0	194	212	228	0
Total Employees							0
Corkscrew Crossing	3655						
SF		563	0				
MF		62	0				
Total		625	0				
The Preserve at Corkscrew	3655						
SF		441	252				
MF		0	0				
Total		441	252				
Commercial Employees ⁽¹⁾		75 ⁽¹⁾	0				
Service Employees ⁽¹⁾		40 ⁽¹⁾	0				
Bella Terra	3655						
SF		1,054	1,076				
MF		0	816				
Total		1,054	1,892				
Commercial Employees ⁽²⁾		225 ⁽²⁾	0				
Service Employees ⁽²⁾		120 ⁽²⁾	0				
Corkscrew Shores (Woods)	3655						
SF		550 ⁽³⁾	0				
MF		0	0				
Total		550	0				
Commercial Employees ⁽⁴⁾		44	0				
Service Employees ⁽⁴⁾		0	0				
Aggregated totals for 4 developments	3655						
SF		2,583	1,328	1,109	1,257	1,386	2,583
MF		1,140	816	263	321	354	1,140
Total		3,723	2,144	1,372	1,578	1,740	3,723
Industrial Employees							73
Commercial Employees		344	NA	58	36	17	344
Service Employees		160	NA	159	216	265	160
Total Employees							577

Footnotes:

- ⁽¹⁾ Lee Co. List of Approved Projects -- 40,000 sq. ft. of mixed commercial, assumed to include 30,000 sq. ft. retail and 10,000 sq. ft. office
⁽²⁾ Lee Co. List of Approved Projects -- 120,000 sq. ft. of total commercial, assumed to include 90,000 sq. ft. retail and 30,000 sq. ft. office.
⁽³⁾ News-Press, July 13, 2014 -- just opened for sales; when completed, 648 homes.
⁽⁴⁾ Corkscrew Woods Rezoning TIS, April 10, 2012 -- 2,500 sq. ft. of high turnover sit down restaurant and 15,000 sq. ft. of special retail ce
⁽⁵⁾ Lee County EEPSCO Study - Table A-1: 2026 EEPSCO Model Lane Use Data.

APPENDIX
CORKSCREW ROAD CORRIDOR
EEPCO TRAFFIC ANALYSIS ZONES

	TAZ	Approved	LC Aerial Rooftops	MPO Zonal Data			ised Zonal
				2010	2026	2040	2040
WildBlue							
	3340						
SF		1,096	0	0	0	0	1,000
MF		0	0	0	0	0	0
Total		1,096	0	0	0	0	1,000
Industrial Employees		0					0
Commercial Employees ⁽¹⁾		100	0	0	0	0	100
Service Employees		0	0	0	0	0	0
Total Employees							100
School Enrollments		0	0	0	0	0	0
Corkscrew Farms							
	3350						
SF		1,325	400	0	0	0	1,325
MF		0	0	0	0	0	0
Total		1,325	0	0	0	0	1,325
Industrial Employees							
Commercial Employees		0	0	0	0	0	0
Service Employees		0	0	0	0	0	0
Total Employees							0
School Enrollments		0	0	0	0	0	0
Pepperland							
	3331						
SF		700	0	0	0	0	700
MF		0	0	0	0	0	0
Total		700	0	0	0	0	700
Industrial Employees							0
Commercial Employees ⁽²⁾		0	0	0	0	0	0
Service Employees		0	0	0	0	0	0
Total Employees							0
School Enrollments		0	0	0	0	0	0
Verdana (Corkscrew Groves)							
	3345						
SF		1,460	0	0	0	0	1,460
MF		0	0	0	0	0	0
Total		1,460	0	0	0	0	1,460
Industrial Employees							0
Commercial Employees ⁽²⁾		0	0	0	0	0	0
Service Employees		0	0	0	0	0	0
Total Employees							0
School Enrollments		0	0	0	0	0	0
CAM40							
	3354						
SF		40	0	0	0	0	40
MF		0	0	0	0	0	0
Total		40	0	0	0	0	40
Industrial Employees							0
Commercial Employees		0	0	0	0	0	0
Service Employees		0	0	0	0	0	0
Total Employees							0
School Enrollments		0	0	0	0	0	0

⁽²⁾ Proposed Project includes 30,000 sq. ft. of commercial retail: 30,000 sq. ft x 2.5 employees per 1,000 sq. ft. = 150 commercial employees.

⁽⁴⁾ Lee County EEPCO Study - Table A-1: 2026 EEPCO Model Lane Use Data.

**VERDANA VILLAGE - EEPCCO TEXT AMENDMENT
DEVELOPMENT PROGRAM**

MASTER DEVELOPMENT SUMMARY (2032)

#19531

		TRACT > TAZ >	TAZ 3345	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	Total
Residential												
SF	d.u.	SF DU	2,400	0	0	0	0	0	0	0	0	2,400
MF	d.u.	MF DU	0	0	0	0	0	0	0	0	0	0
Senior Adult (Det)	d.u.	SA DU	0	0	0	0	0	0	0	0	0	0
	SubTotal		2,400	0	0	0	0	0	0	0	0	2,400
Hotel	rooms	HOTEL RM	0	0	0	0	0	0	0	0	0	0
Industrial	sq. ft.		0	0	0	0	0	0	0	0	0	0
Retail	sq. ft.		100,000	0	0	0	0	0	0	0	0	100,000
Office												
General	sq. ft.		0	0	0	0	0	0	0	0	0	0
Medical	sq. ft.		0	0	0	0	0	0	0	0	0	0
	SubTotal		0	0	0	0	0	0	0	0	0	0
Recreation												
Golf	holes		0	0	0	0	0	0	0	0	0	0
Community Park	acres		0	0	0	0	0	0	0	0	0	0
Regional Park	acres		0	0	0	0	0	0	0	0	0	0
Recreation Center	sq. ft.		0	0	0	0	0	0	0	0	0	0
Library	sq. ft.		0	0	0	0	0	0	0	0	0	0
Community												
Hospital	beds		0	0	0	0	0	0	0	0	0	0
ALF	units		0	0	0	0	0	0	0	0	0	0
Churches	sq. ft.		0	0	0	0	0	0	0	0	0	0
Elementary School	students		0	0	0	0	0	0	0	0	0	0
Middle School	students		0	0	0	0	0	0	0	0	0	0
High School	students		0	0	0	0	0	0	0	0	0	0
Government/Civic	sq. ft.		0	0	0	0	0	0	0	0	0	0

ZDATA (FSUTMS) POPULATION & EMPLOYMENT ESTIMATE

ZDATA - POPULATION / OCCUPANCY

		TRACT > TAZ >	TAZ 3345	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	Total
SF	per/d.u. 2.00 26% 5% 1.48	Tot. Pop. PCTVNP PCTVAC Perm. Pop.	4,800	0	0	0	0	0	0	0	4,800
MF	per/d.u. 1.50 0% 0% 1.50	Tot. Pop. PCTVNP PCTVAC Perm. Pop.	0	0	0	0	0	0	0	0	0
Senior Adult	per/d.u. 1.50 0% 0% 1.50	Tot. Pop. PCTVNP PCTVAC Perm. Pop.	0	0	0	0	0	0	0	0	0
Hotel	occip/m 2.00	Occupants	0	0	0	0	0	0	0	0	0

ZDATA - EMPLOYMENT

		TRACT > TAZ >	TAZ 3345	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	TAZ x	Total
Industrial	emp/1k 0.50	IND Emp	0	0	0	0	0	0	0	0	0
Commercial											
General Retail	emp/1k 2.50	Emplys	250	0	0	0	0	0	0	0	250
Golf	emp/holes 1.74	Emplys	0	0	0	0	0	0	0	0	0
	SubTotal	COM Emp	250	0	0	0	0	0	0	0	250
Service											
Hotel	emp/rm 0.90	Emplys	0	0	0	0	0	0	0	0	0
General Office	emp/1k 4.50	Emplys	0	0	0	0	0	0	0	0	0
Medical Office	emp/1k 4.05	Emplys	0	0	0	0	0	0	0	0	0
Community Park	emp/acre 0.27	Emplys	0	0	0	0	0	0	0	0	0
Regional Park	emp/acre 0.27	Emplys	0	0	0	0	0	0	0	0	0
Recreation Center	emp/1k 0.50	Emplys	0	0	0	0	0	0	0	0	0
Library	emp/1k 0.20	Emplys	0	0	0	0	0	0	0	0	0
Hospital	emp/bed 1.00	Emplys	0	0	0	0	0	0	0	0	0
ALF	emp/unit 0.65	Emplys	0	0	0	0	0	0	0	0	0
Church	emp/1k 0.50	Emplys	0	0	0	0	0	0	0	0	0
Elementary School	emp/student 0.08	Emplys	0	0	0	0	0	0	0	0	0
Middle School	emp/student 0.19	Emplys	0	0	0	0	0	0	0	0	0
High School	emp/student 0.22	Emplys	0	0	0	0	0	0	0	0	0
Government/Civic	emp/1k 3.00	Emplys	0	0	0	0	0	0	0	0	0
	Sub Total	SER Emp	0	0	0	0	0	0	0	0	0
Total Employment	Total	TOT Emp	250	0	0	0	0	0	0	0	250



APPENDIX C
TRAFFIC DATA



CONVERSION FACTORS



PCS 70 - Corkscrew Rd west of Ben Hill Griffin Pkwy

2018 AADT = 22,900 VPD

Hour	EB	WB	Total
0	0.57%	0.42%	0.49%
1	0.31%	0.25%	0.28%
2	0.23%	0.17%	0.20%
3	0.21%	0.15%	0.18%
4	0.37%	0.41%	0.39%
5	0.96%	1.49%	1.24%
6	2.19%	4.97%	3.67%
7	4.68%	7.59%	6.23%
8	5.00%	7.47%	6.31%
9	5.28%	6.38%	5.87%
10	5.68%	6.35%	6.03%
11	6.28%	6.57%	6.44%
12	6.88%	6.77%	6.82%
13	6.94%	7.00%	6.97%
14	6.97%	7.12%	7.05%
15	7.52%	6.77%	7.12%
16	8.54%	6.60%	7.51%
17	9.19%	6.39%	7.70%
18	7.29%	5.16%	6.16%
19	4.90%	3.78%	4.30%
20	3.91%	2.98%	3.42%
21	3.07%	2.55%	2.79%
22	1.95%	1.77%	1.86%
23	1.08%	0.89%	0.98%

Month of Year	Fraction
January	1.11
February	1.17
March	1.18
April	1.1
May	0.98
June	0.9
July	0.83
August	0.81
September	0.89
October	1
November	1.02
December	0.99

Directional Factor		
AM	0.69	WB
PM	0.56	EB

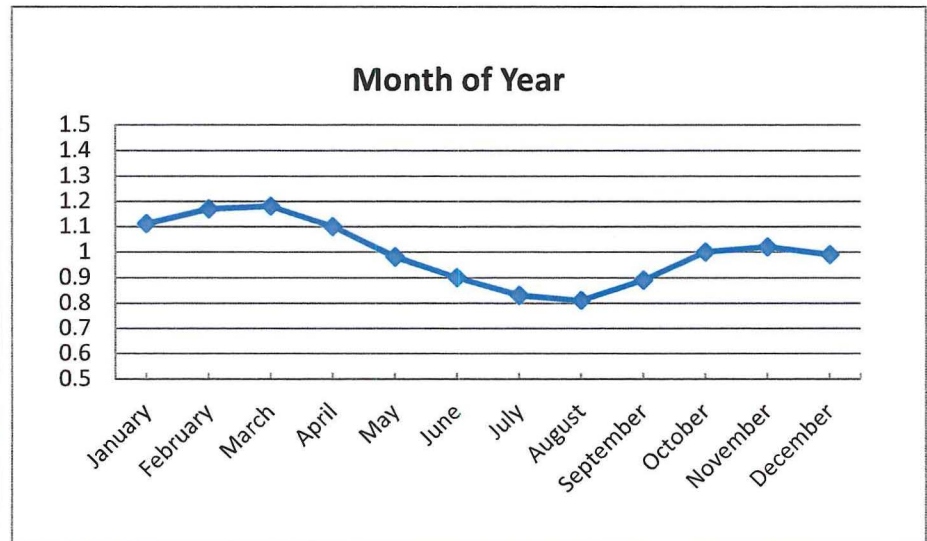
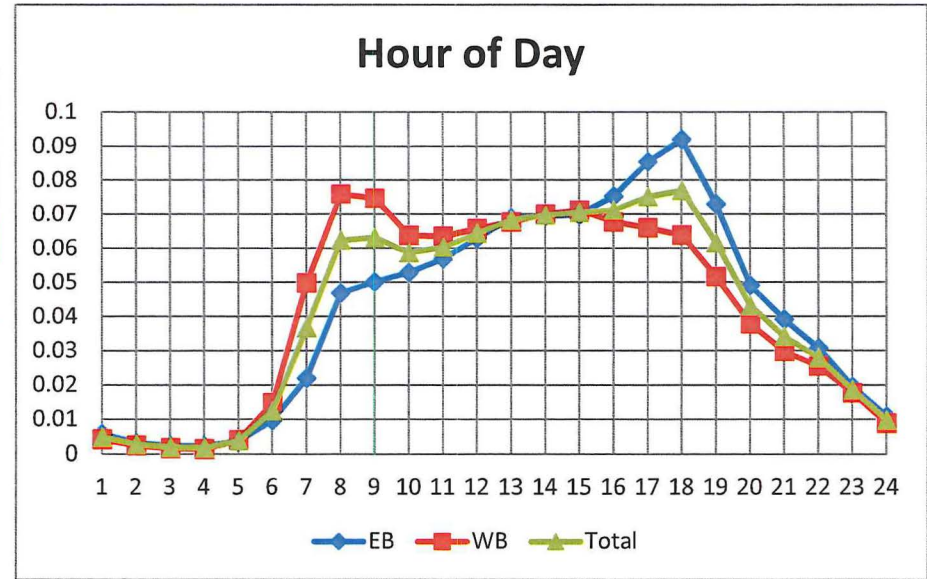
$$MOCF = 1 / ((1.11 + 1.17 + 1.18) / 3) = 0.867$$

$$K100 = 0.093$$

$$D = 0.56(EB)$$

Day of Week	Fraction
Sunday	0.71
Monday	1.01
Tuesday	1.08
Wednesday	1.08
Thursday	1.09
Friday	1.13
Saturday	0.9

Design Hour Volume		
#	Volume	Factor
5	2324	0.101
10	2280	0.100
20	2246	0.098
30	2233	0.098
50	2192	0.096
100	2140	0.093
150	2089	0.091
200	2062	0.090



GENERALIZED PEAK HOUR DIRECTIONAL SERVICE VOLUMES



**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.						

ENHANCEMENTS FOR VERDANA VILLAGE
PROVIDING REGIONAL BENEFIT AND FLOOD CONTROL

PROVIDED FOR PROJECT COMMERCIAL and ADDITIONAL DENSITY

1. Increase the Verdana Village storm water storage design capacity from 100cfs to 650cfs to assist in accommodating future off-site flows anticipated from a master Lee County regional flood mitigation study.
2. Provide a hydraulic connection from the eastern flow-way at The Place at Corkscrew development located on the north side of Corkscrew Road to the northwest corner of the Verdana Village property. This work is a regional benefit that reconnects a historic flow-way pattern that includes the construction of dual 30" flow-way culverts under Corkscrew Road.
3. Increase the size of up to 13 internal flow-way sub-basin water control concrete weir structures from a 6' wide opening to up to 36' wide to assist in accommodating future off-site flows anticipated from a master Lee County regional flood mitigation study.
4. Enlarge onsite flow-way design widths and size of internal water storage basins equivalent to approximately 700,000cy of additional excavation to assist in accommodating future off-site flows anticipated from a master Lee County regional flood mitigation study.
5. Increase the design height of the project (including flow-way areas) perimeter berms from an approximate 1.5'-3' average height to 2.5'-5' high to assist in accommodating future off-site flows anticipated from a master Lee County regional flood mitigation study.
6. Provide a plugged hydraulic connection in the northeast corner of Verdana Village to allow the County the future ability to hydraulically connect stormwater from the north to the south side of Corkscrew Road. This is a regional benefit as it will divert water from continuing west into areas prone to flooding and assists in accommodating future flows anticipated from a master Lee County regional flood mitigation study. Verdana Village will not be responsible to treat or provide ground water or surface water monitoring of any flows entering Verdana Village from offsite.
7. Provide a hydraulic connection from the east side of Carter Road to intercept a historical flow-way and route 50% of the flows into the Verdana Village property and the balance of 50% flow to continue south along Carter Road towards the Panther Island Mitigation Bank lands. This enhancement is a regional benefit in

that it reconnects a historic flow-way pattern involving the construction of flow-way culverts under Carter Road and flow-way re-establishment into the project to assist in accommodating future flows anticipated from a master Lee County regional flood mitigation study.

8. Provide 65% open space within Verdana Village which is 5% more than the existing Lee County requirement and previously approved Pepperland Ranch and Verdana developments which is equivalent to approximately 106 acres, which is a regional benefit.
9. Provide 56% conservation easement within Verdana Village which is 1% more than the existing Lee County requirement and previously approved Pepperland Ranch and Verdana developments which is equivalent to approximately 21 acres, which is a regional benefit.
10. Provide significant residential pod setbacks to the project boundaries, wider than what was provided in the original Verdana approval, which is a regional benefit.
11. Provide residential pod clustering by combining the previously approved Pepperland Ranch and Verdana developments into the proposed Verdana Village, as suggested by the Dover Kohl study and required by the Tier 1 property mapping. The rear yard setback from the project residential pod to the Panther Island Mitigation Bank to the south was 500' in the original Verdana approval but now exceeds 3,000'.
12. Verdana Village will require all single-family lots (not including attached units) within the development to provide a minimum average of 150' deep lots with a minimum 40' front yard setback. This results in a reduction of development area within a residential pod and promotes a more rural setting which is a regional benefit.



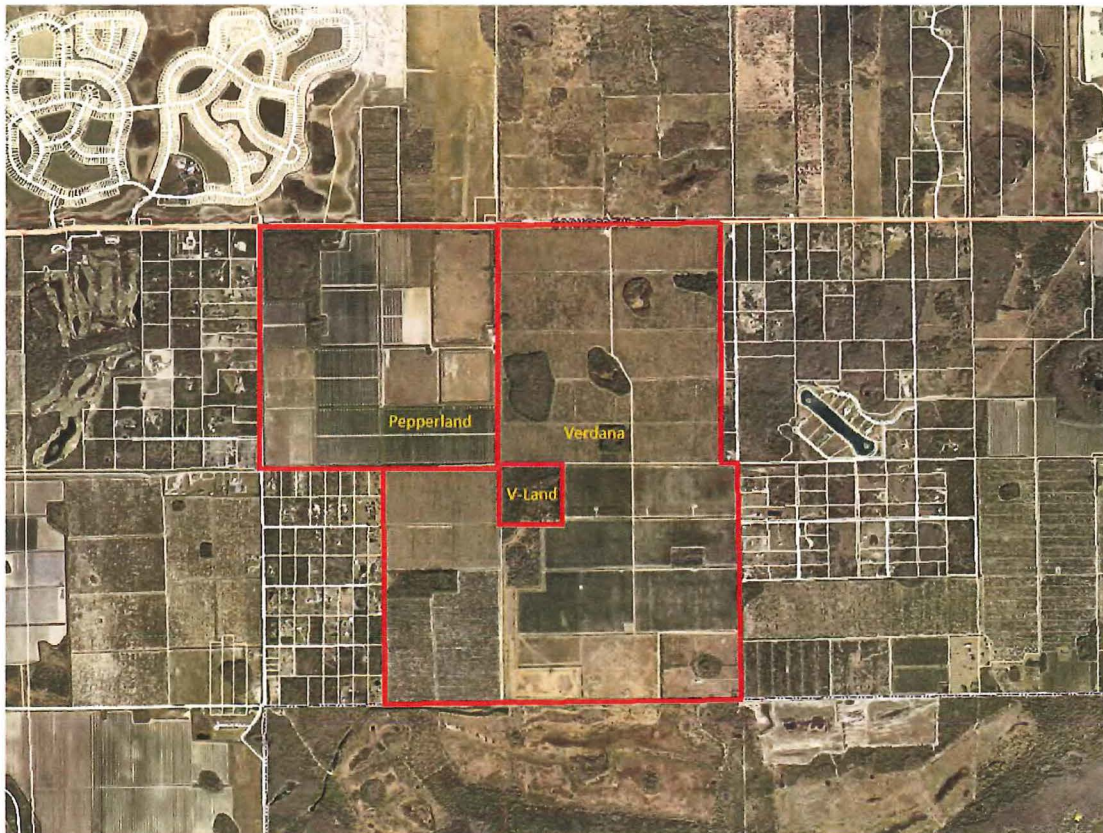
MAXWELL HENDRY SIMMONS
real estate appraisers & consultants

Market Study (Needs Analysis)

Verdana Commercial Uses
18500/19500 Corkscrew Road
Estero, Lee County, Florida

Date of Study: 8 July 2019

File Name: 19065303 - TPL-LAND-SUB, LLC - Market Study



Prepared For
TPL-LAND-SUB, LLC
c/o Morris Depew Associates, Inc.
29141 Cleveland Avenue
Fort Myers, Florida 33901

Info@MHSappraisal.com
(239) 337-0555 • MHSappraisal.com
12600 World Plaza Lane, Building #63 • Fort Myers, FL 33907



MAXWELL · HENDRY · SIMMONS
real estate appraisers & consultants

8 July 2019

TPL-LAND-SUB, LLC
c/o Morris Depew Associates, Inc.
29141 Cleveland Avenue
Fort Myers, Florida 33901

Attention: Ms. Tina Ekblad

Re: Market study (needs analysis) for the proposed commercial uses located at 18550/19500 Corkscrew Road, Estero, Lee County, Florida

Dear Ms. Ekblad:

As you requested, we have performed a market study on the above-referenced property, which is described within the attached report. We have evaluated the need for additional commercial space in order to support the existing and proposed residential build-out in the East Corkscrew neighborhood (defined herein). Note that the entire subject property consists of three distinct tracts, known respectively as Verdana, Pepperland, and V-Land (CAM40).

Within this report, we have endeavored to answer three questions:

- Can the East Corkscrew neighborhood (defined herein) support a grocery-anchored center?
 - Yes, there will be 24,000± people living in the East Corkscrew neighborhood and adjacent communities at the current proposed build-out and there are numerous similar grocery-anchored center's around Lee County serving that population size.
- How quickly will the commercial development be needed?
 - Very soon, as the East Corkscrew neighborhood will be built-out in less than a decade at current growth rates.
- What if more commercial square footage is approved in the East Corkscrew neighborhood, will that create conflict?
 - No, the build-out population of 24,000± might actually support as much as 3.9M± square feet of commercial space based on comparisons from around Lee County.

In summary, based upon multiple comparisons of competitive neighborhoods and their existing levels of commercial space, it is reasonable to expect that at build-out of the existing and proposed residential dwelling units in the East Corkscrew neighborhood, demand for commercial space will either meet or exceed 200,000 square feet.

Thank you for the opportunity to be of service.

Respectfully submitted,

Matthew H. Caldwell
State-Certified General Real Estate Appraiser
RZ 2901

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SEC. I: INTRODUCTION

OWNER OF RECORD:	Pan Terra Holdings, LTD / TPL-LAND-SUB, LLC / V-Land-Sub, LLC
ADDRESS:	18500/19500 Corkscrew Road, Estero, Florida 33928
TAX ID:	29-46-27-00-00001.0000; 30-46-27-00-00001.0000; 31-46-27-00-00001.1000; 32-46-27-00-00001.0000; 32-46-27-00-00001.1000
LEGAL DESCRIPTION:	See Property Description section
SITE AREA:	2,138.26± acres
IMPROVEMENTS:	N/A (Only related to interim agricultural use)
ZONING / FUTURE LAND USE:	See Needs Analysis section
DATE OF STUDY:	23 May 2019
INTENDED USER:	This appraisal is made for the exclusive use of our client, TPL-LAND-SUB, LLC c/o Morris Depew Associates, Inc. and/or affiliates, and its use by others is strictly prohibited.
INTENDED USE:	This market study consists of a needs analysis that measures demand (if any) within the East Corkscrew neighborhood (defined herein) for additional commercial services. This demand is measured under the assumption that certain commercial approvals on nearby properties have already been granted. Further, emphasis is placed on measuring demand and capacities for grocery use in the context of dwelling units approved, but unbuilt, in the East Corkscrew neighborhood.



SEC. II: SCOPE OF WORK

EXTENT OF PROPERTY IDENTIFICATION

For this analysis, the subject property was identified via a legal description and research of public records. Reliance was placed primarily on information provided by the local public records, as well as information provided by our client.

The entire subject property currently features a mix of zoning (MPD, RPD, and AG-2) and future land uses (DR/GR and Wetlands), and is either already, or has a request to be, located within the Environmental Enhancement Preservation Conservation Overlay (EEPCO).

- The Verdana parcel has an approved MPD zoning resolution (Z-18-010) which outlines the development approvals, including 1,460 residential dwelling units and 30,000 square feet of accessory commercial uses and 25,000 of amenity uses.
- The Pepperland parcel has a recorded development agreement (IN# 2017000183852) which outlines the primary development rights secured through the RPD zoning resolution (Z-17-013) and per the terms of the Agreement, will not expire for twenty (20) years following the effective date of 15 August 2017. The principle item contained in the agreement is the allowance for up to 700 residential units, of either single-family, attached, and/or multi-family development. The zoning resolution further outlines that the subject can be developed with 638 units “by right” and the balance of 62 units can be achieved through Transfer of Development Rights (TDR). This approval also allows for 50,000 square feet of amenity use, of which 17,500 square feet can be accessory commercial uses. (Note that the list of allowable commercial accessory uses is more restrictive than that for Verdana.)
- The V-Land-Sub parcel, also known as CAM40, fills a “doughnut-hole” inside of the two larger parcels, within the EEPCO, and is zoned AG-2 with the majority of the future land use being Wetlands.

As with many of the recent large-scale developments along eastern Corkscrew Road, both of these zoning resolutions also require a “Flow-way agreement” for restoration of historic sloughs/wetlands and uplands and improvement of downstream flood conditions, by placing 55% of the property in conservation easements along with a minimum of 60% open space for the entire development.

The current owner/contracted buyer plans to submit a new site plan to consolidate the development footprint, distinct from initial versions associated with the MPD and RPD resolutions, in order to better achieve the EEPCO goals. This revised site plan would incorporate the V-Land (CAM40) parcel under the same planning dynamics for a proposed total of 2,400 units and up to 100,000 square feet of neighborhood commercial space (under the allowances of an amendment made to the Lee County Comprehensive Plan), with the commercial uses not being restricted to only accessory commercial use. This is a key distinction, as the existing commercial approvals on the subject property are for accessory commercial uses. While “accessory” designation may not necessarily prohibit use of the commercial development by residents outside of the immediate community, the purpose of an accessory commercial use is to principally serve the needs of the residents living “behind the gate”.

EXTENT OF INSPECTION

For the purposes of this analysis, Matthew H. Caldwell relied upon a previous exterior inspection of the subject property, conducted on 22 May 2019.



TYPE AND EXTENT OF DATA RESEARCH

This assignment is multi-faceted and studies the need for uses associated with the subject property. The study was commissioned to analyze real estate market conditions and economic & demographic trends surrounding the subject property to determine if there is sufficient need for the proposed allowable uses. The study includes a review of a variety of published sources, as well as a collection of primary data. Data research was conducted using the following sources:

- Public Records
- Local REALTOR® Association Multiple Listing Services (MLS)
- Loopnet
- CCIM/ESRI (Environmental Systems Research Institute)
- CoStar
- US Bureau of Labor Statistics
- US Census Bureau
- Information from contractors, brokers, and agents in the area

The primary emphasis of the data research concentrated on the subject's and the surrounding neighborhoods.



SEC. III: NEEDS ANALYSIS

SOUTHWEST FLORIDA / LEE COUNTY DATA





Lee County, named for Robert E. Lee, was created from Monroe County in 1887, and included the present-day Collier, Hendry, and Lee Counties. Lee County was split into the three (3) current counties in 1923. The present-day Lee County encompasses 1,212 square miles, with a variety of natural inland, coastal, and barrier island habitats and a year-round population of 618,754 as of the 2010 census. The county's western boundary is the Gulf of Mexico. The county contains a total of 803 square miles of land area and 200 ± square miles of inland water area. The county is ranked thirteenth in area in the state. The westerly flowing Caloosahatchee River bisects the county and is part of the cross-state Intracoastal Waterway. There are several incorporated municipalities in Lee County as follows:

City of Fort Myers: Incorporated in 1886. 48.31 Square Miles. 2017 Population: 79,943.

The oldest permanent settlement in Lee County, this was the site of Fort Myers, one of many military outposts utilized during the 2nd and 3rd Seminole Wars and the Civil War. As the county seat, the City is home to the majority of professional businesses in Lee County. The City has expanded their municipal boundaries considerably over the last decade through the use of annexation in an effort to diversify their tax base.

City of Cape Coral: Incorporated in 1970. 114.0 Square Miles. 2017 Population: 183,365.

Originally developed in 1957 by Leonard and Jack Rosen, owners of the Gulf American Land Corporation, Cape Coral is now the largest municipality, by population, in Lee County and is the second largest in land area in the State of Florida. As a pre-platted, traditionally designed subdivision, Cape Coral has an extreme degree of uniformity. The City is home to a large percentage of Lee County's workforce population.

City of Sanibel: Incorporated in 1974. 17.5 Square Miles. 2017 Population: 7,363.

Encompassing the geographical boundaries of Sanibel Island, the City was incorporated in response to State recommendations to develop high-density residential uses along the beaches and a high-traffic coastline causeway, among other issues. Nearly ½ of the island is set aside as natural preserve.

Town of Fort Myers Beach: Incorporated in 1995. 6.2 Square Miles. 2017 Population: 7,077.

Encompassing the geographical boundaries of Estero Island, the Town was incorporated in response to citizen desire for greater control over land development codes, among other issues.

City of Bonita Springs: Incorporated 1999. 33.0 Square Miles. 2017 Population: 56,088.

The City was incorporated in response to citizen desire for greater control over land development codes, among other issues. The City includes a portion of mainland Lee County and the adjacent islands. The City is home to the Naples/Fort Myers Greyhound Track, Shangri-La Hotel, Everglades Wonder Gardens, and the redeveloping Downtown Bonita Springs.

Village of Estero: Incorporated 2015. 30.0 Square Miles. 2017 Population: 33,048

Located immediately adjacent to the northern boundary of Bonita Springs, the Village was incorporated in response to citizen desire for greater control over local planning and facility decisions. The Village is home to Koreshan State Park, as well as Hertz Arena, Miromar Outlet, Coconut Point Mall, and Hertz World Headquarters.

There are many other unincorporated, yet distinct, communities in Lee County, both rural and suburban in nature. These include Alva, Bayshore, Boca Grande, Captiva, Corkscrew, Buckingham, Iona, Lehigh Acres, North Fort Myers, Pine Island, and San Carlos Park.



There are four basic factors that influence value according to *The Appraisal of Real Estate*, Fourteenth Edition. These factors include:

- I. Social Forces
- II. Economic Forces
- III. Governmental Forces
- IV. Environmental Forces

Each of the forces interacts, resulting in increases, decreases, or stabilization of property values. As a result, these forces also serve to directly affect the demand for real property in a particular area. The four forces that affect values are described as follows:

I. Social Forces

Population fluctuation has a significant impact on property values. The chart below demonstrates the change in population between the two most recent decennial Censuses.

	2018 (Est.)	2010	2000	CHANGE
COUNTY POPULATION ¹	754,210	618,754	440,888	+67.7% (2000 to 2017)

1. <https://www.census.gov/quickfacts/fact/table/leecountyflorida.colliercountyflorida/PST040217>

II. Economic Forces

Economic considerations involve the financial capacity of the inhabitants of a region to rent or own property and properly maintain it. These economic forces may include income levels, unemployment rates, the economic base of a region and the strength of development and construction.

	2018	2017	2016	2015
UNEMPLOYMENT RATE ²	3.4% (Annual)	3.9% (Annual)	4.6% (Annual)	5.0% (Annual)
AVERAGE WEEKLY WAGE ²	\$824 (3Q)	\$864 (4Q)	\$844 (4Q)	\$842 (4Q)
SINGLE-FAMILY MEDIAN PRICE ³	\$251,000 (Annual)	\$243,500 (Annual)	\$227,400 (Annual)	\$210,000 (Annual)
RETAIL VACANCY RATE ⁴	4.8% (4Q)	4.9% (4Q)	5.6% (4Q)	6.2% (4Q)
OFFICE VACANCY RATE ⁴	7.6% (4Q)	6.5% (4Q)	8.6% (4Q)	10.7% (4Q)
INDUSTRIAL VACANCY RATE ⁴	3.4% (4Q)	2.5% (4Q)	3.4% (4Q)	5.8% (4Q)

1. <https://www.census.gov/quickfacts/fact/table/leecountyflorida/PST045216>

2. <http://www.bls.gov/>

3. <http://www.floridarealtors.org/ResearchAndStatistics/Florida-Market-Reports/Index.cfm>

4. [CoStar](#)



III. Governmental Forces

The county government consists of a five-member board of county commissioners, elected to four-year terms within at-large districts. A non-elected county manager heads the government staff. Other elected officials in the county are sheriff, tax collector, supervisor of elections, clerk of the circuit court, and property appraiser. In addition, there are numerous special districts with independently elected boards, with the services provided ranging from fire protection to water & sewer service.

Services

The cities of Fort Myers, Cape Coral, and Sanibel each have their own police and fire protection. The Town of Fort Myers Beach has its own fire protection, but no police protection. Police protection for Fort Myers Beach is provided by the Lee County Sheriff's Department. The balance of the county is patrolled by the Florida State Highway Patrol and the Lee County Sheriff's Department. The police system is adequate. Lee County has experienced a decrease in the crime rate in recent years. Fire protection is also adequate as substations are situated in all portions of the county and is provided by independent special districts outside of the incorporated cities.

Utilities

CenturyLink is the primary telephone service provider for Southwest Florida. CenturyLink has a fiber optic backbone that has the ability to connect all of its central offices and maintain high network availability. Embarq and Telcove/Level 3 Communications are the local exchange carriers. These carriers have multiple survivable shared SONET rings. The rings are 100% fiber optic, backed up by fully redundant electronics and power sources, with mini rings inside and outside the major SONET ring.

The City of Fort Myers and some sections of Lee County receive their electricity from Florida Power and Light Company. The balance of Lee County receives its power from the Lee County Electric Cooperative. Gas is available from any one of a number of manufactured bottled gas dealers in the county. Natural gas is now available in many parts of Lee County provided by TECO. In early 2000, a new pipeline to the area extended service from the Tampa Bay region.

There is an adequate supply of potable water for business or private use either from the City of Fort Myers, the City of Cape Coral, the City of Bonita Springs, Florida Governmental Utility Authority, or from Lee County's water utility system. Areas of Lee County not covered by municipalities are serviced by Lee County Utilities and the Greater Pine Island Water Association. Sewer service is provided either by Lee County Utilities, Florida Governmental Utility Authority, or the city municipality.

Medical Services

Lee County has six general and two specialized hospitals, 16 nursing homes, 44 assisted living facilities, a veteran's clinic and several walk-in emergency facilities. Ambulance service in Lee County is operated as a department of the Lee County Emergency Service or is contracted with the independent fire districts.

Communications

The *Fort Myers News-Press*, the area's largest newspaper, is published daily. The *Daily Breeze* from Cape Coral is also published daily except Sunday. Several weekly newspapers serve different locations throughout Lee County, along with 41 radio stations and 8 local television stations.



Educational System

The county has a fully developed K4 through 12, public school system. There are also several private and parochial schools in the county. Florida Southwestern State College has a campus in Fort Myers, while Florida Gulf Coast University is located in south Lee County. In addition, there are also several private universities which service the area.

Transportation

There are four major north/south traffic arteries through Lee County and Fort Myers, which include U.S. 41, McGregor Boulevard, Interstate 75, and Summerlin Road. The major east/west arteries include State Road 78, Colonial Boulevard, College Parkway, Daniels Parkway, Alico Road, Estero Parkway, and Corkscrew Road.

The area is also served by two airports. Page Field, located within the city limits of Fort Myers, provides two runways for private aircraft and the terminal was recently upgraded. The Southwest Florida International Airport is located east of Interstate 75 along Treeline Avenue. The Southwest Florida International Airport underwent an expansion in September 2005, which included a 28-gate, two story terminal, as well as three concourses, a three story parking garage/rental car facility, and a new taxiway.

Land Use Control

The Lee County Local Planning Agency adopted a Comprehensive Land Use Plan in early 1984. This plan designates areas in Lee County for growth, new development, and environmental protection. This Comprehensive Plan helps to guide Lee County in its future growth and has been updated semi-annually to the present time. The Division of Community Development enforces all zoning regulations for the unincorporated areas of Lee County.

IV. Environmental Forces

The county has a sub-tropical climate. The average temperature is 74.4 degrees with a monthly mean high of 91.6 in the summer months and an average winter mean of 64.1 degrees. Rainfall averages approximately 52 inches annually with the heaviest rains during the summer months.

Conclusion / Life Cycle Stage

The subject market area is in the Growth stage of its life cycle. This market area experienced tremendous development from 2003-2005 and then an equally significant decline in property values from 2006-2011. All of the preceding factors contribute to the economy of Lee County. Although the rate of population increases has slowed since 2008 due to the overall slowdown in the national economy, historical trends demonstrate that the Lee County area is a desirable destination for in-migration. This is supported by a return to a net increase in in-migration exhibited during 2010 - 2013. The University of Florida's Bureau of Economic and Business Research, projects that as many as 150,000 new residents could potentially come to Lee County over the next ten years. Furthermore, according to this University of Florida study, the population of Lee County could be nearing one million by 2035, an increase of more than 400,000 over the next two decades. Even with the well documented housing, foreclosure and unemployment problems which plagued the region during the downturn, Lee County continued to rank among the top five counties in Florida for population growth. In addition, the overall attractiveness of the Southwest Florida weather and lifestyle indicate that demand characteristics for both housing and support facilities should be positive for the long term.



EAST CORKSCREW NEIGHBORHOOD



Note the subject properties highlighted in orange and red.

This area of Lee County represents one of the few remaining locations with large, open tracts available for development and all of the properties are located outside of the municipal limits of the Village of Estero. Most of this area is located in the Southeast Lee County Planning Community and was historically designated under the Comprehensive plan for only Density Reduction/Groundwater Resource (1 dwelling unit per 10 acres) and Wetlands (1 dwelling unit per 20 acres). However, the Board of County Commissioners has in recent years approved gross densities at 1 dwelling unit per acre with significant environmental restoration standards, focusing specifically on restoring historic sloughs (flow-ways) in order to improve downstream water quality and flood conditions in the Estero and Imperial Rivers.

The current large-scale projects in progress and/or ownerships greater than a Section (1 square mile) are shown above. The only projects which are under development currently are The Place at Corkscrew (highlighted in green), WildBlue (blue) and Corkscrew Shores (violet). The Place has demonstrated robust sales growth over the last year and has reduced the developer's build-out timeline by several years total, while sales began occurring in WildBlue in the 2nd Quarter of 2019. Also, Corkscrew Shores totals 648 units and is nearly built-out. Another similar project immediately ready for development in the adjacent San Carlos Planning Community is CenterPlace (yellow).

In addition to the large development tracts, there are two (2) active major aggregate mining operations currently in production (Florida Rock & Youngquist), both along Alico Road. Beyond this there are three (3) major agricultural landowners: Lipman (6 L's), Consolidated Citrus, and Troyer Bros. A portion of the Troyer Bros. and Consolidated Citrus properties are under possible consideration for conversion to an aggregate mine as well.



Most of the remaining vacant parcels have been acquired by either Lee County or South Florida Water Management District for conservation purposes, as well as protection of the Lee County Wellfield at the northeast corner of Corkscrew Road and Alico Road.

SUBJECT & EAST CORKSCREW NEIGHBORHOOD (0-5 MILE RADIUS)

While the subject falls within the larger Southeast Lee County Planning Community, in developing our analysis, we have determined to use a 5-mile radius as our limit of measurement, measured from the midpoint of the subject property along Corkscrew Road. This is based upon three key points.

The first is the traditional market expectation to review demand and supply in 1-, 3-, and 5-mile radii. This allows for standardized comparisons across markets and neighborhoods.

The second is consideration of the specific geography of East Corkscrew. The subject property lies nearly at the center of the neighborhood. A 5-mile radius captures nearly all existing residential development and is bounded by the incorporated limits of the Village of Estero on the west and by publicly owned conservation lands to the north, east, and west. This radius not only captures every parcel currently within the Environmental Enhancement Preservation Conservation Overlay (EEPCO), but also most all other large, privately held lands that could be developed with a use alternative to agriculture.

Lastly, we have considered the typical travel distance for grocery shopping in America. A 2015 study by the US Department of Agriculture analyzed grocery shopping preference.¹ For low-income/SNAP dependent shoppers, private transportation is a challenge to shopping and a neighborhood that lacks adequate food sales within a 0.5-mile radius can create “food deserts”. However, the current typical resident of the East Corkscrew neighborhood does not reflect this profile, and in our opinion, that will remain unchanged with future growth. According to this study, middle- and upper-income families which are not transportation challenged travel an average of 3.79 miles from home to their grocery of preference.

¹ “Most U.S. Households Do Their Main Grocery Shopping at Supermarkets and Supercenters Regardless of Income”, USDA, 3 August 2015

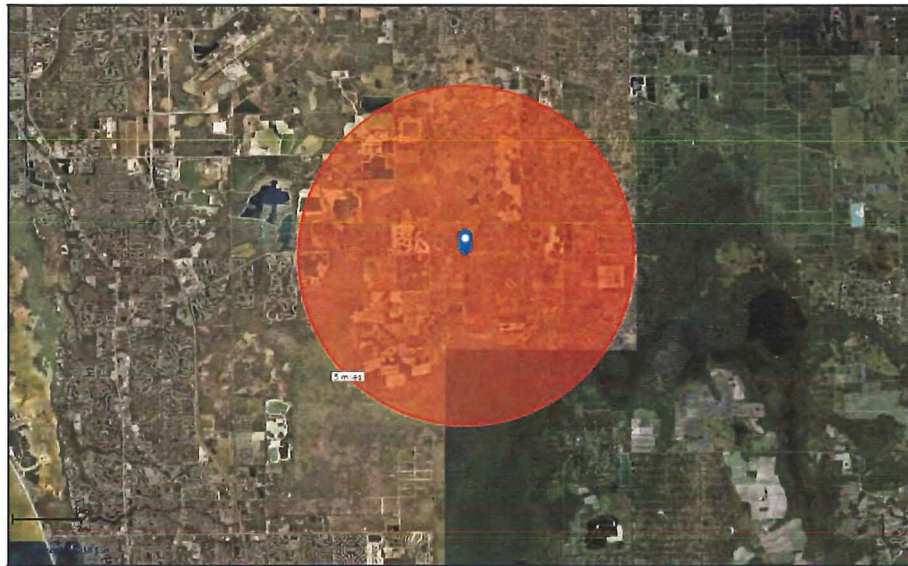


Taking all three of these facts into consideration, we have focused on the 5-mile radius for the forthcoming analysis. Note also that the aggregate data reflects conditions through 2017 and our further analysis involved additional adjustments for changes we have observed in 2018-2019.



18500/19500 Corkscrew Road

0-5 mile Radius



June 24, 2019

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Page 1 of 1

This map reflects the 5-mile radius surrounding the subject property (as measured from the midpoint of the subject along Corkscrew Road). The only two modern developments that fall entirely within this radius are The Place and Corkscrew Shores. This neighborhood has been historically rural and undeveloped, however in the coming years this will change substantially. Corkscrew Shores will build out at 648 units. The Place will build-out at 1,325 units. The subject is proposed for 2,400 units. Adding to this estimate of older/existing rural households of 400 units, this results in a total build-out within the 5-mile radius of 4,773 units.

This radius also captures the eastern edge of Bella Terra/Preserve and WildBlue. WildBlue will be 1,100 units. Bella Terra (1,960 units) and Preserve at Corkscrew (fka Cypress Shadows; 441 units) are both built-out.

Beyond this, there are also the rural communities of Wildcat Farms and Corkscrew (the original rural settlement) located at the far eastern end of Corkscrew Road. The nearest grocery centers for these residents are either located in Downtown Lehigh Acres (15 miles) or Immokalee (13 miles). The subject property will be a roughly 6.5-mile travel distance for these residents. The 2017 statistics for this area was 233 households with an average size of 3.19 persons and a population of 748 persons. In our opinion, this area will build out at around 400 households/units.

Taken altogether this commercial location could serve a total of 8,700± units with a current existing unit count, as of the end of 2018, of roughly 4,000±.

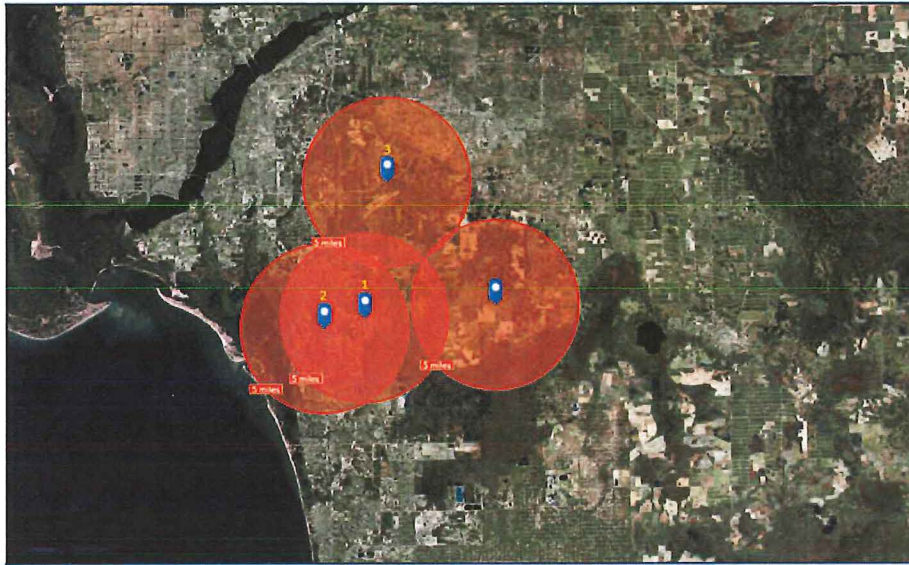


COMPARISON TO EXISTING GROCERY CENTERS



Comparison Properties

0-5 mile Radius



June 24, 2019

Source: *Site To Do Business, Business Analyst*

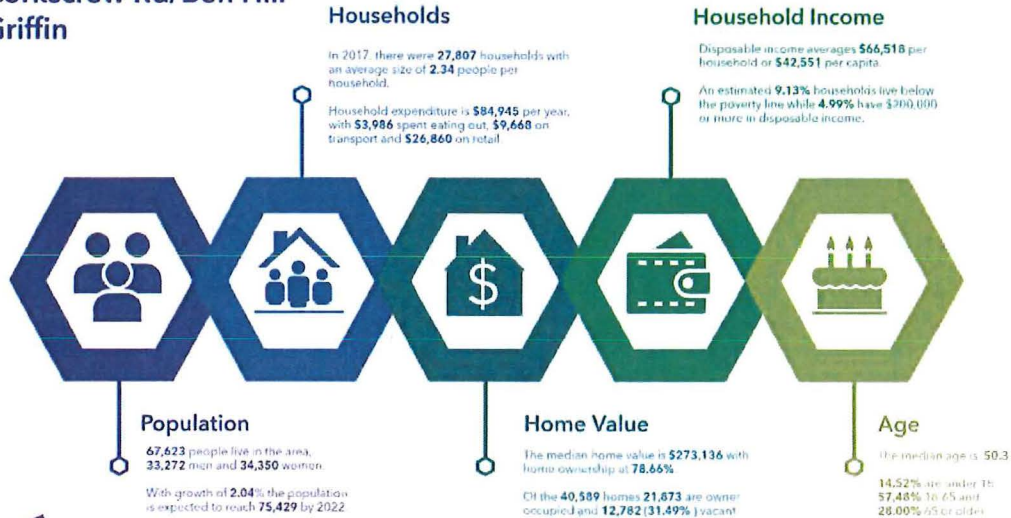
In considering competitive nearby locations, we have considered three grocery anchored shopping centers:

1. Corkscrew Road & Ben Hill Griffin Parkway
 - 20311 Grande Oak Shoppes Boulevard, Estero
 - 2002-built, 84,000± square feet (Gross Building Area)
2. Corkscrew Road & US 41
 - 21301 S Tamiami Trail, Estero
 - 1997-built, 82,000± square feet (Gross Building Area)
3. Daniels Parkway & Gateway Boulevard
 - 13111 Paul J Doherty Parkway, Fort Myers
 - 2017-built, 66,000± square feet (Gross Building Area)



Comparison 1 (2002-built grocery center)

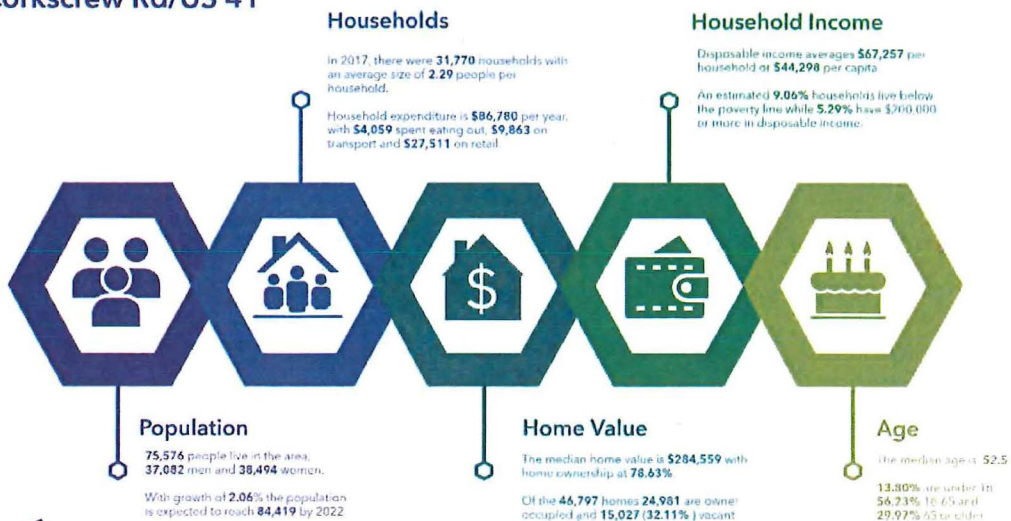
Corkscrew Rd/Ben Hill Griffin



Source: Site To Do Business, Business Analyst

Comparison 2 (1997-built grocery center)

Corkscrew Rd/US 41

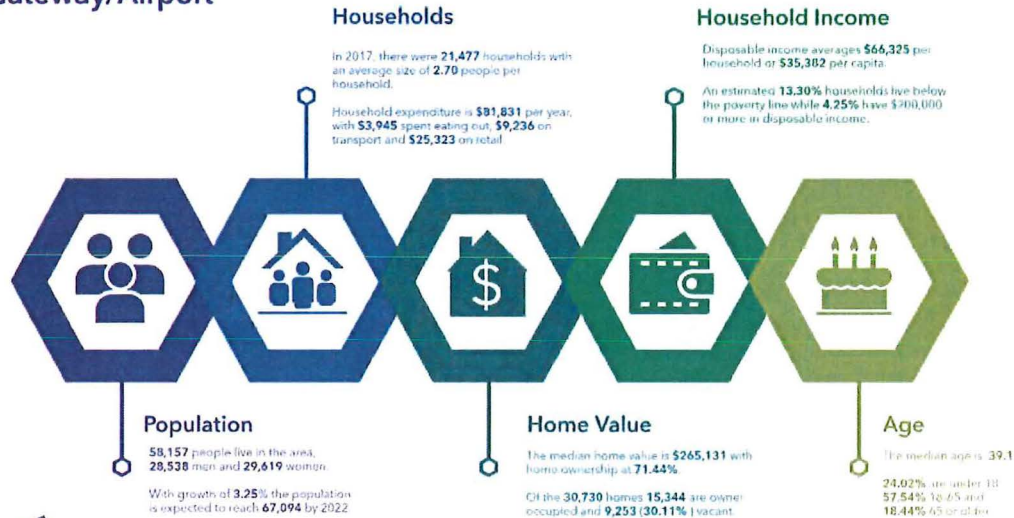


Source: Site To Do Business, Business Analyst



Comparison 3 (2017-built grocery center)

Gateway/Airport



Source: Site To Do Business, Business Analyst



Summary

An analysis of each of the three existing market areas (5-mile radius) is provided above. Each of these are similar in the likely design and layout of the proposed commercial use on the subject property. Each of these markets are very similar with higher than average income and household expenditures as compared to Lee County as a whole.

Both Comparison 1 and 2 are very similar in household size (2.34 & 2.29) and median age (50.3 & 52.5). And both locations serve a similar population size (27,807 & 31,770). Notably these two markets overlap one another with roughly half of each covering the other. Taken together, we estimate that each serves 15,000-20,000 residents. However, consider that the graphic/data in Comparison 1 does not reflect the additional future growth of WildBlue, CenterPlace, and Corkscrew Shores within that 5-mile radius. It is likely this growth will push this location beyond the ability to meet demand for grocery and related retail services, if it is not already been exceeded.

The supposition that the center in Comparison 1 has exceeded capacity can be concluded by considering Comparison 3. This location successfully serves 21,500± people, however the southern and eastern sides of the radius are totally vacant lands. And on the northern side, this radius overlaps with that of the grocery center located at the intersection of Colonial Boulevard and State Road 82, creating a similar dynamic as that between Comparisons 1 and 2. This leaves Comparison 3 likely serving less than 15,000± people.

We have also noted that at the time the centers in Comparisons 1 and 2 were built (2002 and 1997, respectively), the population of the Estero CDP (Census Designated Place) was roughly 12,100± and 7,600± respectively (based on 2000 Census population of 9,503). This suggests that each center was designed to serve roughly 6,000± from the immediate neighborhood. Although this geography (Estero CDP) does not cover the entire 5-mile radius for each center, it clearly indicates that a grocery-anchored center could support a population of at least roughly 6,000± in the East Corkscrew neighborhood.

Turning back then to the subject, our earlier estimate was for a near-term build-out of 8,700± units. Converting this to population to be served, we have considered the ratio of households/units to population in the subject market and the three comparisons. The subject as of 2017 (still heavily rural) was at 2.96 person per household, which is reflective of having the lowest median age out of this group, at 37.2. The adjacent rural community of Wildcat/Corkscrew is even younger at 32.3 years median age and an average household size of 3.19 persons. These are both similar to Comparison 3, with 2.70 persons and 39.1 median age, respectively. Both neighborhoods reflect families with children in the home. However, Comparisons 1 and 2 are far more reflective of retirees in both household size (2.34 & 2.29) and median age (50.3 & 52.5).

In our opinion, the subject market area will continue to be a more affordable option as compared with the center of Estero (Comparisons 1 and 2). This has been the geographical trend over the last three decades and we expect that this will continue. This is likely to then reflect a household size of around 2.75 persons, favoring the family user over the retiree. Applying this to the build-out of 8,700± units results in a build-out population of 23,925. Considering this, it is reasonable to expect that, at the least, commercial services similar to that provided in the three comparison markets would need to be provided in the East Corkscrew market upon build-out.



RATE OF GROWTH/BUILD-OUT

In order to gauge the rate at which these proposed units might be able to be absorbed, we have considered the rate of growth in Estero over the previous 29 years, since the 1990 Census.

	1990	Annual %	2000	Annual %	2010	Annual %	2018
Estero CDP	3,177	19.91%	9,503	13.79%	22,612		
Village of Estero					27,991	2.45%	33,474

Source: US Census, American Community Survey

Prior to the incorporation of the Village of Estero (2014), the US Census identified a CDP (Census Designated Place) for the 1990 and 2000 Census. The boundaries of the CDP and the current Village are not identical, but as the 2010 estimates reflect, they are very similar. Prior to the founding of Florida Gulf Coast University, all of Estero, from Estero Bay in the west out along Corkscrew Road to the subject market area, was rural, with very limited development along US 41, primarily consisting of mobile home parks and small retail uses.

When ALICO Corporation donated the land on the east side of I-75 between Alico Road and Corkscrew Road for the location of the University, speculative interest spiked in this community. Following the opening of the campus in 1998, development spread along both sides of the Interstate, US 41, and new corridors being built by Lee County. Taking the period of 1990-2010 together, they demonstrate an annual growth rate of 16.85% over those 20 years. Contrast this with the post-2010 rate of growth, which coincides with approaching near build-out of all remaining vacant parcels within the now-incorporated Village. Those that remain are almost entirely designated for commercial uses. The subject neighborhood of East Corkscrew not only shares the same physical characteristics as 1990's-era Estero but is essentially the only remaining location of large-scale vacant tracts in southern Lee County. Note that this period (1990-2010) includes the major recession of the mid-2000's, meaning that this 20-year period only reflected 15± years of robust growth.

Estimating that at the end of 2017, East Corkscrew and those neighborhoods directly adjacent had 4,000± existing units and a current proposed build-out of 8,700± units, that leaves 4,700± units to be absorbed. Applying an average annual growth rate of 17%, based on the 1990-2010 conditions in Estero, the East Corkscrew neighborhood would build-out in 2033, as shown below.

	2018	2019	2020	2021	2022	2023
17% Annual Growth	4,000	4,680	5,476	6,406	7,496	8,770
2.75/persons per HH	11,000	12,870	15,058	17,618	20,613	24,117

Source: US Census, American Community Survey



In order to test this estimate of the rate of growth, we have analyzed the latest absorption figures from Corkscrew Shores and The Place, the two communities with measurable recent sales data.

At Corkscrew Shores, the absorption has been as follows:

	2014 (2 mo)	2015	2016	2017	2018	2019 (5 mo)
Sales	8	110	153	119	114	50
Absorp (mo)	6	9	13	10	10	10
Annual Rate	11.11%	16.98%	23.61%	18.36%	17.59%	18.52%

Source: SWFL MLS & Public Records

At the Place, the absorption has been as follows:

	2018	2019 (5 mo)
Sales	277	114
Absorp (mo)	23	23
Annual Rate	20.91%	17.59%

Source: Developer

Both of these communities have shown a fairly consistent rate of absorption and, notably, they did not appear to cannibalize from each other during their overlapping periods. Considering the relatively rapid rate of growth historically demonstrated in the Village of Estero and the even faster rate of growth demonstrated by these two communities within the immediate neighborhood, it is not unreasonable to expect that the existing and proposed units for the East Corkscrew neighborhood will be absorbed in less than a decade. The demand for commercial uses to serve this neighborhood is not a distant proposition but will rather become a pressing need within a short-term timeframe.



ADDITIONAL COMMERCIAL ANALYSIS

In addition to the proposal to allow 100,000 square feet of commercial uses associated with the subject property, it is known that other property owners are likely to make similar proposals, adding as much as another 100,000 square feet of allowable commercial space. We are considering here if the build-out of the subject East Corkscrew neighborhood could absorb not only a grocery-anchored shopping center, but even more diverse commercial development.

In making this comparison, we have taken Comparisons 1 and 3 and analyzed the total square footage of commercial space within their respective 5-mile radii. We have excluded Comparison 2 from this analysis due to the heavy overlap with Comparison 1. In this context "commercial" is non-residential space, which includes industrial buildings.

Looking at Comparison 1, there is a total of 19.7M± square feet of commercial space. With 27,807 households, that's a ratio of 708 square feet per household/unit. Under Comparison 3, there is a total of 10.1M± square feet of commercial space. With 21,477 households, that's a ratio of 470 square feet per household/unit. This is a substantial difference in range, but easily explained as a reflection of the retail supply gap in the area of Comparison 1. Retail centers such as Miromar Outlets and Gulf Coast Town Center serve the entire Southwest Florida region, not just the population within the 5-mile radius.

This can be shown with a Retail Gap Analysis that reflects retail gap or retail leakage to identify any variations between the demand for retail goods and services, and the supply of retail goods and services in the relative market areas. In simple terms, positive gap (green) reflects those retail services that residents demand but must leave the 5-mile radius to secure. Negative gap (red) reflects those retail services that residents demand but are being overserved within the 5-mile radius, typically reflecting the presence of regional facilities designed to serve more than the local population.



Comparison 1 (2002-built grocery center)



Retail MarketPlace Profile

Corkscrew Rd/Ben Hill Griffin
20301 Grande Oak Shoppes Blvd, Estero, Florida, 33928
Ring Band: 0 - 5 mile radius

Prepared by Esri
Latitude: 26.43394
Longitude: -81.78930

Summary Demographics						
2019 Population						70,404
2019 Households						29,134
2019 Median Disposable Income						\$57,871
2019 Per Capita Income						\$42,474
2017 Industry Summary						
	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
Total Retail Trade and Food & Drink	44-45,722	\$1,307,449,885	\$1,557,287,064	-\$249,837,179	-8.7	648
Total Retail Trade	44-45	\$1,185,359,996	\$1,372,069,025	-\$186,709,029	-7.3	472
Total Food & Drink	722	\$122,089,888	\$185,218,039	-\$63,128,151	-20.5	177

Comparison 3 (2017-built grocery center)



Retail MarketPlace Profile

Gateway/Airport
12064-12406 Fuel Farm Rd, Fort Myers, Florida, 33913
Ring Band: 0 - 5 mile radius

Prepared by Esri
Latitude: 26.53556
Longitude: -81.74761

Summary Demographics						
2019 Population						59,563
2019 Households						22,030
2019 Median Disposable Income						\$54,512
2019 Per Capita Income						\$34,430
2017 Industry Summary						
	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
Total Retail Trade and Food & Drink	44-45,722	\$954,248,248	\$567,730,599	\$386,517,649	25.4	260
Total Retail Trade	44-45	\$862,174,727	\$490,002,259	\$372,172,468	27.5	177
Total Food & Drink	722	\$92,073,522	\$77,728,340	\$14,345,182	8.4	84

This dynamic can be seen throughout Southwest Florida. The Estero market became the dominant location for regional retail development over the last two decades and these projects draw from the surrounding 5-county region and even from other competitive regions, such as Miami and Tampa.

In our opinion, the subject neighborhood is likely to maintain a positive retail demand gap, with a need for residents to leave the area to meet the totality of their needs, such as vehicle and furniture purchases, for example. The likelihood that the subject neighborhood would become the location of another regional shopping destination is very remote, in our opinion. The subject is clearly much more like Comparison 3.

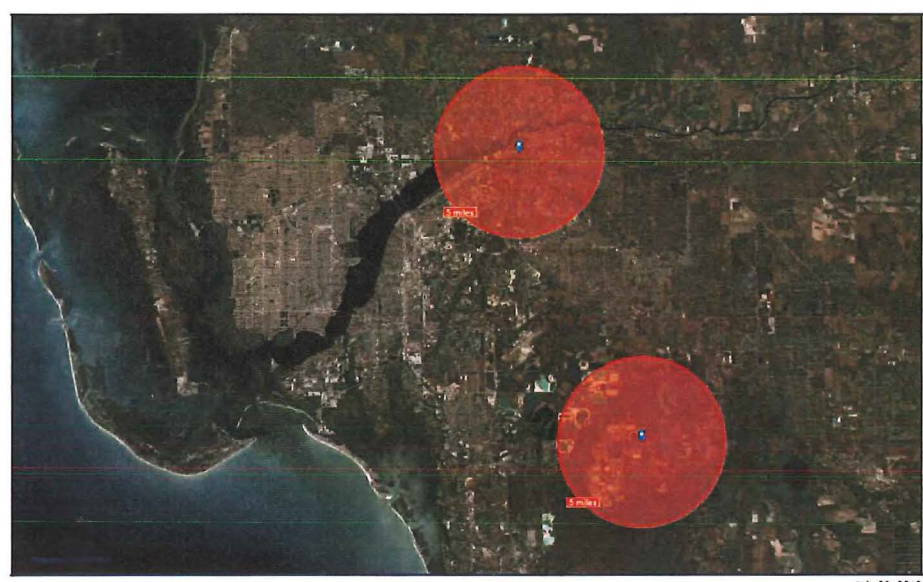


Comparison 4 (2005-built grocery center)

In order to test this ratio, we have considered an additional comparison. Comparison 4 is the 5-mile radius surrounding the grocery-anchored shopping center at the intersection of State Road 31 and State Road 80. This area does not include a major regional shopping center and, in our opinion, more accurately reflects the mix of non-residential uses that will be achievable in the subject neighborhood as compared to Comparison 1.



Comparison 4 0-5 mile radius



July 08, 2019

00019.B04

Page 1 of 1

SR 31/SR 80

Households

In 2017, there were **15,590** households with an average size of **2.76** people per household.

Household expenditure is **\$62,475** per year, with **\$2,996** spent eating out, **\$7,476** on transport and **\$19,164** on retail.

Household Income

Disposable income averages **\$53,129** per household or **\$25,931** per capita.

An estimated **17.15%** households live below the poverty line while **2.05%** have \$200,000 or more in disposable income.





This comparison has 2.76 persons per household, very similar to the 2.75 persons we have assumed for the subject neighborhood and this area has a median age of 40.9, reflective of the similar family-oriented nature that we expect for the subject neighborhood.

Under Comparison 4 there is a total of 6.9M± square feet of commercial space. With 15,590 households, that's a ratio of 443 square feet per household/unit

	Population	HH Size (Avg)	Median Age	Households/Units	Comm SF	HH/Com SF	Vacancy
Comparison 1	67,623	2.34	50.3	27,807	19,700,000	708	8.7%
Comparison 3	58,157	2.70	39.1	21,477	10,100,000	470	5.0%
Comparison 4	43,150	2.76	40.9	15,590	6,900,000	443	3.1%

Considering the ratios demonstrated in Comparisons 3-4, it is our opinion that the subject neighborhood could support a ratio of 450 square feet of commercial space per household. With 8,700± households, this would equate to 3.9M± of commercial space. In our opinion it is reasonable to expect that the subject build-out of 8,700± units could absorb at least 200,000 square feet of additional commercial space.

(Note that within the subject 5-mile radius there is already 57,000± square feet of non-residential space, which includes the Old Corkscrew Golf Club clubhouse, a concrete plant, and the Corkscrew Country Store, but neither this, nor the comparison statistics, include private amenity centers within specific communities.)

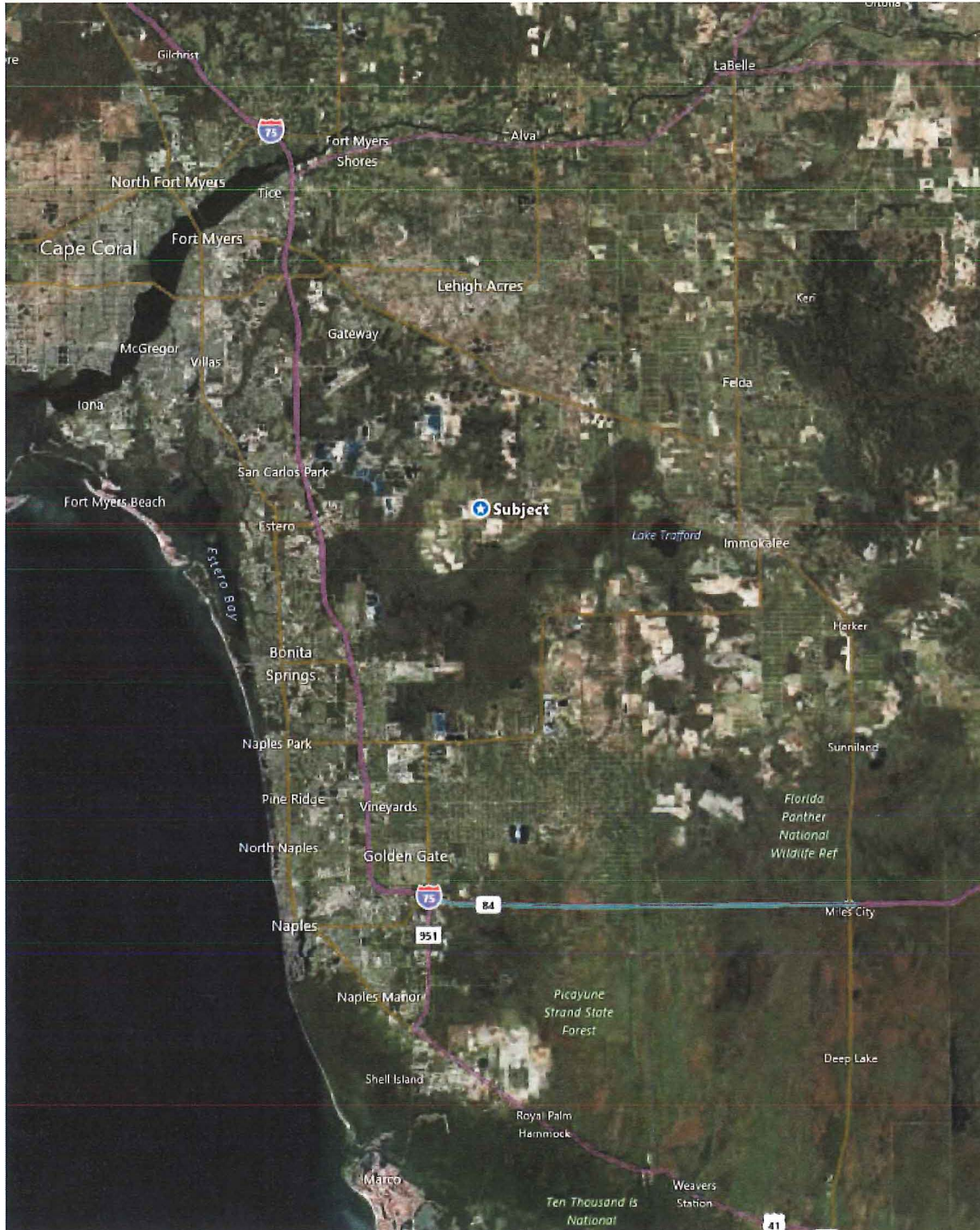
SUMMARY OF CONCLUSION

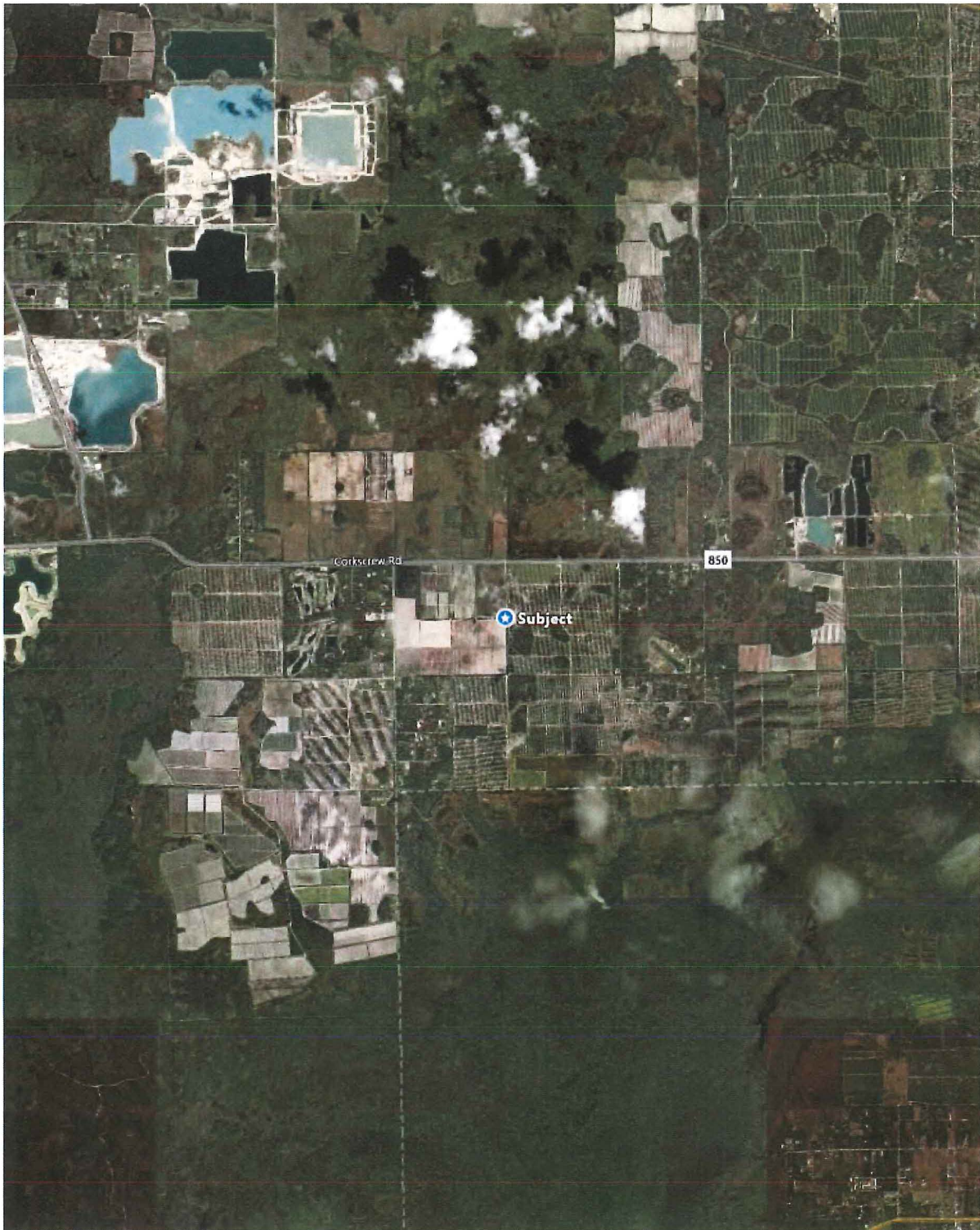
In summary, based upon multiple comparisons of competitive neighborhoods and their existing levels of commercial space, it is reasonable to expect that at build-out of the existing and proposed residential dwelling units in the East Corkscrew neighborhood, demand for commercial space will exceed 200,000 square feet.



SEC. IV: SUBJECT PROPERTY DESCRIPTION

LOCATION MAPS







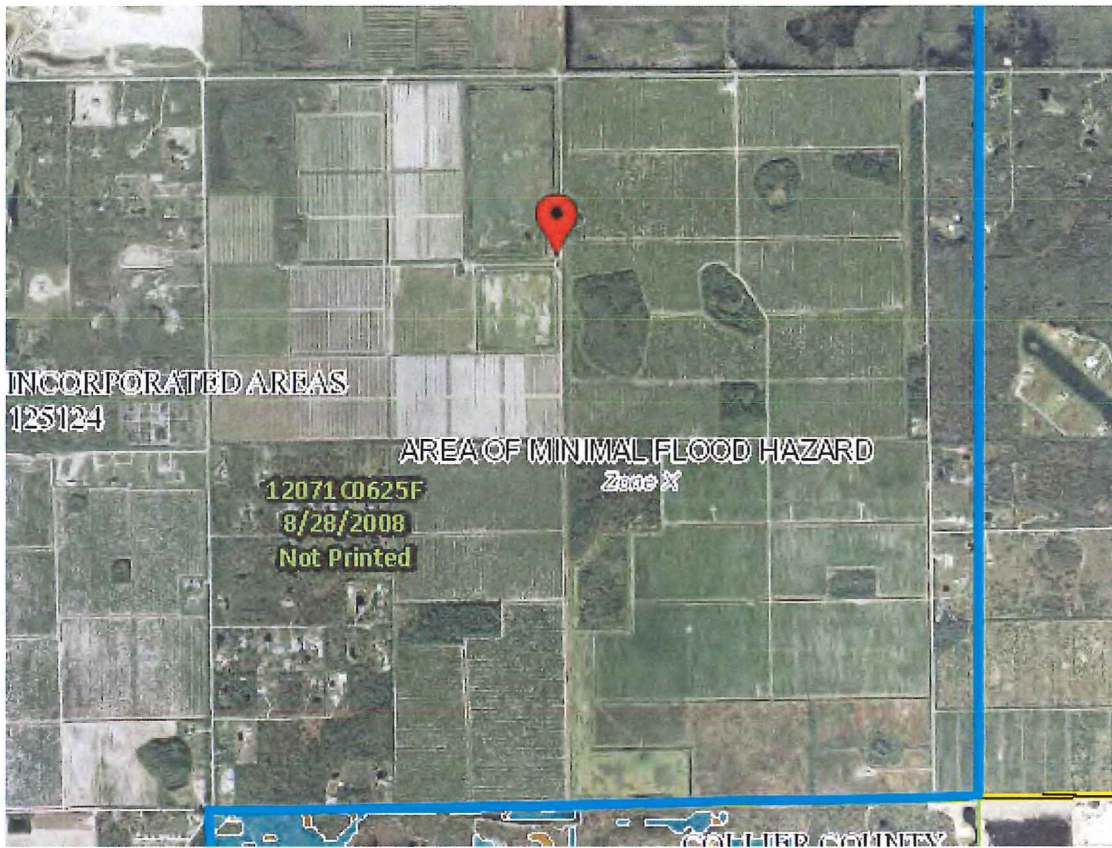


AERIAL MAP





FLOOD MAP



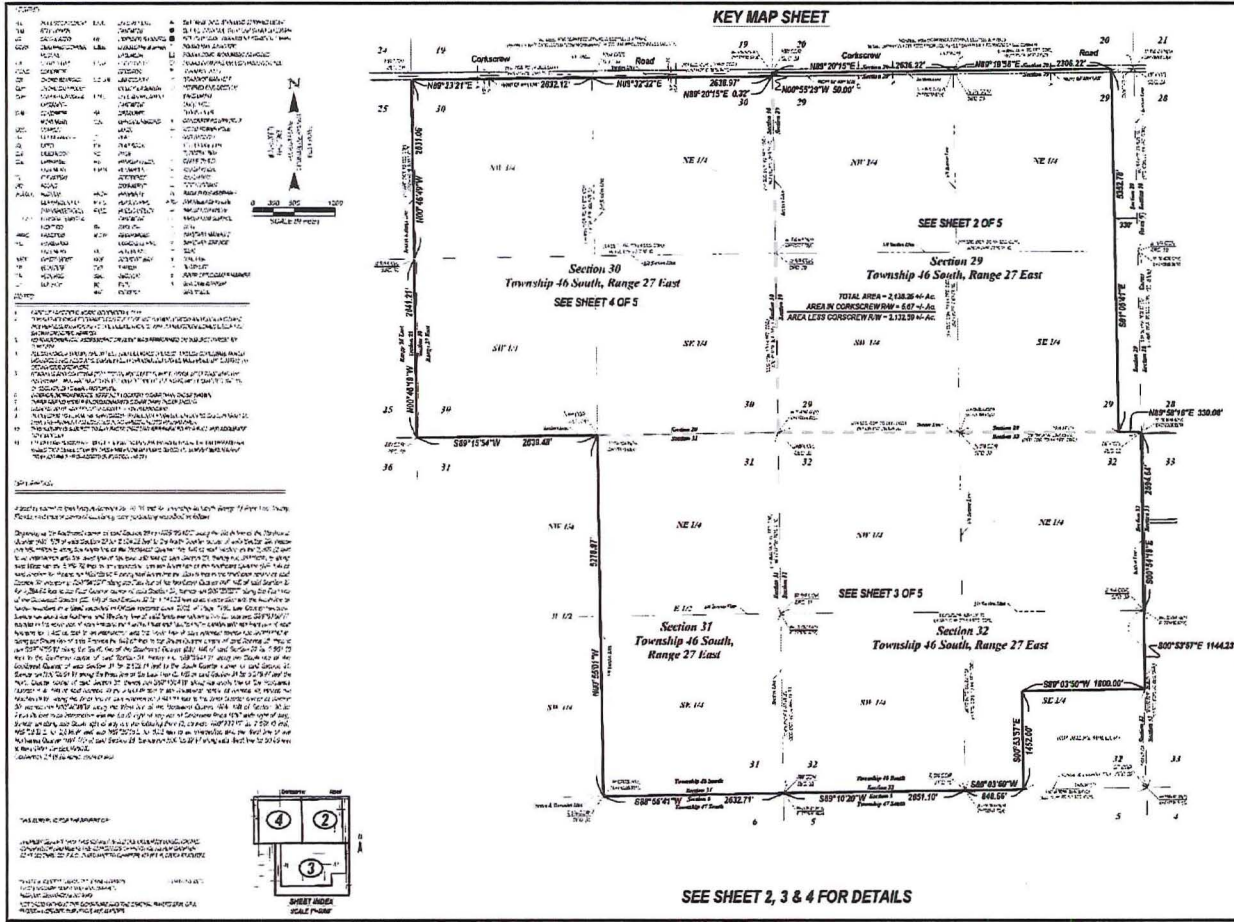


LEGAL DESCRIPTION

A tract or parcel of land lying in Sections 29, 30, 31 and 32, Township 46 South, Range 27 East, Lee County, Florida, said tract or parcel of land being more particularly described as follows:

Beginning at the Northwest corner of said Section 29 run N89°20'15"E along the North line of the Northwest Quarter (NW 1/4) of said Section 29 for 2,636.22 feet to the North Quarter corner of said Section 29; thence run N89°19'58"E along the North line of the Northeast Quarter (NE 1/4) of said Section 29 for 2,306.22 feet to an intersection with the West line of the East 330 feet of said Section 29; thence run S01°05'41"E along said West line for 5,352.78 feet to an intersection with the North line of the Northeast Quarter (NE 1/4) of said Section 32; thence run N89°58'16"E along said North line for 330.06 feet to the Northeast corner of said Section 32; thence run S00°54'19"E along the East line of the Northeast Quarter (NE 1/4) of said Section 32 for 2,594.64 feet to the East Quarter corner of said Section 32; thence run S00°53'57"E along the East line of the Southeast Quarter (SE 1/4) of said Section 32 for 1,144.23 feet to an intersection with the North line of lands described in a deed recorded in Official Records Book 2032, at Page 1106, Lee County Records; thence run along the Northerly and Westerly line of said lands the following two (2) courses: S89°03'50"W parallel to the south line of said Fraction for 1,800.00 feet and S00°53'57"E parallel with the East line of said Fraction for 1,452.00 feet to an intersection with the South line of said Fraction; thence run S89°03'50"W along the South line of said Fraction for 848.66 feet to the South Quarter corner of said Section 32; thence run S89°10'20"W along the South line of the Southwest Quarter (SW 1/4) of said Section 32 for 2,651.10 feet to the Southeast corner of said Section 31; thence run S88°55'41"W along the South line of the Southeast Quarter of said Section 31 for 2,632.71 feet to the South Quarter corner of said Section 31; thence run N00°55'01"W along the West line of the East Half (E 1/2) of said Section 31 for 5,278.97 feet to the North Quarter corner of said Section 31; thence run S89°15'54"W along the South line of the Southwest Quarter (SW 1/4) of said Section 30 for 2,639.48 feet to the Southwest corner of Section 30; thence run N00°46'19"W along the West line of said Fraction for 2,641.21 feet to the West Quarter corner of Section 30; thence run N00°46'49"W along the West line of the Northwest Quarter (NW 1/4) of Section 30 for 2,631.06 feet to an intersection with the South right of way line of Corkscrew Road (100' wide right of way); thence run along said South right of way line the following three (3) courses: N89°23'21"E for 2,632.12 feet; N89°32'32"E for 2,638.97 feet and N89°20'15"E for 0.32 feet to an intersection with the West line of the Northwest Quarter (NW 1/4) of said Section 29; thence run N00°55'29"W along said West line for 50.00 feet to the POINT OF BEGINNING.

Containing 2,138.26 acres, more or less.



Barraco
and Associates, Inc.
SURVEYING & ENGINEERING
1000 N. W. 10th St., Suite 100
Fort Lauderdale, FL 33304
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TPL-LAND-SUB, LLC
1000 N. W. 10th St., Suite 100
Fort Lauderdale, FL 33304
TEL: (954) 575-1111

VERDANA VILLAGE
A Parcel of Land in
Sections 29, 30, 31 & 32,
Township 46 South,
Range 27 East
Lee County, Florida

BOUNDARY SURVEY

1 OF 6

SURVEY





PROPERTY PHOTOGRAPHS



VIEW TO THE SOUTH OF PEPPERLAND (22 MAY 2019)



VIEW TO THE SOUTH OF VERDANA (22 MAY 2019)



VIEW TO THE EAST ALONG CORKSCREW ROAD (22 MAY 2019)



VIEW TO THE WEST ALONG CORKSCREW ROAD (22 MAY 2019)



PROPERTY CHARACTERISTICS

ADDRESS:	18500/19500 Corkscrew Road, Estero, Florida 33928				
TAX ID:	29-46-27-00-00001.0000; 30-46-27-00-00001.0000; 31-46-27-00-00001.1000; 32-46-27-00-00001.0000; 32-46-27-00-00001.1000				
LEGAL DESCRIPTION:	See earlier in Property Description section				
LOCATION/ACCESS/EXPOSURE:	<p>The property is located in in the east Corkscrew Road area, outside of the municipal limits of the Village of Estero, southeast of FGCU and the heavily developed Ben Hill Griffin Parkway corridor.</p> <p>The parcel fronts on the south side of Corkscrew Road (Arterial, 2-lanes, paved) between Six L's Farm Road (Private, Local, 2-lanes, unpaved) and Carter Road (Private, Local, 2-lanes, unpaved), with excellent exposure to traffic passing by the parcel.</p> <p>Vehicular access to the subject property is gained from Corkscrew Road, which has an open median. Note that the subject does not have access from Six L's Farm Road.</p> <p>Corkscrew Road has a 2018 AADT of 3,600±</p>				
SIZE (SITE AREA)/SHAPE:	<table border="0"><tr><td style="text-align: right;">Site Area (acres)</td><td style="border-left: 1px solid black;">2,138.26±</td></tr><tr><td style="text-align: right;">Shape</td><td style="border-left: 1px solid black;">Rectangular</td></tr></table> <p>This information is based upon public records. This appraisal assumes that the site area is accurate.</p>	Site Area (acres)	2,138.26±	Shape	Rectangular
Site Area (acres)	2,138.26±				
Shape	Rectangular				
PHYSICAL FEATURES (TOPOGRAPHY, ELEVATION, ETC.):	<p>The subject property is generally cleared and graded and appears to be below the crown of Corkscrew Road. Drainage on the subject property, as well as in other areas, appears to be adequate and is primarily serviced by an open canal system. The Verdana parcel is currently utilized for citrus production. The Pepperland parcel has a perimeter berm around the entire parcel and is currently utilized for a row crop operation. The V-Land parcel is mostly wetlands.</p>				



UTILITIES:	<p>The subject is served by the following utilities:</p> <table border="1"><tr><td>Telephone:</td><td>CenturyLink</td></tr><tr><td>Electricity:</td><td>Lee County Electric Co-operative</td></tr><tr><td>Water:</td><td>Lee County, Available (Requires extension by developer)</td></tr><tr><td>Sewer:</td><td>Lee County, Available (Requires extension by developer)</td></tr><tr><td>Natural Gas</td><td>None</td></tr><tr><td>Multimedia:</td><td>Comcast</td></tr></table>	Telephone:	CenturyLink	Electricity:	Lee County Electric Co-operative	Water:	Lee County, Available (Requires extension by developer)	Sewer:	Lee County, Available (Requires extension by developer)	Natural Gas	None	Multimedia:	Comcast
Telephone:	CenturyLink												
Electricity:	Lee County Electric Co-operative												
Water:	Lee County, Available (Requires extension by developer)												
Sewer:	Lee County, Available (Requires extension by developer)												
Natural Gas	None												
Multimedia:	Comcast												
FLOOD ZONE:	<p>The subject property is not located in a flood hazard area, as indicated by the Federal Emergency Management Agency Maps. The subject property is located within Flood Zone X as found on Flood Map Panel ID #12071C0625F, as of 28 August 2008. Properties located within this area are not typically required to purchase flood insurance under most financing situations. This property is not located in a FEMA FIRM Floodway.</p>												
EASEMENTS, ENCROACHMENTS, ETC.:	<p>Carter Road (and powerlines) is an easement along the lower southeastern side of the Verdana parcel.</p> <p>There are no known adverse easements restrictions, encumbrances, leases, reservations, covenants, contracts, declarations, special assessments, ordinances, or other items of a similar nature.</p>												
ASSESSED VALUE, TAXES, AND ASSESSMENTS:	<table border="1"><thead><tr><th>Tax Year</th><th>Market Assessed Value</th><th>Taxable Value</th><th>Taxes & Assess.</th></tr></thead><tbody><tr><td>2018</td><td>\$7,814,465</td><td>\$2,524,218</td><td>\$36,927.06</td></tr></tbody></table> <p>The property does benefit from an agricultural classification. The ad valorem taxes and annual assessments due for each period are exclusive of any early payment discounts or late payment penalties. There are no known atypical outstanding assessments.</p>	Tax Year	Market Assessed Value	Taxable Value	Taxes & Assess.	2018	\$7,814,465	\$2,524,218	\$36,927.06				
Tax Year	Market Assessed Value	Taxable Value	Taxes & Assess.										
2018	\$7,814,465	\$2,524,218	\$36,927.06										



SEC. V: ADDENDA

QUALIFICATIONS: MATTHEW H. CALDWELL

Education & Experience

Bachelor of Arts in History, Florida Gulf Coast University, Fort Myers, Florida (2004)

Education through the Appraisal Institute, Steve Williamson's Real Estate Education Specialists, Ed Klopfer Schools of Real Estate, & McKissock, Inc. (2002-Present)

Gulf Coast Appraisal and Consulting Services, Inc., Cape Coral, Florida (2002-03) - Associate

Gulf Coast Appraisal and Associates, Inc., Cape Coral, Florida (2003) - Associate

Maxwell & Hendry Valuation Services, Inc., Fort Myers, Florida (2004-2013) - Associate

Maxwell, Hendry & Simmons, LLC, Fort Myers, Florida (2013-present) - Associate

Professional Designations & Affiliations

State-Certified General Real Estate Appraiser, RZ 2901 (2006-Present)

Other

Qualified as an expert witness in:

Florida District Court: 20th Judicial Circuit
U.S. District Court: Middle District of Florida
Court of Common Pleas: Sandusky County, OH

Member, Florida House of Representatives

Elected 2010, 2012, 2014, & 2016

Adjunct with Florida Gulf Coast University:

"Redistricting in Florida" - Fall 2011

License



Characterization of Ground and Surface Water Resources
Verdana Village
TPL-Land-Sub, LLC
Lee County, Florida

November 2019



Progressive Water Resources
Integrated Water Resource Consultants

6561 Palmer Park Circle • Suite D • Sarasota, Florida 34238 • (941) 552-5657

1.0 Executive Summary

TPL-Land-Sub, LLC's (Applicant) project, herein referred to as Verdana Village, is located in southeastern Lee County, Florida, south of Corkscrew Road and east of Interstate 75. The property encompasses approximately 2,138.26 acres, of which approximately 1,134 acres are currently permitted for citrus and approximately 482 acres are used for the cultivation of row crops (potatoes). Verdana Village is distinct from other residential developments in Lee County's Density Reduction/Groundwater Resource (DR/GR) area in that it is comprised of two (2) adjacent and previously approved residential developments (Verdana and Pepperland Ranch) as well as the 40-acre Monahan parcel, shown in **Figure 1**, that are now being combined into the single, integrated project (Verdana Village) as shown on **Figure 2**.

The aggregation of the two (2) proposed developments offers a unique opportunity to further enhance the water resource benefits beyond what was proposed in the earlier approvals. Therefore, the Verdana Village concept not only provides a substantial net benefit to the water resources within the DR/GR, but also affords increased protection to onsite aquifers and to Lee County's Corkscrew Wellfield.

The Verdana Village project site has a long history of farming, with sections of the property used for decades for the cultivation of citrus and row crops. Although necessary for farming, the historic hydrologic alterations to the site have been significant. Verdana Village's strategy not only significantly reduces the decades-long impacts to groundwater resources, it offers an unprecedented recreation of historic surface water flows through the creation of an integrated flow-way system that provides increased recharge and flood protection. In accordance with Lee County's Comprehensive Plan (The Lee Plan), proposed developments within the DR/GR must demonstrate the protection, preservation and enhancement of groundwater resources and environmental (wetland) systems. The Verdana Village project maintains the water resource and environmental protection benefits of each of the previously approved development plans while expanding those approved resource protections to a greater level, thereby resulting in the following Water Resource Benefits:

- The total lawn and landscape irrigated areas within the proposed Verdana Village development represent a decrease from the sum of irrigated areas for the two (2) previously approved development plans.
- The South Florida Water Management District's (SFWMD) irrigation allocation model for the Verdana Village lawn and landscape area indicates a decrease in quantities when compared to the sum of irrigated quantities for the two (2) previously approved development plans. Verdana Village also proposes to decrease the maximum or peak month (i.e. dry season) quantity and eliminate the historical agricultural freeze protection quantities historically used for citrus.
- Verdana Village will utilize both groundwater and captured stormwater for irrigation, whereby groundwater quantities are used to supplement surface water irrigation supplies within the project's stormwater management system lakes. Irrigation quantities will then be withdrawn from the lakes to irrigate lawn and landscaped areas. The conjunctive use of both ground and surface water supplies are anticipated to conserve additional groundwater from the Water Table Aquifer when adequate surface water supplies are available, thereby furthering the project's resource benefits within the DR/GR. Currently, there are a total of thirty-six (36) agricultural wells on the property, thirty-two (32) of which

withdraw from the Water Table Aquifer. Verdana Village proposes to use only four (4) newly constructed Water Table Aquifer wells for lawn and landscape irrigation.

- Along with a decrease in irrigated area as compared to the previously approved projects, the smaller footprint of the Verdana Village project will result in a reduction in lawn care, chemical applications, and maintenance activities for the turf and landscaped areas.
- The project includes a master-controlled irrigation system that regulates the initiation and overall duration of irrigation events in order to increase irrigation water use efficiency and enhance water conservation (i.e. no individual homeowner will have access to irrigation timers). Evapotranspiration sensors are also proposed for each irrigation pump station and future plans may include an integrated communication system between the surface water pump station controller clocks and the irrigation well pump station(s).
- Improved surface water quality is anticipated through the creation of numerous interconnected stormwater management system lakes which outfall into a uniquely designed flow-way system. The integrated flow-way system is composed of a series of shallow depressional sub-basins which stair-step stormwater down the property's south-trending gradient. The flow-way system will increase stormwater residence time and promote increased recharge to the Water Table Aquifer. In addition, the series of shallow depressional sub-basins will provide enhanced floodwater storage, allowing the project to help alleviate historic stormwater flooding concerns on Carter Road to the east and Six L's Farm Road to the west.

Collectively, these Water Resource Benefits represent a new standard of water resource and environmental protection and, in many cases, exceed the future land use requirements contemplated by Lee County's Comprehensive Plan.

2.0 Property Setting

Prior to agricultural development, the project site was characterized as open rangeland and pine flatwoods, interspersed with wet prairies, marshes, and cypress forests. As shown on the 1953 historical aerial photograph included as **Figure 3**, there appears to be a preferential northeast to southwest trending slough system network that transected the property and conveyed surface water flows downgradient. The sloughs, or flow-ways, historically conveyed surface water towards a large wetland system now referred to as the "Corkscrew Swamp Sanctuary" and the "Flint Pen Strand", both of which are part of the Corkscrew Regional Ecosystem Watershed (CREW).

With the development of Corkscrew Road, surface water flows to the north were effectively cut-off and rerouted to the west. Hydrologic alterations continued south of Corkscrew Road when the citrus grove, installed in the early 1960s, eliminated historic flow-ways and redirected surface water through ditches along the western boundary of Section 32 and into the northern section of what is now the Panther Island Mitigation Bank. To the northwest, row crop farming similarly altered the southwesterly flow of surface water, whereby flows were redirected to the west towards Six L's Farm Road before heading south towards the CREW.

As previously stated, the project area is sloped to the south, with the highest land surface elevations of approximately 27 feet NAVD located on the northern sections of the property immediately south of Corkscrew Road. The lowest land surface elevations are located in the south-central section of the property at approximately 19 feet NAVD. Ground and surface water flows generally mimic land surface topographic gradients. The extensive ditching and draining of the subject property is typical of southwest Florida agricultural operations and is necessary due to the crop's extreme vulnerability to excess water and elevated water tables. Therefore, water table elevations onsite were carefully controlled and maintained several feet below land surface and below the plant root zones. Consequently, the property was designed to depress the water table and quickly remove stormwater.

The predominant soil type is *Immokalee Sand* interspersed with *Oldsmar Sand* and *Valkaria Sand*. The Natural Resource Conservation Service (NRCS) defines *Immokalee Sand* as a poorly-drained soil occurring in marine deposit Flatwoods. Although PWR's research indicates that detailed flood maps have not yet been produced for the project site, the Federal Emergency Management Agency's (FEMA) National Flood Hazard Map shows that the property lies within Flood Zone X which is defined as an Area of Minimal Flood Hazard.

The property is also located within the State of Florida's Water Body Identification (WBID) No. 3259B1, as shown on **Figure 4**. A WBID represents a sub-watershed delineated by the Florida Department of Environmental Protection (FDEP) and is based on the United States Geological Survey (USGS) Hydrologic Use Codes (HUC). Through evaluation of surface water quality data collected within WBID No. 3259B1, the FDEP has determined that the WBID is verified impaired for iron. The impairment for iron is not surprising since PWR's local work experience indicates that shallow groundwater in the vicinity of the Applicant's property is naturally high in iron.

3.0 Existing Permitted Groundwater Supplies

There are three (3) principal aquifer systems underlying the site: 1) the unconfined Surficial Aquifer System, colloquially known as the "Water Table Aquifer"; 2) the confined Intermediate Aquifer System; and 3) the confined Upper Floridan Aquifer System (UFAS). In southeastern Lee County, groundwater quality decreases rapidly with depth and suitable irrigation and potable supplies are generally found within 300 to 400 feet of land surface. Below these depths, groundwater becomes highly mineralized and saline. Consequently, groundwater is primarily withdrawn from the shallow Surficial Aquifer System (i.e. Water Table Aquifer) and the upper producing unit of the underlying Intermediate Aquifer System (i.e. Sandstone Aquifer). Since suitable water quality is required for agricultural operations, thirty-two (32) existing irrigation wells are completed into the Water Table Aquifer and four (4) existing irrigation wells are completed into the Sandstone Aquifer. As shown in **Table 1**, a vast majority (83 percent) of the 1,571.22 million gallons per year (MG) of groundwater supplies currently authorized by the SFWMD for agricultural irrigation are derived from the Water Table Aquifer.

Table 1. Currently Authorized Annual Agricultural Irrigation Quantities

Property	WUP No.	Water Table Quantities (MG)	Sandstone Quantities (MG)
Verdana (Pan Terra)	36-00327-W	887.67	262.17
Pepperland	36-00883-W	421.38	N/A
Total Permitted		1,309.05	262.17
Percent Distribution		83 Percent	17 Percent

Please note that the Pepperland WUP No. 36-00883-W stipulates that annual irrigation quantities will be reduced to 150.66 MG and maximum monthly quantities reduced to 18.94 MG upon approval of the first development order, as required by Lee County Resolution No. Z-17-013 adopted August 2, 2017. No such water use provision has been incorporated into WUP No. 36-00327-W for Verdana.

As shown, **Figure 5** provides the location for all permitted agricultural irrigation wells onsite and **Appendix A** includes copies of the current SFWMD WUPs for both properties (Verdana is owned by Pan Terra Holdings, LTD and Pepperland Ranch is owned by the Applicant) that comprise Verdana Village. Please note that, in order to simplify the nomenclature used in this report, the colloquial term “Water Table Aquifer” will be used interchangeably to describe the Surficial Aquifer System and “Sandstone Aquifer” will be used to describe the upper producing unit of the Intermediate Aquifer System.

3.1 Surficial Aquifer System (Water Table Aquifer)

The unconfined Water Table Aquifer originates at land surface and is composed of approximately 10 to 20 feet of unconsolidated surficial deposits consisting of gray-to-dark brown, fine-grained, silty quartz sand, with minor shell content. Below the surficial sands, thin discontinuous deposits of clayey sands can sometimes overlay the uneven upper contact of limestones associated with the Tamiami Formation. Consistent with the stratigraphic delineations in the Florida Geological Survey (FGS) Open File Report No. 37, the Tamiami Formation includes the Ochopee and Buckingham Limestone Members as well as the Pinecrest Sand Member.

Based on Lee County Utilities Well Completion Reports in the vicinity of the project site, the limestones, sands and marls of the Tamiami Formation extend to approximately 130 to 150 feet below land surface (bls) and are major regional sources of groundwater supply due to their shallow depth (near land surface) and high transmissivity. It is therefore understandable why the Tamiami Formation has been extensively utilized by agricultural operations within the DR/GR for decades.

In some areas of Lee County the sediments of the Tamiami Formation can be subdivided into “Upper” and “Lower” units that are separated by low permeability (i.e. clayey sediments). When present, only the upper unit is described as occurring within the Water Table Aquifer. Please note that PWR’s review of Well Completion Reports for both Lee County’s public supply wells and the existing citrus irrigation wells does not indicate the presence of a consistent confining unit separating the Upper and Lower sediments of the Tamiami Formation in the vicinity of the project site. Therefore, locally the Water Table Aquifer is considered to include the full vertical extent of the Tamiami Formation and to extend from land surface to approximately 130 to 150 feet bls.

As stated above, the Water Table Aquifer is also used as a supply source for several of Lee County’s public supply wellfields and six (6) public supply well sites are located along Corkscrew Road to the northwest of the project, three (3) of which are shown on **Figure 6**. Each of the six (6) well sites on Corkscrew Road have paired Water Table Aquifer and Sandstone Aquifer wells that allow for withdrawals from both aquifer systems. The three (3) well sites shown on **Figure 6** represent the easternmost extent of Lee County’s Corkscrew Public Supply Wellfield. The Corkscrew Wellfield is protected under Lee County’s Wellfield Protection Ordinance No. 07-35 which specifies four (4) protection zones that were based upon the physical characteristics of the aquifer and the theoretical groundwater travel times based on natural groundwater gradients and drawdowns resulting from the wellfield’s operation. The four (4) protection zones represent groundwater travel times of 6 months, 1 year, 5-

years, and 10-years. The Wellfield Protection Ordinance restricts certain types of land use activities, with restrictions increasing closer to the wellheads.

As shown on **Figure 6**, Public Supply Well Site No. 38 is located nearest to some of the project's stormwater lakes. As also shown, the Wellfield Protection Ordinance travel time zones for the Water Table Aquifer extend into the northwestern section of the property.

The Lee Plan's DR/GR land use category also includes areas that have been designated as important recharge areas for the shallow Water Table Aquifer. The reported recharge rate for the project site is estimated to be between 0 and 10 inches per year (Source: USGS/SFWMD report entitled *Recharge to the Surficial Aquifer System in Lee and Hendry Counties, Florida*, 1995). However, based on the design of the existing agricultural stormwater management system used to quickly remove stormwater from the property, opportunity for recharge to the underlying Water Table Aquifer is considered low. The stormwater management and integrated flow-way system proposed for the Verdana Village project is anticipated to dramatically improve the opportunity for increased recharge to the Water Table Aquifer, in addition to providing enhanced flood protection for adjoining watersheds.

4.0 Proposed Verdana Village Development

Much effort was dedicated to the overall Verdana Village site plan to maximize benefits to water resources and environmental systems in order to meet, and in many cases exceed, the criteria outlined in The Lee Plan. The proposed residential development will enhance recharge opportunities across the property through the use of approximately 196.5 acres of onsite stormwater lakes as well as an integrated flow-way system that will generally maintain the historic flow patterns discussed in Section 2.0 above. The flow-way system will be composed of a series of shallow depressional basins which stair-step stormwater down the property's southerly gradient while retaining the hydroperiods of the onsite wetlands, in addition to accommodating flows from onsite stormwater management lakes. The flow-way system will increase stormwater residence time and promote increased recharge to the Water Table Aquifer. As shown in the bulleted list of Hydrologic Restoration Goals provided below, the proposed residential development project has incorporated substantial benefits to the water resources and environmental systems:

4.1 Verdana Village Hydrologic Restoration Goals

- **Hydrologic Restoration Goal No. 1** is to significantly reduce evapotranspiration of the project site by the elimination of all farming activities and the replanting of native vegetation in areas outside the development. In addition, the proposed Verdana Village footprint is smaller than the sum of the previously approved development designs. The proposed reduction in the residential footprint further enhances the water resources of the DR/GR.
- **Hydrologic Restoration Goal No. 2** is to infill the existing farm ditch and drainage network particularly surrounding the existing onsite wetlands. This action will dramatically shift the wetlands' hydroperiods back towards a more natural cycle and elevation. In addition, a majority of the existing onsite wetlands will be incorporated into the integrated flow-way system.
- **Hydrologic Restoration Goal No. 3** is to further improve surface water quality through the creation of

numerous stormwater management system lakes that outfall into a uniquely designed flow-way system. The flow-way system is composed of a series of shallow depressional sub-basins that stair-step stormwater down the property's southerly gradient and provide additional water quality treatment.

- **Hydrologic Restoration Goal No. 4** is to significantly reduce permitted groundwater withdrawals from the unconfined Water Table Aquifer for use as irrigation, thereby reducing permitted impacts to Lee County's potable supply wells. In addition, all permitted Sandstone Aquifer withdrawals will be terminated.
- **Hydrologic Restoration Goal No. 5** is to create an integrated flow-way system to increase stormwater residence time and promote increased recharge to the Water Table Aquifer. In addition, the flow-way's series of shallow depressional sub-basins will provide enhanced floodwater storage, allowing the project to help alleviate historic stormwater flooding concerns on Carter Road to the east and Six L's Farm Road to the west. The flow-way system will also be capable of accepting stormwater flows from the residential development (The Place) located north of Corkscrew Road.
- **Hydrologic Restoration Goal No. 6** is to strategically reestablish the historic hydrology of the site without causing adverse environmental impacts to nearby land uses and to downstream-receiving watersheds.
- **Hydrologic Restoration Goal No. 7** is to reduce the overall irrigated area from the previously approved development projects as well as the associated irrigation quantities. The smaller footprint of the Verdana Village project will result in a reduction of lawn care and maintenance activities for the turf and landscaped areas.

5.0 Comparative Groundwater Impact Analysis

To illustrate the recovery in water levels of the Water Table Aquifer (Layer 1) as a result of the proposed residential development plan, PWR developed two (2) one-layer numerical modeling scenarios representative of the existing permitted and proposed conditions, respectively, using the USGS MODFLOW groundwater modeling code. The required Professional Geologist certification for the modeling scenario described herein is included as **Appendix C**.

The Transmissivity value utilized for the modeling scenarios was derived by averaging the three (3) closest wells with Aquifer Performance Test (APT) data for the Surficial Aquifer System (Station Nos. LM-7589, LM-3660 and LM-3661) found through the SFWMD's DBHYDRO database. Specific Yield was based on information published in the James Montgomery Consulting Engineers, Inc. 1988 Lee County Water Resources Management Project Report and Technical Publication 90-01 DRE-287. Aquifer thickness was based on PWR's knowledge of the project area as well as Well Completion Reports for Lee County's adjacent Public Supply wells. Hydraulic Conductivity was then derived by dividing the Transmissivity value by the aquifer thickness.

The "Permitted Conditions" modeling scenario is representative of Water Table Aquifer conditions currently authorized by the SFWMD for both WUP Nos. 36-00327-W (Pan Terra Holdings - Citrus Irrigation) and 36-00883-W (Pepperland's Approved Development Plan - Residential Irrigation Quantities) and includes two stress periods: Stress Period 1 – an initial model water level set up period, and Stress Period 2 – the currently permitted maximum monthly quantities. The "Proposed Conditions" modeling scenario is representative of conditions

associated with the updated Verdana Village residential development irrigation quantities and includes two stress periods: Stress Period 1 – an initial model water level setup period, and Stress Period 2 – the proposed maximum monthly quantities for lawn and landscape irrigation. Both modeling scenarios were run for 90 days with no recharge to simulate pumping the maximum month allocation for the three driest months of the year (namely March, April, and May). The drawdown for each scenario was calculated by comparing the model-derived heads at the end of Stress Period 2 to those at the end of Stress Period 1. The drawdown resulting from these two models was then compared against one another using capabilities of Groundwater Vistas 7 (GWV7) in order to produce water level contours representing the net increase of water levels (i.e. recovery or negative drawdown) of the Water Table Aquifer as a result of the reduction in maximum month quantities associated with the Verdana Village development plan. As shown in **Figure 7**, increases in water levels (i.e. recovery or negative drawdown) in the Water Table Aquifer are predicted in the immediate vicinity of the proposed residential irrigation wells, including Lee County’s adjacent Public Supply Wells.

6.0 Consistency with The Lee Plan

As stated in The Lee Plan’s Policy 33.3.4, additional densities and accessory commercial uses may be granted to proposed planned developments within the DR/GR if significant regional hydrological and wildlife connections are demonstrated and potential impacts to the water resources and environmental systems are reduced. In order to assist Lee County staff in their understanding of the project and how the proposed residential development meets or exceeds the elements of The Lee Plan’s Policy 33.3.4, specific policy elements directly related to groundwater resources have been provided in bold text followed by a detailed description of how the Policy elements are met or exceeded.

Policy 33.3.4.2.a.1 Restore and accommodate existing and historic regional flow-ways where they currently or previously existed;

The Verdana Village proposed integrated flow-way system will generally maintain the historic flow-way patterns discussed in Section 2.0 above while retaining the hydroperiods of the onsite wetlands, in addition to accommodating flows from onsite stormwater management lakes. The flow-way system will be composed of a series of shallow depressional basins which stair-step stormwater down the property’s southerly gradient. The flow-way system will increase stormwater residence time and promote increased recharge to the Water Table Aquifer. In addition, the integrated flow-way system will facilitate hydrologic connections to adjacent properties to help alleviate historic flooding concerns along Carter Road to the east and Six L’s Farm Road to the west. The development of the site is also subject to SFWMD ERP rules which require that the project not cause flooding or adverse impacts to wetlands or other water resources.

Policy 33.3.4.2.a.2 Restore and accommodate existing and historic groundwater levels;

The subject property has historically been utilized for the cultivation of both citrus and row crops and, although necessary for farming, the hydrologic alterations to the site have been significant through extensive ditching and draining of the property. Water table elevations onsite were carefully controlled and maintained several feet below land surface and below the plant root zones due to the crop’s extreme vulnerability to excess water and elevated water tables. Consequently, the property was designed to depress the water table and quickly remove

stormwater. As part of the proposed planned development, the existing agricultural operation will be eliminated and the existing farm ditch and drainage network will be infilled, particularly surrounding the onsite wetlands. In addition, a majority of the existing onsite wetlands will be incorporated into the integrated flow-way system. This action will dramatically shift the wetlands' hydroperiods back towards a more natural cycle and elevation, thereby restoring the property to historic hydrologic conditions.

Policy 33.3.4 2.b Includes and enhanced lake management plan, that:

Policy 33.3.4 2.b.1. Applied best management practices for fertilizers and pesticides;

The Permittee is committed to implementing Best Management Practices (BMPs) regarding the proposed stormwater management system and has provided an extensive Enhanced Lake Management Plan (ELMP) as part of the Verdana Village planned development. With the elimination of the agricultural operations, the irrigated area is anticipated to be reduced by approximately 1,332 acres (i.e. reduction of approximately 82 percent). Correspondingly, quantities of fertilizers and pesticides used on the project site are expected to be significantly reduced. In addition, the Verdana Village lawn and landscape footprint is approximately 11 percent less than the sum of the two previously approved developments (Pepperland and Verdana), further reducing the application of fertilizer and pesticides. All future applications of fertilizers and pesticides applied will be performed in accordance with the manufacturers' recommended rates and quantities and all fertilizers will be applied by certified professionals in accordance with Ordinance 08-08 which requires that individuals applying fertilizer and pesticides complete the BMP training program offered by Lee County. As stipulated, at least one (1) BMP-trained employee must be onsite while fertilizers are applied in order to ensure compliance.

Policy 33.4.2.b.2 Provides erosion control and bank stabilization;

Erosion control and bank stabilization measures used on the onsite lakes will be designed, constructed and maintained in accordance with SFWMD ERP rules and state regulations. Additional information regarding erosion protection and lake maintenance is provided in the ELMP. No motorized watercraft will be allowed within any of the onsite stormwater management lakes.

Policy 33.3.4.2.b.3 Establishes lake maintenance requirements.

All onsite lakes will be maintained in accordance with SFWMD rules and regulations and all lake maintenance activities will be performed in accordance with Lee County ordinances and requirements. The stormwater and surface water discharged from any onsite lakes will conform to existing SFWMD and FDEP rules and Lee County Wellfield Protection Ordinances, all of which are intended to protect water resources and existing legal users of water. The applicant has proposed a surface water monitoring program in order to ascertain if surface water quality coming onto, originating within, and leaving the project meet all applicable requirements of the SFWMD ERP program authorized pursuant to Part IV of Chapter 373, F.S. and Chapter 62-302, F.A.C. Surface Water Quality Standards. Additional information regarding lake maintenance is provided in the ELMP.

Policy 33.4.2.c Develop a site specific ecological and hydrological restoration plan which includes at a minimum the following: preliminary excavation and grading plans, analysis of hydrological improvements and water budget narrative, replanting plan, habitat restoration plan, success criteria, long term monitoring and maintenance.

The narratives, plans, analyses and graphics provided in support of the Verdana Village's proposed ecological and hydrological restoration not only meet The Lee Plan policies, but exceed the already approved restoration plans for the Pepperland and Verdana planned developments. Important details regarding site specific ecological and hydrological restoration objectives are summarized below and are provided elsewhere in this response. Please note that preliminary excavation and grading plans for the property's restoration, as required by Policy 33.3.4, are provided in the Indigenous Preservation, Restoration and Management Plan.

A large component of the proposed restoration of the subject property regards both surface and groundwater resources and is designed to improve, preserve and restore both local and regional hydrological conditions. The existing agricultural land use predates the County's Wellfield Protection Program and is exempt from Lee County's fertilizer and irrigation ordinances. A significant step towards the hydrologic restoration of the property will therefore be achieved through the elimination of all farming activities. This action will effectively reduce the permitted agricultural growing area from a total of 1,616 acres to a proposed lawn and landscape area of 283.9 acres. Resource improvements are also realized through the proposed development's reduction of lawn and landscaped areas as compared to already approved developments (approximately 11 percent less than the sum of the two previously approved developments). The proposed elimination of agricultural pesticide and fertilizer applications, coupled with the proposed reduction in residential landscaped areas, significantly restores and helps rebalance the Water Table Aquifer and surface water resources within the DR/GR.

The proposed development creates a more natural and balanced hydrologic condition, whereby existing topographic gradients are maintained and past agricultural practices are virtually erased. Past land use impacts resulting from decades of ditching, draining, and the broad application of agrichemicals will be replaced by the development's proposed flow-ways, restoration, and wildlife connection areas. In addition, irrigation demands and irrigated areas are proposed to be significantly reduced and much of the property restored to a more natural and stable hydrologic condition. Groundwater use will be further reduced through the use of captured and recycled stormwater and the project's unique flow-way design of interconnected, cascading shallow basins further enhances surface water quality and increases groundwater recharge potential. Not only will the proposed flow-way accommodate stormwater discharges from the Verdana Village development, but it is designed to accept offsite flows and reduce nearby flooding concerns. The historic flow-way patterns will be reestablished, allowing the site to again beneficially interact with adjoining properties and will thereby improve hydrologic conditions to a far greater extent than offered by the previously approved planned developments. The Verdana Village's design not only significantly restores the property's historic water balance, but also preserves and enhances wetlands, indigenous habitats, and provides critical wildlife connections to adjacent conservation areas.

The preservation and enhancement of existing indigenous vegetation as well as the large-scale restoration of agricultural lands to indigenous habitats will serve to provide significant regional flow-ways and wildlife corridors within the project site. The proposed flow-ways and wildlife corridors will provide connection from the Corkscrew Regional Mitigation Bank and The Place conservation lands to the north with Panther Island Mitigation Bank and Audubon's Corkscrew Swamp Sanctuary lands to the south. The proposed flow-ways will also serve to re-establish the historic north-to-south flow of surface water through the project site.

Enhancement activities will consist of the removal of exotic plant species from existing indigenous vegetation. Restoration activities will consist of the removal of exotic vegetation from existing non-indigenous vegetation, grading and installation of native plantings. Wetland flow-ways will be created from existing agricultural lands and will consist primarily of freshwater marsh habitat with hydric pine forest plant communities in the higher elevations. The side slopes of the flow-ways will be 8:1 or less and will be planted with appropriate marsh and hydric pine vegetation after grading activities are completed. Water elevations within the flow-ways will be stepped down from the north to south using control structures (i.e. weirs) to mimic historic patterns and to allow hydration of the indigenous replanting areas. Each weir will be set at a specific elevation to control water levels in each flow-way basin. This design allows for the cascading of water from north to south while maintaining water elevations supportive of the proposed hydric pine and freshwater marsh vegetation communities.

The proposed project provides significant regional hydrological and wildlife connections and significantly improves, preserves and restores regional surface and groundwater resources and indigenous wildlife habitats.

Policy 33.3.4 2.g. Uses Florida Friendly Plantings with low irrigation requirements in Common Elements.

As compared to the existing, approved development plans, the proposed Verdana Village represents a reduced landscape area of and correspondingly lower irrigation demands of approximately 11 percent, respectively. As a result, the proposed land use provides a significant net benefit to the water resources of the DR/GR, as shown in **Figure 7**. Notably, the proposed integration of stormwater through conjunctive use and the proposed water conservation and irrigation demand management techniques will further reduce overall groundwater usage.

Consistent with this Policy, Florida-Friendly landscaping will be incorporated to the greatest extent practical in the design of the residential and common area elements. The applicant has included a proposed condition to this effect for Lee County Staff to review and consider. The University of Florida's Institute of Food and Agricultural Science (IFAS) Florida Friendly Yards and Neighborhoods Handbook will be used as a guide in developing the landscape architecture. The goal will be to develop quality landscapes that incorporate native, drought-tolerant plantings and the use of low volume irrigation emitters to maximize water conservation.

Policy 33.3.4.2.j Protects public wells through compliance with the requirements of the Well Field Protection Ordinance.

The proposed Verdana Village borders Lee County's Corkscrew Wellfield and several of the proposed stormwater lakes are within Wellfield Protection Zones 3 and 4 (5- and 10-year travel times) representing the outward extent of the wellfield's zone of capture. The proposed Verdana Village will comply with Section 14-214(c) of the Lee County Well Field Protection Ordinance No 07-35, adopted under Lee County Land and Development Code, Chapter 14 Article III, which regulates the following:

- The use, handling, production or storage of regulated substances... in quantities greater than those set forth in Section 14-208.

Verdana Village is a residential development, therefore regulated substances will not be permitted to be used, handled or stored onsite in quantities greater than those set forth in Section 14-208. As per

Section 14-208, there will not be an aggregate of any one (1), or all regulated substances on a given parcel or in a certain building exceeding 110 gallons if the substance is a liquid or 1,110 pounds if the substance is a solid.

- Wastewater effluent disposal, except that public access use of reclaimed water and land application under the conditions set forth in F.A.C. 62-610, Part III, may be permitted. Where public access reuse is permitted the chloride content must be no greater than 500 milligrams per liter.

Verdana village is a residential development, therefore there will not be any wastewater disposal onsite.

- Liquid waste disposal and solid waste disposal.

Verdana Village is a residential development, therefore there will be no liquid or solid waste disposal onsite.

- Stormwater or surface water discharged within this protection zone must conform to existing South Florida Water Management District and State Department of Environmental Protection rules.

The stormwater and surface water management system will be subjected to review and approval of the SFWMD. All discharges will be in compliance with existing ERP rules.

- Sanitary hazards are prohibited within a 100-foot radius around an existing and proposed public water supply wells.

There will be no onsite septic systems and no sanitary hazards within a 100-foot radius of the existing and proposed public water supply wells.

- Abandoned wells on property lying within the ten-year travel time zone of wells regulated by this article will be physically plugged in accordance with the provisions of Lee County Ordinance No. 06-09, Section 9.3.4

It is important to note that, based on the Lee County Land Development Code Section 14-209 (b)(7), the construction, repair or maintenance of a facility or improvement within a protection zone is exempt from the provisions of this article provided that all contractors, subcontractors, laborers, material men and their employees using, handling, storing or producing regulated substances uses the applicable BMPs set forth in Section 14-217. Further protections for Lee County public supply wells are provided in the project's ELMP.

In addition, all of the thirty-six (36) existing citrus and row crop irrigation wells are proposed to be capped and properly plugged and abandoned as per Lee County Ordinance No. 06-09, Section 9.3.4, and SFWMD Rule 40E-3.5.1(3), F.A.C, thereby eliminating a possible vertical pathway for the introduction of any regulated substances.

Policy 33.3.4.2.l Connect to public water and sewer service. Connect to reuse if available at time of development order approval.

The Verdana Village proposed development is the redevelopment of two (2) existing planned developments. As part of the redevelopment, Verdana Village will continue to maintain a commitment to central water and sewer service and remains within the Lee County Utilities Service Area. This continued commitment with the change of land use from agricultural to residential will reduce demands on the Water Table Aquifer by decreasing removal quantities, thereby promoting a positive influence on Lee County's ability to withdraw groundwater at their existing production wells. The Letters of Availability provided with proposed Comprehensive Plan Amendment and Mixed Use Planned Development applications demonstrate that Lee County Utilities has the capacity to serve potable water and the wastewater treatment plant capacity to serve the Proposed Allowable Residential and Commercial Land Uses. The nearest reclaimed water line terminates approximately five miles west of the property.

Policy 33.3.4.2.n Demonstrate that the planned development will not result in significant detrimental impacts on present and future water resources.

Projects in critical areas for future potable water supply (i.e. DR/GR land use category) are subject to a special review by Lee County staff. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water supplies and will assess whether the proposed land uses would cause any significant impact on present or future water resources. Details are provided below which demonstrate how the proposed Verdana Village will further reduce stress to the regional and onsite potable aquifers within the DR/GR.

To more clearly understand the withdrawal-related impacts on onsite aquifers and the nearby Corkscrew Wellfield's production wells, as well as environmental features and local water resources resulting from the currently permitted citrus irrigation wells (Pan Terra Holdings – Citrus Irrigation), a groundwater flow modeling scenario was created consistent with the criteria required by the SFWMD. The model allowed for the simulation of existing SFWMD permitted quantities (i.e. Pan Terra Citrus Irrigation and Pepperland Residential Development Irrigation) and was then compared to a simulation of the proposed residential irrigation quantities for Verdana Village (see irrigation demand calculations in **Appendix B**). In accordance with SFWMD rules, the groundwater flow model simulated the maximum month (i.e. dry season) withdrawals for 90 consecutive days with no recharge from rainfall. Details of the comparative groundwater modeling efforts are provided in **Section 5.0** above.

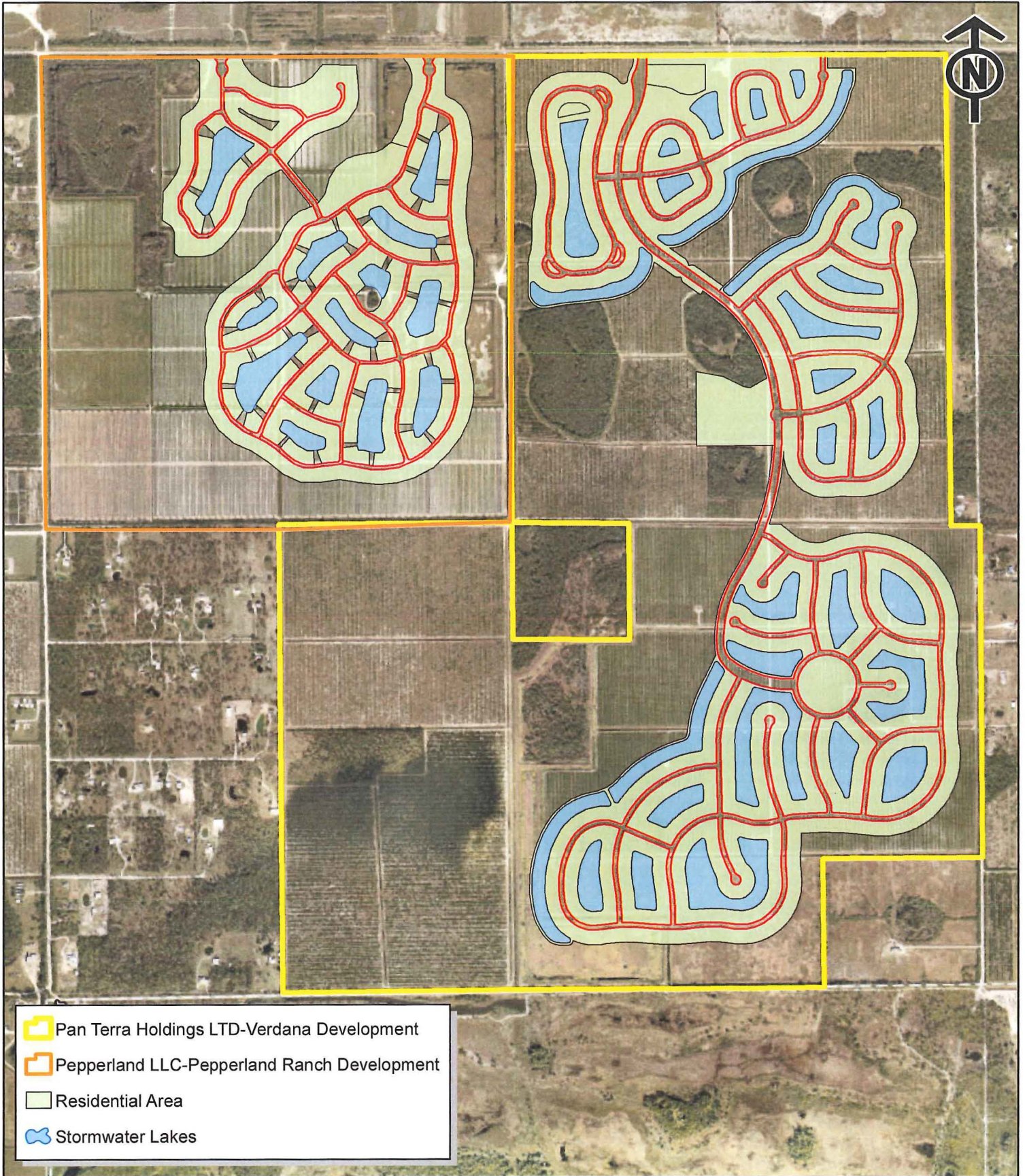
Based on SFWMD currently authorized Water Table Aquifer withdrawals for WUP Nos. 36-00327-W (Pan Terra Holdings - Citrus Irrigation) and 36-00883-W (Pepperland Approved Development Plan), there is a net increase in water levels (i.e. negative drawdown) signifying a substantial recovery in the Water Table Aquifer (see **Figure 7**). Although not presented herein, due to the proposed elimination of permitted Sandstone Aquifer withdrawals used to irrigate the citrus grove, an increase in groundwater levels, i.e., rebound, is also anticipated to occur to Lee County's Sandstone Aquifer wells.

Based on PWR's groundwater flow modeling, the proposed decrease in the permitted Water Table Aquifer quantities will have a significantly positive influence on Lee County Utility's ability to withdraw groundwater at their existing production wells. The groundwater flow modeling demonstrates that the proposed Verdana Village meets The Lee Plan Policy set forth in Section 2.4.2 regarding reduction of impacts to water resources within the DR/GR and Policy 2.4.3 by demonstrating that the proposed land use will not cause significant harm to the present and future public water resources.

In summary, Verdana Village represents an opportunity to reduce existing Water Table Aquifer impacts through a reduction in overall irrigated acreage and the corresponding decrease in onsite irrigation demands as compared to the current SFWMD permitted uses.

7.0 In Conclusion

The information provided herein demonstrates the high level of protection, preservation and enhancement of groundwater and environmental (wetland) resources contemplated by the proposed Verdana Village development. Verdana Village not only maintains the water resource and environmental protection benefits of each of the prior development plans, but extends resource protections beyond any project yet envisioned within the DR/GR.



- Pan Terra Holdings LTD-Verdana Development
- Pepperland LLC-Pepperland Ranch Development
- Residential Area
- Stormwater Lakes

Scale: 1:17,000

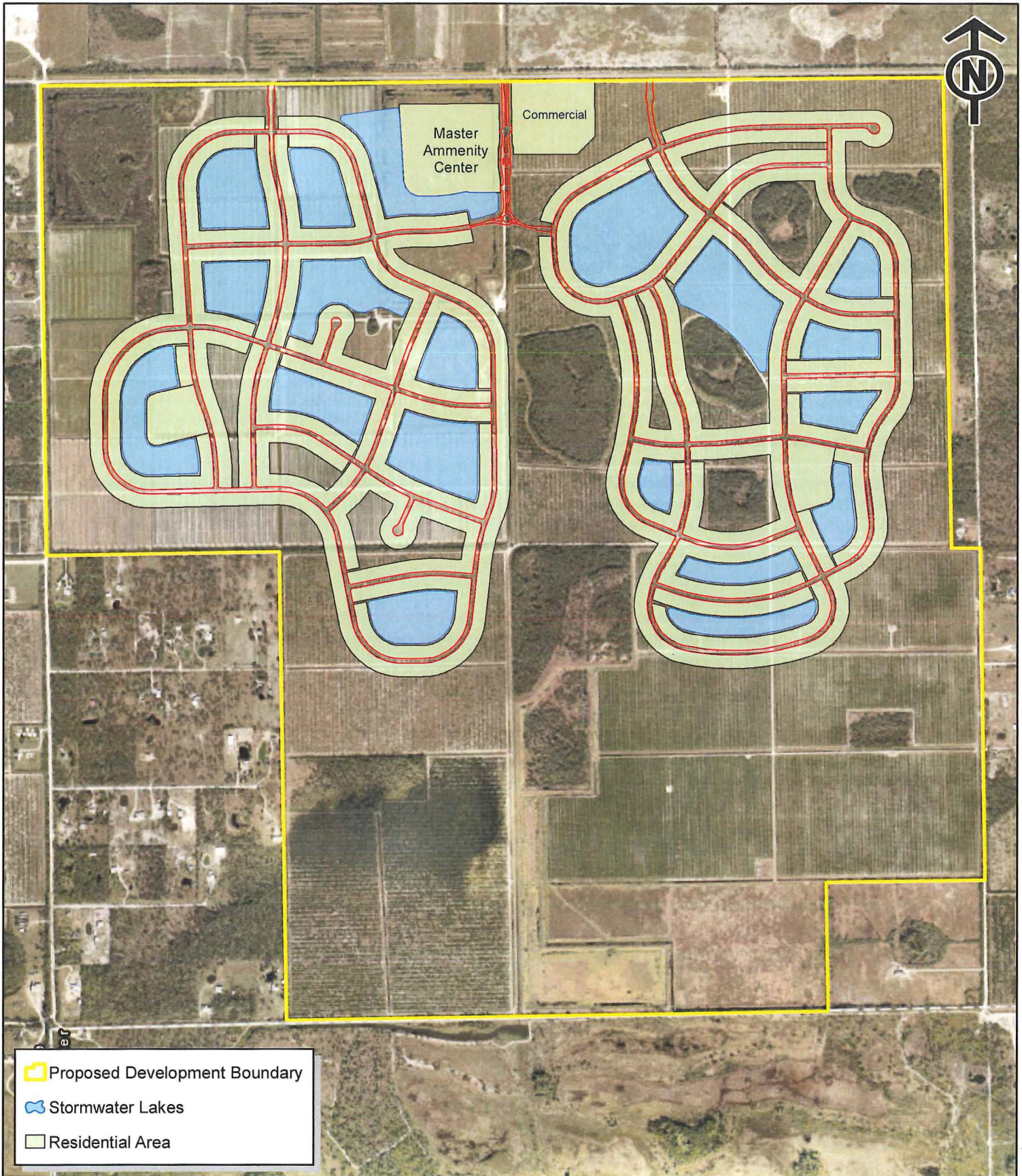
7/11/2019

Image: ESRI Imagery

0 0.1 0.2 0.4 0.6 Miles

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Figure 1
 Previously Proposed
 Residential Development Plans
 Lee County, Florida



- Proposed Development Boundary
- Stormwater Lakes
- Residential Area

Scale: 1:17,000

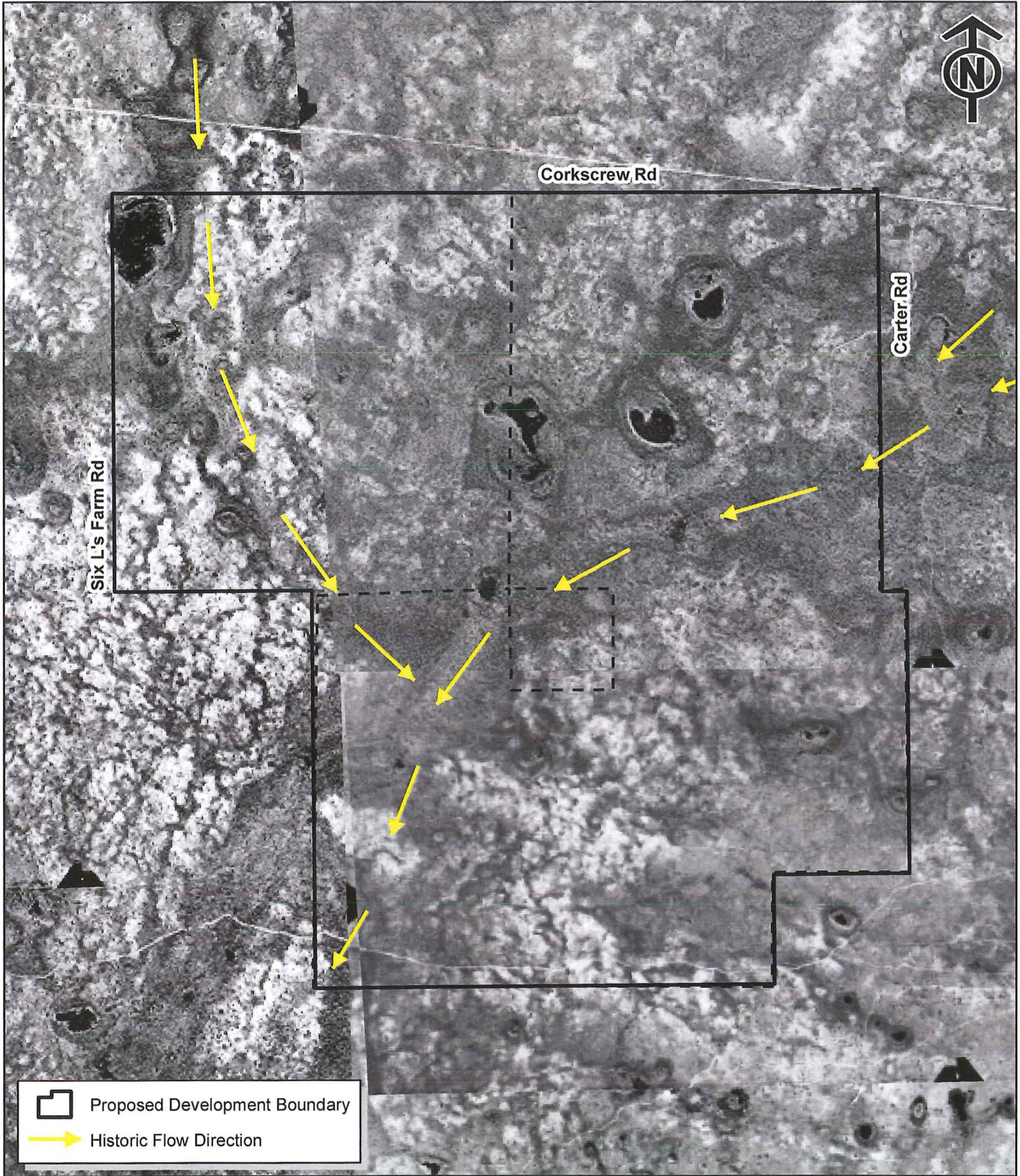
7/11/2019

Image: ESRI Imagery

0 0.1 0.2 0.4 0.6 Miles

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Figure 2
Proposed Development Plan
Verdana Village
Lee County, Florida



Scale: 1:20,000

7/12/2019

Image: Historic 1953 Aerial Imagery

0 550 1,100 2,200 3,300 Feet

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Figure 3
 1953 Historic Aerial
 Verdana Village
 Lee County, Florida



Progressive Water Resources
 Integrated Water Resource Consultants

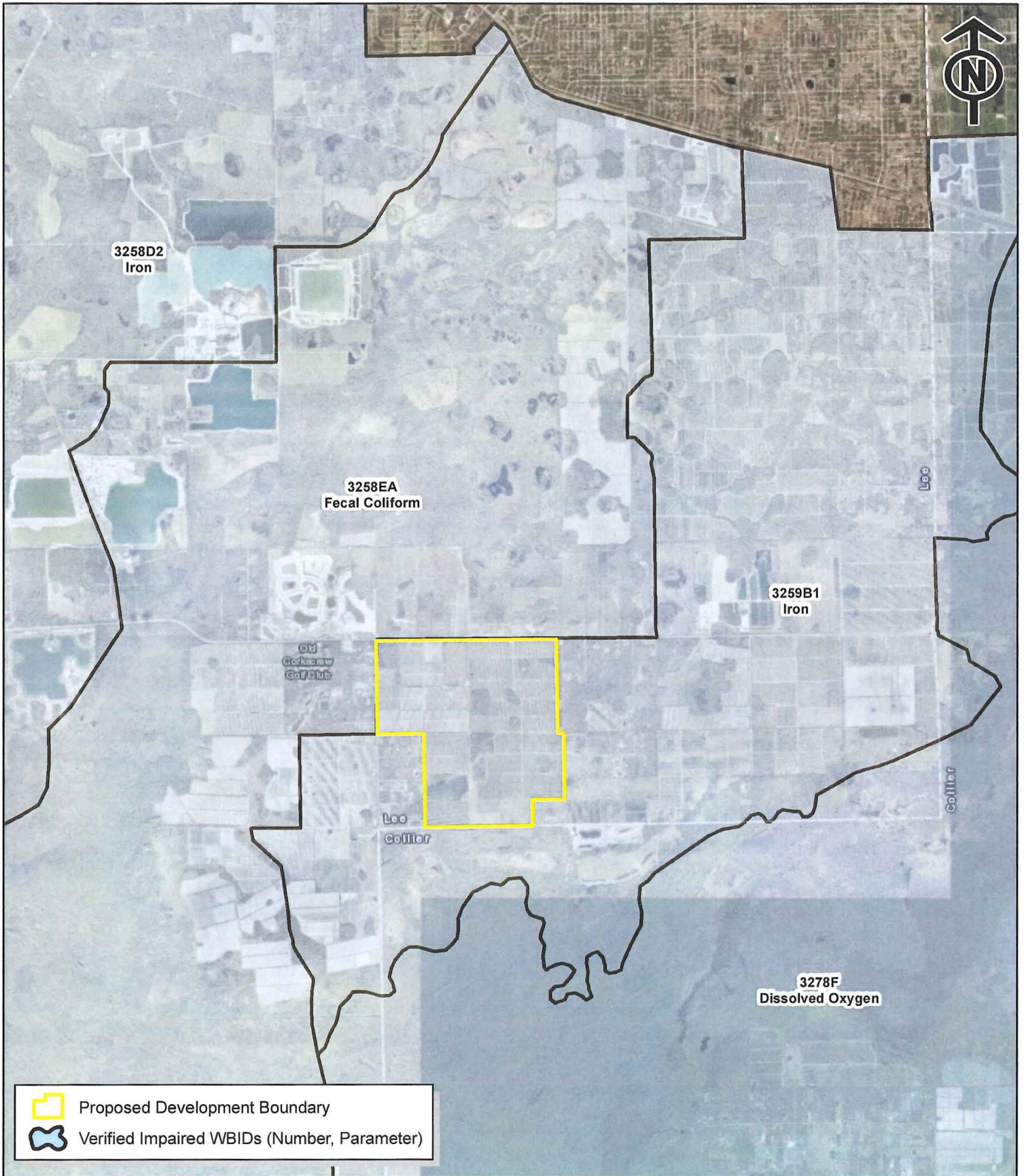


Figure 4
 Verified Impaired WBIDs
 Verdana Village
 Lee County, FL

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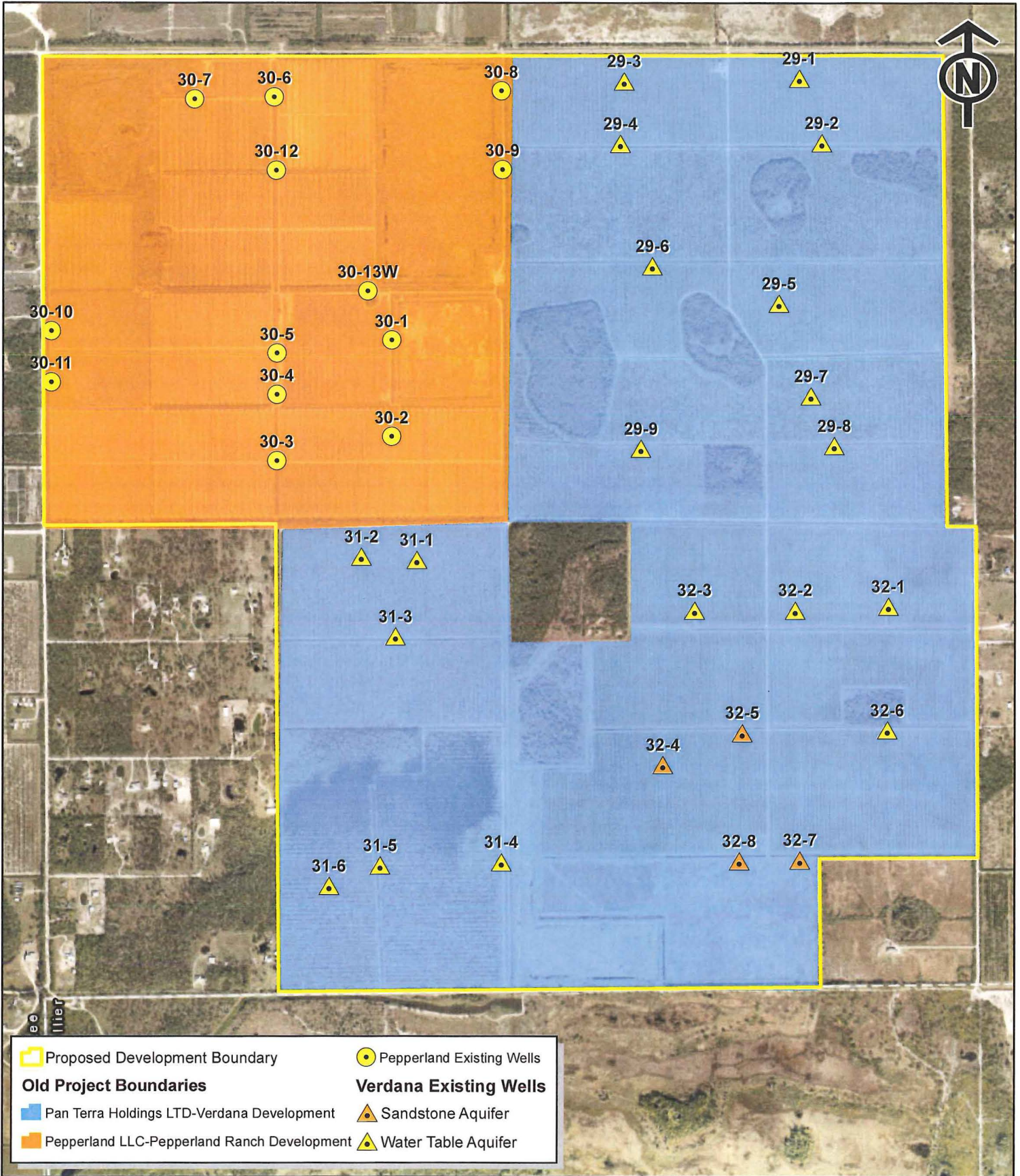
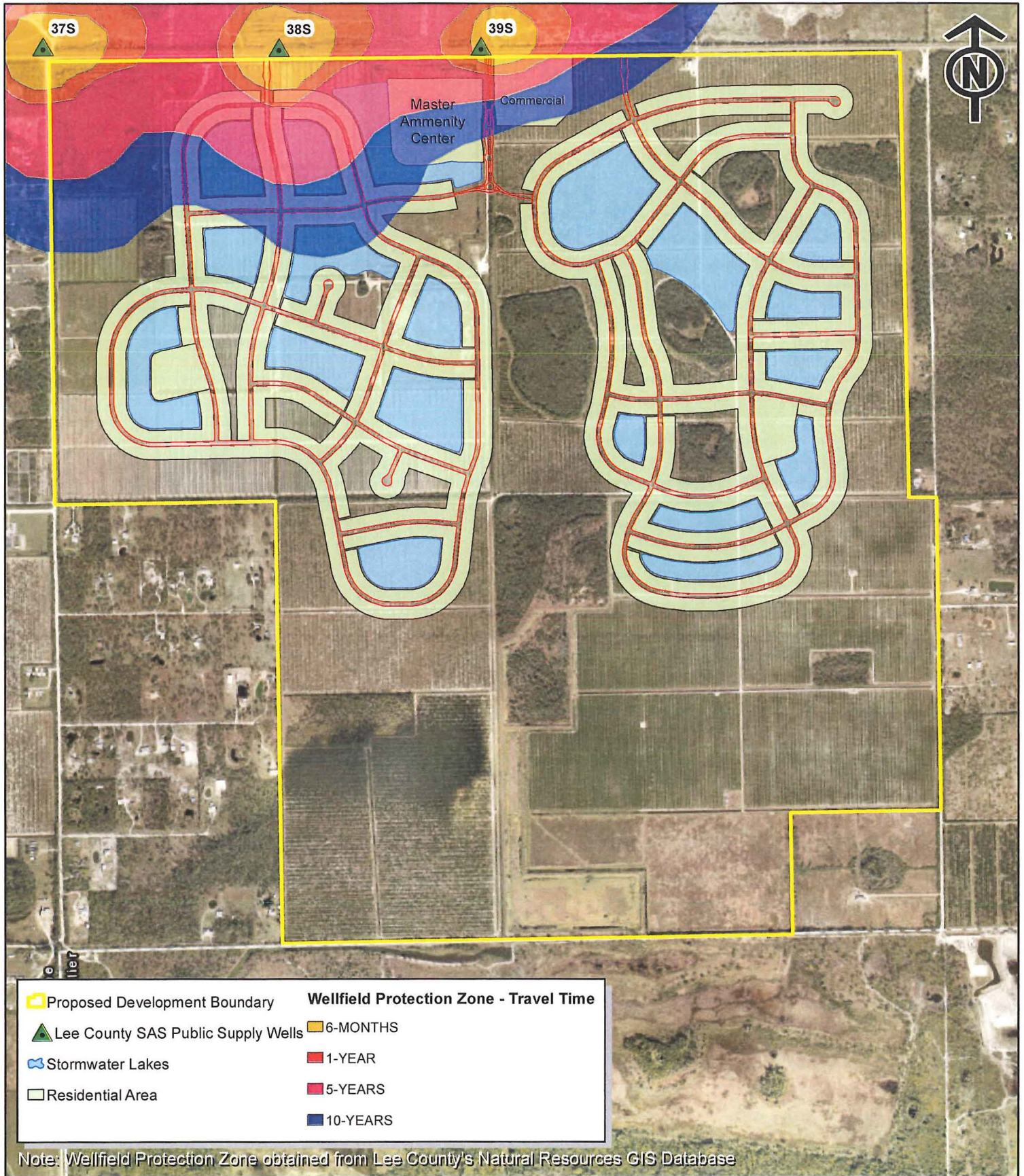


Figure 5
 Permitted Verdana
 and Pepperland Wells
 Lee County, Florida

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Proposed Development Boundary	Wellfield Protection Zone - Travel Time
Lee County SAS Public Supply Wells	6-MONTHS
Stormwater Lakes	1-YEAR
Residential Area	5-YEARS
	10-YEARS

Note: Wellfield Protection Zone obtained from Lee County's Natural Resources GIS Database

Scale: 1:18,000

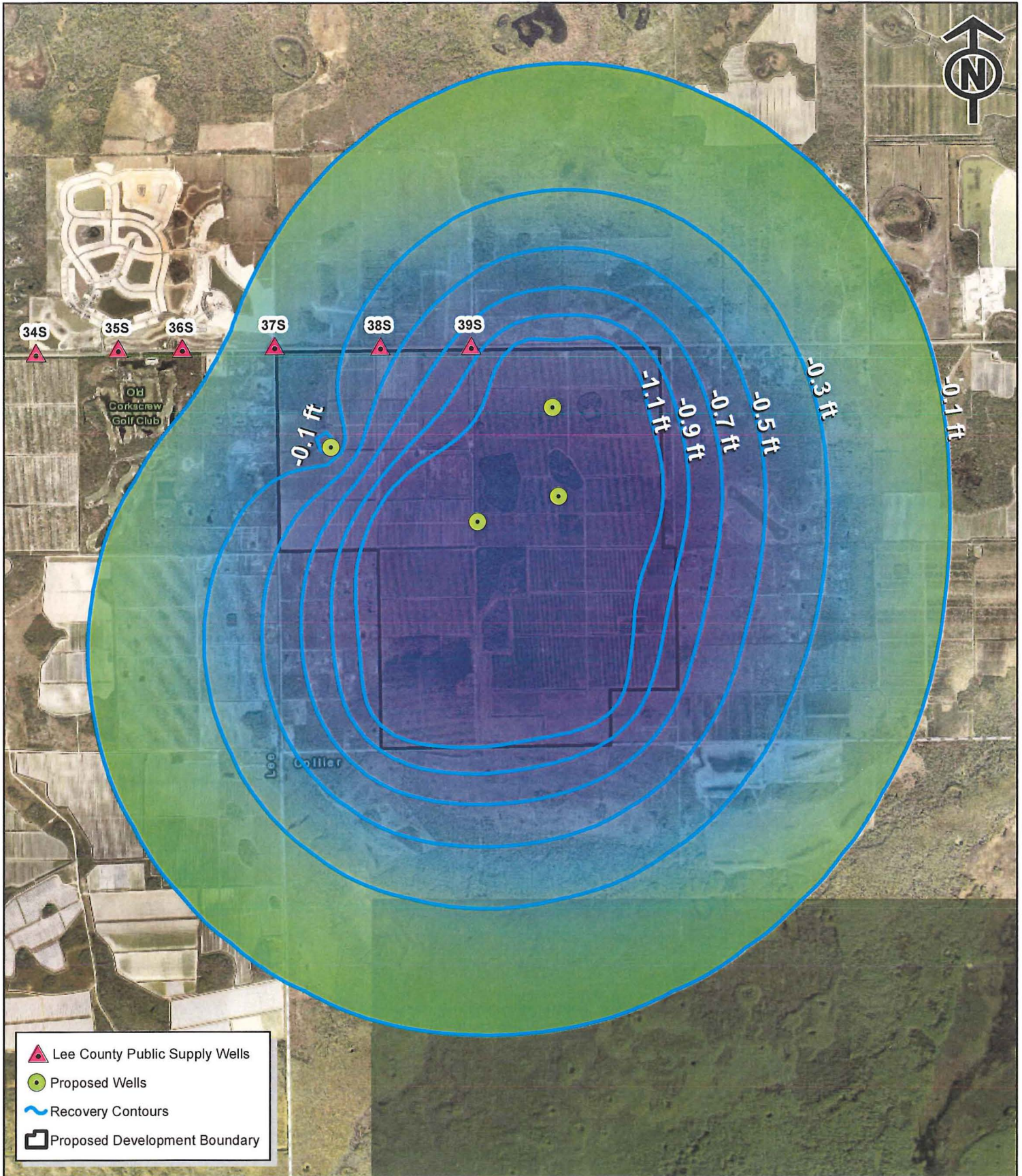
7/11/2019

Image: ESRI Imagery

0 0.1 0.2 0.4 0.6 Miles

Progressive Water Resources has provided the images or data presented in this map for informational purposes only. This data is not intended to be used in lieu of official survey data provided by a Professional Surveyor licensed by the State of Florida

Figure 6
Wellfield Protection
Zone Travel Times
Verdana Village
Lee County, Florida



Scale: 1:40,000

7/11/2019

Image: ESRI Imagery

0 0.225 0.45 0.9 1.35 Miles

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Figure 7
Recovery Contours
Verdana Village
Lee County, Florida

Appendix A

WUP No. 36-00327-W

WUP No. 36-00883-W

SPECIAL PERMIT CONDITIONS

1. This permit is issued to:
Pan Terra Holdings Ltd
150 Alhambra Circle, Suite 925
Coral Gables, FL 33134

2. This permit shall expire on March 7, 2031.

3. Use classification is:

Agricultural Irrigation

4. Source classification is:

Groundwater from:
Sandstone Aquifer
Surficial Aquifer System

5. Allocation:

Total annual allocation is 1,149.84 million gallons (MG). (3.15 MGD)

Total maximum monthly allocation is 188.19 million gallons (MG).

Allocation from a specific source (aquifer, waterbody, facility, or facility group):

Maximum annual allocation from Surficial Aquifer System shall not exceed 887.67 million gallons (MG). (2.40 MGD).

Maximum annual allocation from Sandstone Aquifer shall not exceed 262.17 million gallons (MG). (718,274 GPD).

Maximum monthly allocation from Surficial Aquifer System shall not exceed 145.28 million gallons (MG).

Maximum monthly allocation from Sandstone Aquifer shall not exceed 42.91 million gallons (MG).

Maximum daily freeze protection allocation shall not exceed 21.05 million gallons (MG).

These allocations represent the amount of water required to meet the water demands as a result of a rainfall deficit during a drought with the probability of recurring one year in ten. The Permittee shall not exceed these allocations in hydrologic conditions less than a 1-in-10 year drought event. Compliance with the annual allocation is based on the quantity withdrawn over a 12-month time period. Compliance with the maximum monthly allocation is based on the greatest quantity withdrawn in any single month. The annual allocation expressed in GPD or MGD is for

informational purposes only.

If the rainfall deficit is more severe than that expected to recur once every ten years, the withdrawals shall not exceed that amount necessary to continue to meet the reasonable-beneficial demands under such conditions, provided no harm to the water resources occur and:

1. All other conditions of the permit are met; and
2. The withdrawal is otherwise consistent with applicable declared Water Shortage Orders in effect pursuant to Chapter 40E-21, F.A.C.

6. Withdrawal facilities:

Groundwater - Existing:

- 4 - 12" X 140' X 650 GPM Wells Cased To 60 Feet
- 1 - 12" X 95' X 600 GPM Well Cased To 45 Feet
- 1 - 9.5" X 95' X 570 GPM Well Cased To 45 Feet
- 1 - 8" X 200' X 590 GPM Well Cased To 145 Feet
- 6 - 12" X 140' X 700 GPM Wells Cased To 60 Feet
- 4 - 12" X 140' X 600 GPM Wells Cased To 60 Feet
- 1 - 8" X 95' X 610 GPM Well Cased To 45 Feet
- 1 - 12" X 110' X 650 GPM Well Cased To 60 Feet
- 3 - 8" X 200' X 600 GPM Wells Cased To 145 Feet
- 1 - 8" X 95' X 600 GPM Well Cased To 45 Feet

7. The Permittee shall submit all data as required by the implementation schedule for each of the permit conditions to: SFWMD at www.sfwmd.gov/ePermitting, or Regulatory Support, 3301 Gun Club Road, West Palm Beach, FL 33406.
8. The Permittee must submit the appropriate application form incorporated by reference in Rule 40E-2.101, F.A.C., to the District prior to the permit expiration date in order to continue the use of water.
9. Every five years from the date of last calibration, the Permittee shall submit re-calibration data for each withdrawal facility.
10. Monthly withdrawals for each withdrawal facility shall be reported to the District semi-annually. The water accounting method and means of calibration shall be stated on each report.
11. The Permittee shall continue to investigate the feasibility of utilizing reclaimed water as an alternative water supply for this project. To this end, the Permittee, or its successor, shall provide the District with periodic reclaimed water feasibility reports, to be submitted at five (5) year

intervals commencing 5 years from permit issuance and continuing through the duration of this water use permit. Such reclaimed water feasibility reports shall evaluate the feasibility of utilizing reclaimed water and specifically consider: 1) whether a suitable reclaimed water supply source is available and permitted; 2) whether reclaimed water supply lines are available at the property boundary in sufficient capacity to serve Permittee's needs; 3) whether the Permittee is capable of accessing the reclaimed water source through distribution lines; 4) whether use of reclaimed water is technically, environmentally, and economically feasible; and 5) whether use of reclaimed water would adversely affect requirements contained in Permittee's surface water drainage permit, if appropriate.

12. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water. The permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the project site, and the necessary on-site modifications and authorizations are obtained.
13. This permit supersedes and/or cancels the following water use permit(s):
36-01530-W

STANDARD PERMIT CONDITIONS

1. All water uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance.

The Permittee shall immediately notify the District in writing of any previously submitted material information that is later discovered to be inaccurate.

2. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.
3. The Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit a new or modified lease showing that it continues to have legal control or documentation showing a transfer in control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40E-1.6107, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
4. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order. The Permittee is advised that during a water shortage, pumpage, water levels, and water quality data shall be collected and submitted as required by District orders issued pursuant to Chapter 40E-21, F.A.C.
5. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
6. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.
7. A. The Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that Section 373.239, F.S., and Rule 40E-2.331, F.A.C., are applicable to permit modifications.

B. The Permittee shall notify the District in writing 30 days prior to any changes to the project that

could potentially alter the reasonable demand reflected in the permitted allocation. Such changes include, but are not limited to, change in irrigated acreage, crop type, irrigation system, large users agreements, or water treatment method. Permittee will be required to apply for a modification of the permit for any changes in permitted allocation.

8. If any condition of the permit is violated, the permit shall be subject to review and modification, enforcement action, or revocation pursuant to Chapter 373, F.S.
9. The Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the Permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1-in-10 year drought event that results in the:

A. Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

B. Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

10. The Permittee shall mitigate harm to the natural resources caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

A. Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

B. Reduction in water levels that harm the hydroperiod of wetlands,

C. Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

D. Harmful movement of contaminants in violation of state water quality standards, or

E. Harm to the natural system including damage to habitat for rare or endangered species.

11. The Permittee shall mitigate harm to existing off-site land uses caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm as determined through reference to the conditions for permit issuance, includes:

A. Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

B. Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or,

C. Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

NOTICE OF RIGHTS

As required by Sections 120.569 and 120.60(3), Fla. Stat., the following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all of the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a SFWMD decision which affects or may affect their substantial interests shall file a petition for hearing with the Office of the District Clerk of the SFWMD, in accordance with the filing instructions set forth herein, within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, or posting that the SFWMD has or intends to take final agency action, or publication of notice that the SFWMD has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action which materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional Rule 28-106.111, Fla. Admin. Code, point of entry.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Fla. Stat., shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

FILING INSTRUCTIONS

A petition for administrative hearing must be filed with the Office of the District Clerk of the SFWMD. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at SFWMD headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the District Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.

- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to the SFWMD's security desk does not constitute filing. It will be necessary to request that the SFWMD's security officer contact the Office of the District Clerk. An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at clerk@sfwmd.gov. The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

INITIATION OF AN ADMINISTRATIVE HEARING

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Fla. Stat., and Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, SFWMD file number or any other SFWMD identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

MEDIATION

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401–.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Section 120.68, Fla. Stat., and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal with the Office of the District Clerk of the SFWMD in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the clerk of the appropriate district court of appeal.

Last Date for Agency Action:
November 3, 2016

WATER USE STAFF REPORT

Application Number: 160805-19
Permit Number: 36-00327-W
Project Name: PAN TERRA HOLDINGS
Water Use Permit Status: MODIFICATION
Location: LEE COUNTY, S29, 31, 32/T46S/R27E
Applicant's Name and Address: PAN TERRA HOLDINGS LTD
150 ALHAMBRA CIRCLE SUITE 925
CORAL GABLES, FL 33134

Water Use Classification: Agricultural

Total Serviced Acreage: 1,134 (1,134 acres of citrus)

Sources:

Groundwater from: Sandstone Aquifer
Surficial Aquifer System

Authorized Allocation:

Annual Allocation: 1,149.84 Million Gallons (MG)
Maximum Monthly Allocation: 188.19 Million Gallons (MG)
Freeze Allocation: 21.05 Million Gallons (MG)

Specific Source Limitations: Annual(MG) Monthly(MG)

Surficial Aquifer System	887.67	145.28
Sandstone Aquifer	262.17	42.91

Existing Withdrawal Facilities - Groundwater

Source: Sandstone Aquifer
1 - 8" X 200' X 590 GPM Well Cased to 145 Feet
3 - 8" X 200' X 600 GPM Wells Cased to 145 Feet
Source: Surficial Aquifer System
1 - 8" X 95' X 600 GPM Well Cased to 45 Feet
1 - 12" X 110' X 650 GPM Well Cased to 60 Feet
1 - 12" X 95' X 600 GPM Well Cased to 45 Feet
4 - 12" X 140' X 650 GPM Wells Cased to 60 Feet
4 - 12" X 140' X 600 GPM Wells Cased to 60 Feet

Existing Withdrawal Facilities - Groundwater

Source: Surficial Aquifer System

1 - 8" X 95' X 610 GPM Well Cased to 45 Feet

6 - 12" X 140' X 700 GPM Wells Cased to 60 Feet

1 - 9.5" X 95' X 570 GPM Well Cased to 45 Feet

<u>Rated Capacity Source</u>	<u>Status Code</u>	<u>GPM</u>	<u>MGM</u>	<u>MGY</u>
Sandstone Aquifer	E	2,390	104.6	1,256
Surficial Aquifer System	E	12,230	535.4	6,428
Totals:		14,620	640.0	7,684

PURPOSE

The purpose of this application is to modify Water Use Permit 36-00327-W by combining two existing water use permits (36-00327-W and 36-01530-W) into one permit (36-00327-W); and to transfer this revised permit to Pan Terra Holdings, Limited. Withdrawals are from the surficial aquifer system via 19 existing facilities and from the Sandstone aquifer via 4 existing facilities.

PROJECT DESCRIPTION

Pan Terra Holdings (Project) is an existing site that is permitted for the irrigation of 1,134 acres of citrus using a micro-sprinkler irrigation system. The Project site is located in the southeast portion of Lee County on the south side of Corkscrew Road approximately 3.75 miles east of Alico Road, as shown in Exhibits 1 and 2. The Permittee now owns the property that was previously permitted under two separate and adjacent water use permits issued to RLF Corkscrew Holdings, LLC. This modification combines and transfers these two water use permits (36-00327-W and 36-01530-W) into one permit and transfers this combined permit to Pan Terra Holdings Ltd. No changes are being made to the permit expiration dates, water sources, crop type, or facilities. The existing facilities are shown and described in Exhibits 3 and 4, respectively.

Permit History:

Water Use Permit 36-00327-W for RLF Corkscrew Old M &W was for the agricultural irrigation of 730 acres of citrus using a drip irrigation system withdrawing from the surficial aquifer system via 15 existing withdrawal facilities. Water Use Permit 36-01530-W for RLF Corkscrew Old RSSF Young Grove was for the agricultural irrigation of 404 acres of citrus using a micro-sprinkler irrigation system withdrawing from the Sandstone aquifer via four existing withdrawal facilities and from the surficial aquifer system via four existing withdrawal facilities. This combined permit is for the agricultural irrigation of 1,134 acres of citrus using a micro-sprinkler irrigation system withdrawing from the Sandstone aquifer via four existing withdrawal facilities and from the surficial aquifer system via 19 existing withdrawal facilities. This permit (36-00327-W) supersedes and/or cancels permit 36-01530-W (Special Permit Condition 13).

PROJECTED WATER USE DEMANDS

The annual and maximum month allocations for all crops are calculated using the Modified Blaney-Criddle method as described in Section 2.3.1.C of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). Using this method, the total Project demands were calculated to be 188.19 million gallons maximum month (MGM) and 1,149.84 million gallons per year (MGY). Calculations of the supplemental irrigation requirement are detailed in Exhibits 5A, 5B and 5C. Based on historic operational practices, use of the Sandstone aquifer is restricted to 42.91 MGM and 262.17 MGY and use of the surficial aquifer system is restricted to 145.28 MGM and 887.67 MGY pursuant to Special Permit Condition 5. A freeze protection allocation of 21.05 million gallons per day is recommended based on the rated capacity of the Project's withdrawal facilities.

WATER RESOURCE IMPACT EVALUATION

Water Resource Availability

Surficial Aquifer System

The land surface elevation in the vicinity of the Project is approximately 27 feet National Geodetic Vertical Datum (NGVD). The surficial aquifer system in Lee County consists of the water table and Lower Tamiami aquifers. Based on the technical publication, "Water Resources Management Project for Lee County" (Montgomery, 1988) on-site lithologic well data and data from nearby soil boring profiles (Water Use Permit 36-06874-W), the Lower Tamiami confining bed which separates the water table and Lower Tamiami aquifers is negligible or not present in this area of Lee County. Therefore, the two aquifers are hydraulically connected and function as one unit. Information obtained from the United States Geological Survey (USGS) surficial aquifer system monitor well L-5667 located 4.5 miles east of the Project shows that the lowest recent water level was 12.54 feet NGVD in May, 2001 (Exhibit 2), inclusive of the Project's withdrawals. This application is for the continuation of an existing, historical, permitted use of water with no changes in source or withdrawal operations, no increase in demands and no reported problems or harm involving water resource availability. Therefore, the potential for harm to occur to water resource availability of the surficial aquifer system as a result of the continued withdrawal is considered minimal.

Sandstone Aquifer

The land surface elevation in the vicinity of the Project is approximately 27 feet NGVD. The top of the Sandstone aquifer is approximately -150 feet NGVD in this area and the maximum developable limit (MDL) occurs at approximately -130 feet NGVD. Information obtained from the USGS Sandstone aquifer monitor well L-2192, located at the northern Project boundary shows that the average dry season water level elevation is approximately 13.65 feet NGVD, inclusive of the Project's withdrawals. Therefore, the groundwater level is over 140 feet above the MDL for the Sandstone aquifer in the vicinity of the Project. This application is for the continuation of an existing, historical, permitted use of water with no changes in source or demands, and no reported problems or harm involving water resource availability. Therefore, the potential for harm to occur to water resource availability of the Sandstone aquifer as a

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

result of the continued withdrawal is considered minimal.

Existing Legal Users

Surficial Aquifer System

The nearest existing legal user of the surficial aquifer system is Carter Road Citrus (Water Use Permit 36-00094-W) located adjacent to the east of the Project (Exhibit 2). This application is for the continuation of an existing, historical, permitted use of water with no changes in source, demand or withdrawal operations, and no reported problems or harm to existing legal users. Therefore, the potential for harm to occur to existing legal users as a result of the withdrawal of the recommended allocation is considered minimal.

Sandstone Aquifer

The nearest existing legal user of the Sandstone aquifer is Keystone-Lee Grove (Water Use Permit 36-07002-W) located adjacent to the east of the Project. The Project has been utilizing the Sandstone and surficial aquifers for the irrigation of agricultural crops since the 1980's. This application is for the continuation of an existing, historical, permitted use of water with no changes in source and no reported problems or harm to existing legal users. Therefore, the potential for harm to occur to existing legal users as a result of the continued withdrawal is considered minimal.

Existing Off Site Land Uses

Surficial Aquifer System

Land uses that are dependent upon water being on or near land surface and that existed prior to this application are protected from harm. The Project is bordered by agricultural lands and open natural areas. The Project has been utilizing groundwater from the surficial aquifer system to meet the farm's irrigation demands since the 1980's. Therefore, pursuant to Section 3.6.2 of the AH, the use is not expected to result in significant reduction in water levels on the property of an existing off-site land use to the extent that the designed function of a water body and related surface water management improvements are damaged (not including aesthetic values), damage to agriculture, including damage resulting from reduction in soil moisture resulting from water use, or land collapse or subsidence caused by reduction in water levels associated with water use.

Sandstone Aquifer

Land uses that are dependent upon water being on or near land surface and that existed prior to this application are protected from harm. The Project is bordered by agricultural lands and open natural areas. The Sandstone aquifer is separated from the surficial aquifer system and surface water sources by approximately 40 feet of low permeability confining sediments. Therefore, pursuant to Section 3.6.2 of the AH, the use is not expected to result in significant reduction in water levels on the property of an existing off-site land use to the extent that the designed function of a water body and related surface water management improvements are damaged (not including aesthetic values), damage to agriculture, including damage resulting from reduction in

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

soil moisture resulting from water use, or land collapse or subsidence caused by reduction in water levels associated with water use.

Migration of Saline Water

Surficial Aquifer System

The nearest source of surface saline water is Estero Bay located approximately 12 miles to the west. Dissolved chloride concentration data from Lee County Utilities Surficial aquifer monitor wells 15 and 16 (Water Use Permit 36-00003-W) located approximately 3 miles west of the Project and nearby USGS surficial aquifer system monitor wells indicate the surficial aquifer system in this area is fresh (less than 250 milligrams per liter [mg/l] of dissolved chloride). Due to the large distance separating the surface saline water source from the Project site and dissolved chloride concentration monitor data in this aquifer and the Sandstone aquifer located beneath it, the potential for saline water intrusion or upconing to occur as a result of the continued withdrawal is considered minimal.

Sandstone Aquifer

As stated above, the nearest source of surface saline water is the Estero Bay located approximately 12 miles to the west. The Sandstone aquifer is separated from the surficial aquifer system, and saline surface water sources, by approximately 40 feet of low permeability confining sediments. Dissolved chloride concentration data from nearby Sandstone aquifer monitor wells indicate that the concentration is below 250 mg/l which is considered fresh water. Saline water is located below the Sandstone aquifer in the Mid-Hawthorn aquifer. The Mid-Hawthorn aquifer is separated from the Sandstone aquifer by a 90-foot confining layer of low permeability (Bonita Springs marl and Upper Peace River clay). Based on the large distance separating the saline water source from the Project site, and the confinement that exists between the Sandstone and Mid-Hawthorn aquifers, the potential for saline water intrusion or upconing to occur as a result of the continued withdrawal is considered minimal.

Wetland Environments

Surficial Aquifer System

There are cypress forests, freshwater marshes and mixed forested wetland areas located on-site and in the vicinity of the Project. The farm has been withdrawing from the surficial aquifer system to meet the historical demands since the 1980's. The on-site wetland habitats have perimeter ditches associated with the surface water management system authorized by Environmental Resource Permit (ERP) 36-00327-S. In 2007, during the permit renewal (Water Use Application 051031-48), District staff conducted a site visit and determined that the historic withdrawals for the Project have not caused any known harm to wetlands. Additionally, no harm has been reported to date. The area to be added to this permit from Water Use Permit 36-01530-W contains mixed forested wetlands and hydric pine flatwoods. Under ERP 36-00326-S, these wetlands were incorporated into the surface water management system with control elevations designed to maintain the hydroperiod of the wetlands. Issuance of this permit modification results in no increase in the historic withdrawals

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

for the Project. Therefore, the potential for harm to occur to wetlands as a result of the continued withdrawal is considered minimal.

Sandstone Aquifer

There are mixed forested wetlands, cypress forests, freshwater marshes, and hydric pine wetlands on-site. The Sandstone aquifer is isolated from the surficial aquifer system, and wetland environments, by approximately 40 feet of low permeability confining sediments. This application is for the continuation of an existing, historical, permitted use of water with no changes in source or demands, and no reported problems or harm involving wetland environments. Based on this information, the potential for harm to occur to the wetlands as a result of the continued withdrawal is considered minimal.

Sources of Pollution

Surficial Aquifer System

There are no known contamination sources within a one-mile radius of the Project. Therefore, the potential for movement of contaminants, if present, from known pollution sources as a result of the continued withdrawal is considered minimal.

Sandstone Aquifer

There are no known contamination sources within a one-mile radius of the Project. In addition, the Sandstone aquifer is separated from the surficial aquifer system, and specifically the water table aquifer, where sources of pollution tend to occur by approximately 40 feet of low permeability confining sediments. Therefore, the potential for movement of contaminants, if present, from known pollution sources as a result of the continued withdrawal is considered minimal.

ADDITIONAL INFORMATION

Regional Issues

Restricted Allocation Areas or Maximum Developable Limits

The Sandstone aquifer has a MDL set 20 feet above the top of the uppermost strata in the aquifer. The top of the aquifer is approximately -150 feet NGVD beneath the Project and the MDL occurs at approximately -130 feet NGVD. As discussed in the Water Resource Availability section of this staff report, withdrawal of the recommended allocation for this Project should not impact the MDL pursuant to Section 3.9.3 of the AH.

Project Site Issues

Legal Control and Land Use

Records from the Lee County Property Appraiser demonstrate that the Permittee maintains legal control over the Project site. All withdrawal facilities are located within the Project site. The water allocation requested for agricultural irrigation is compatible with the agricultural land use designation at this site (Section 2.1.4 of the AH).

ADDITIONAL INFORMATION (CONTINUED)

Water Use Accounting

The Project's withdrawal facilities were last calibrated in 2011 and 2012. Pursuant to Special Permit Condition 9, the Permittee shall submit a report of recalibration for the water use accounting system for each water withdrawal facility authorized under this permit every five years from each previous calibration, continuing at five-year increments.

Permit Reporting Requirements

Pursuant to Special Permit Condition 10, monthly withdrawals from each facility shall be reported to the District on a semi-annual basis.

Potential Use of Reclaimed Water

The Permittee submitted documentation from Lee County Utilities demonstrating that reclaimed water is not currently available for use at the Project site. Therefore, the use of reclaimed water for this Project is considered technically infeasible. The Permittee shall continue to investigate the feasibility of utilizing reclaimed water as an alternative water supply for this Project and submit a reclaimed water feasibility report every five years (Special Permit Condition 11). If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water (Special Permit Condition 12).

Permit Duration

The Permittee has not requested an extension of the duration for this permit. Therefore, the water use permit duration shall remain the same with a permit expiration date of March 7, 2031.

ENVIRONMENTAL RESOURCE PERMIT STATUS:

PERMITTED (No. 36-00327-S)

RIGHT OF WAY PERMIT STATUS:

Not Applicable

RECOMMENDATIONS

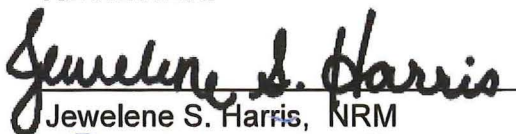
Project Name: PAN TERRA HOLDINGS
Application Number: 160805-19
Permit Number: 36-00327-W


RECOMMENDATION

Authorizing: The use of groundwater from the surficial aquifer system and the Sandstone aquifer for agricultural irrigation of 1,134 acres of citrus using a micro-sprinkler irrigation system with an annual allocation of 1,149.84 million gallons.

STAFF EVALUATION

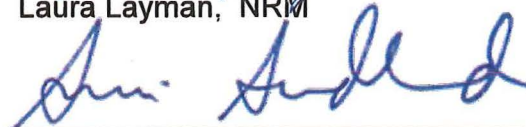
REVIEWER:


Jewelene S. Harris, NRM


Lindy Cerar, P.G., WU

SUPERVISOR:


Laura Layman, NRM


Simon Sunderland, P.G., WU

QUALITY ASSURANCE REVIEW:


Stephanie Lancaster, P.G.

Date: 8/31/16

WATER USE BUREAU CHIEF:


Maria C. Clemente, P.E.

Date: 8/31/16

SPECIAL PERMIT CONDITIONS

1. This permit is issued to:
Pan Terra Holdings Ltd
150 Alhambra Circle, Suite 925
Coral Gables, FL 33134

2. This permit shall expire on March 7, 2031.

3. Use classification is:

Agricultural Irrigation

4. Source classification is:

Groundwater from:
Sandstone Aquifer
Surficial Aquifer System

5. Allocation:

Total annual allocation is 1,149.84 million gallons (MG). (3.15 MGD)

Total maximum monthly allocation is 188.19 million gallons (MG).

Allocation from a specific source (aquifer, waterbody, facility, or facility group):

Maximum annual allocation from Surficial Aquifer System shall not exceed 887.67 million gallons (MG). (2.40 MGD).

Maximum annual allocation from Sandstone Aquifer shall not exceed 262.17 million gallons (MG). (718,274 GPD).

Maximum monthly allocation from Surficial Aquifer System shall not exceed 145.28 million gallons (MG).

Maximum monthly allocation from Sandstone Aquifer shall not exceed 42.91 million gallons (MG).

Maximum daily freeze protection allocation shall not exceed 21.05 million gallons (MG).

These allocations represent the amount of water required to meet the water demands as a result of a rainfall deficit during a drought with the probability of recurring one year in ten. The Permittee shall not exceed these allocations in hydrologic conditions less

SPECIAL PERMIT CONDITIONS

than a 1-in-10 year drought event. Compliance with the annual allocation is based on the quantity withdrawn over a 12-month time period. Compliance with the maximum monthly allocation is based on the greatest quantity withdrawn in any single month. The annual allocation expressed in GPD or MGD is for informational purposes only.

If the rainfall deficit is more severe than that expected to recur once every ten years, the withdrawals shall not exceed that amount necessary to continue to meet the reasonable-beneficial demands under such conditions, provided no harm to the water resources occur and:

1. All other conditions of the permit are met; and
2. The withdrawal is otherwise consistent with applicable declared Water Shortage Orders in effect pursuant to Chapter 40E-21, F.A.C.

6. Withdrawal facilities:

Groundwater - Existing:

- 4 - 12" X 140' X 650 GPM Wells Cased To 60 Feet
- 1 - 12" X 95' X 600 GPM Well Cased To 45 Feet
- 1 - 9.5" X 95' X 570 GPM Well Cased To 45 Feet
- 1 - 8" X 200' X 590 GPM Well Cased To 145 Feet
- 6 - 12" X 140' X 700 GPM Wells Cased To 60 Feet
- 4 - 12" X 140' X 600 GPM Wells Cased To 60 Feet
- 1 - 8" X 95' X 610 GPM Well Cased To 45 Feet
- 1 - 12" X 110' X 650 GPM Well Cased To 60 Feet
- 3 - 8" X 200' X 600 GPM Wells Cased To 145 Feet
- 1 - 8" X 95' X 600 GPM Well Cased To 45 Feet

7. The Permittee shall submit all data as required by the implementation schedule for each of the permit conditions to: SFWMD at www.sfwmd.gov/ePermitting, or Regulatory Support, 3301 Gun Club Road, West Palm Beach, FL 33406.
8. The Permittee must submit the appropriate application form incorporated by reference in Rule 40E-2.101, F.A.C., to the District prior to the permit expiration date in order to continue the use of water.
9. Every five years from the date of last calibration, the Permittee shall submit re-calibration data for each withdrawal facility.
10. Monthly withdrawals for each withdrawal facility shall be reported to the District semi-annually. The water accounting method and means of calibration shall be stated on

SPECIAL PERMIT CONDITIONS

each report.

11. The Permittee shall continue to investigate the feasibility of utilizing reclaimed water as an alternative water supply for this project. To this end, the Permittee, or its successor, shall provide the District with periodic reclaimed water feasibility reports, to be submitted at five (5) year intervals commencing 5 years from permit issuance and continuing through the duration of this water use permit. Such reclaimed water feasibility reports shall evaluate the feasibility of utilizing reclaimed water and specifically consider: 1) whether a suitable reclaimed water supply source is available and permitted; 2) whether reclaimed water supply lines are available at the property boundary in sufficient capacity to serve Permittee's needs; 3) whether the Permittee is capable of accessing the reclaimed water source through distribution lines; 4) whether use of reclaimed water is technically, environmentally, and economically feasible; and 5) whether use of reclaimed water would adversely affect requirements contained in Permittee's surface water drainage permit, if appropriate.

12. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water. The permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the project site, and the necessary on-site modifications and authorizations are obtained.

13. This permit supersedes and/or cancels the following water use permit(s):
36-01530-W

STANDARD PERMIT CONDITIONS

1. All water uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance.

The Permittee shall immediately notify the District in writing of any previously submitted material information that is later discovered to be inaccurate.

2. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.
3. The Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit a new or modified lease showing that it continues to have legal control or documentation showing a transfer in control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40E-1.6107, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
4. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order. The Permittee is advised that during a water shortage, pumpage, water levels, and water quality data shall be collected and submitted as required by District orders issued pursuant to Chapter 40E-21, F.A.C.
5. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
6. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.

7. A. The Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that Section 373.239, F.S., and Rule 40E-2.331, F.A.C., are applicable to permit modifications.

B. The Permittee shall notify the District in writing 30 days prior to any changes to the project that could potentially alter the reasonable demand reflected in the permitted allocation. Such changes include, but are not limited to, change in irrigated acreage, crop type, irrigation system, large users agreements, or water treatment method. Permittee will be required to apply for a modification of the permit for any changes in permitted allocation.

8. If any condition of the permit is violated, the permit shall be subject to review and modification, enforcement action, or revocation pursuant to Chapter 373, F.S.

9. The Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the Permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1-in-10 year drought event that results in the:

A. Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

B. Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

10. The Permittee shall mitigate harm to the natural resources caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

A. Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

B. Reduction in water levels that harm the hydroperiod of wetlands,

C. Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

D. Harmful movement of contaminants in violation of state water quality standards, or

E. Harm to the natural system including damage to habitat for rare or endangered species.

11. The Permittee shall mitigate harm to existing off-site land uses caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm as determined through reference to the conditions for permit issuance, includes:

A. Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

B. Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or,

C. Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

R 21

R 22

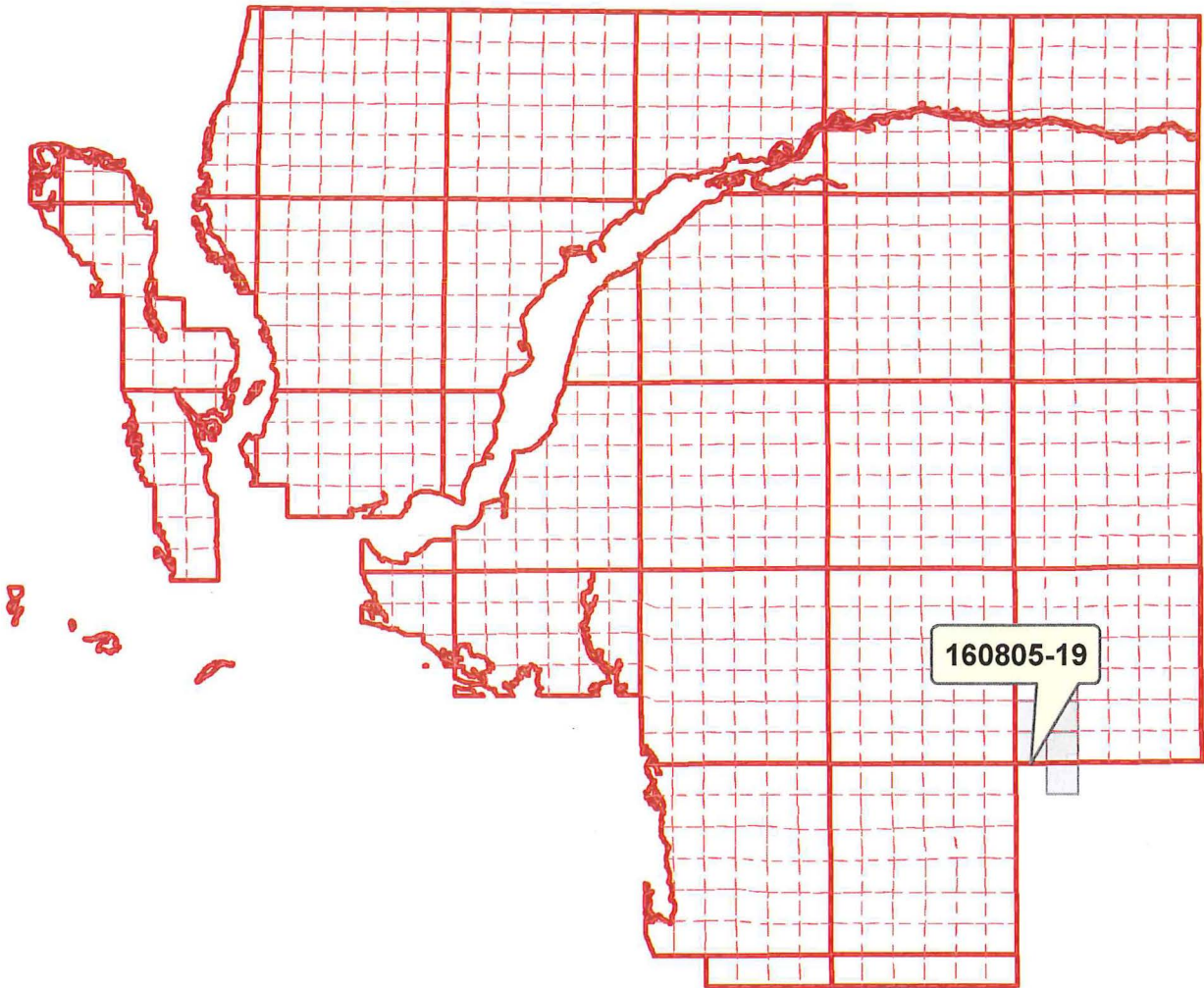
R 23

R 24

R 25

R 26

R 27



T 43

T 44

T 45

T 46

T 47

T 48

160805-19




LEE COUNTY, FLORIDA

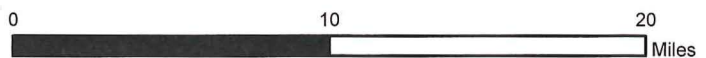
Application No: 160805-19

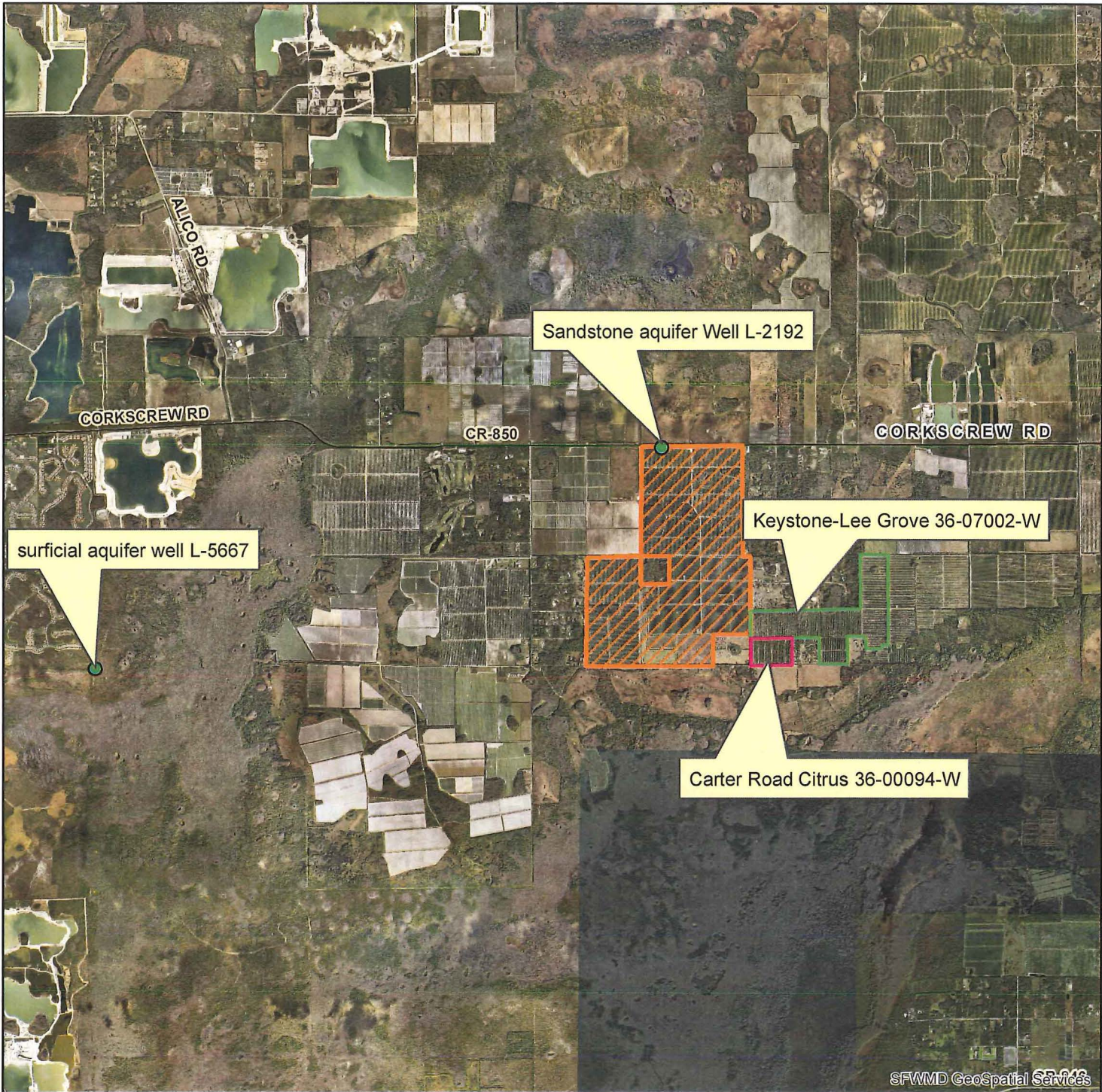
Permit No: 36-00327-W

Sec 29, 31, 32 / Twp 46 / Rge 27

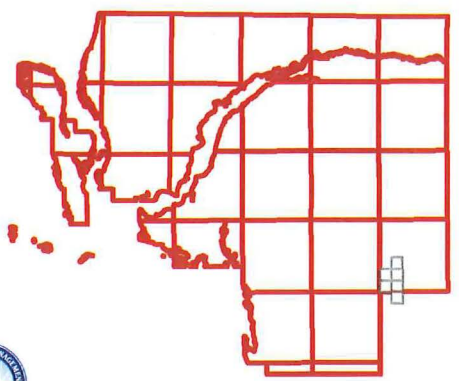
Project Name: PAN TERRA HOLDINGS

N

 Map Date: 2016-08-16





SFWMD GeoSpatial Services



LEE COUNTY, FLORIDA

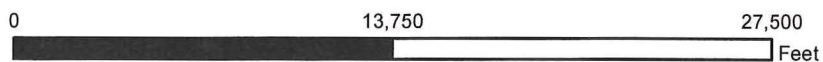
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 Application

Application No: 160805-19

Sec 29, 31, 32 / Twp 46 / Rge 27

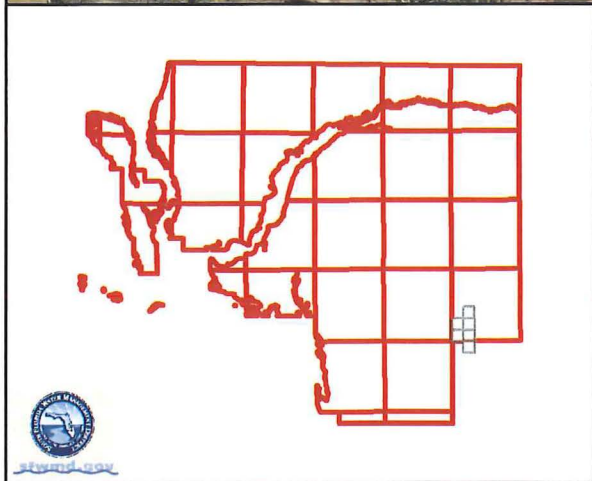
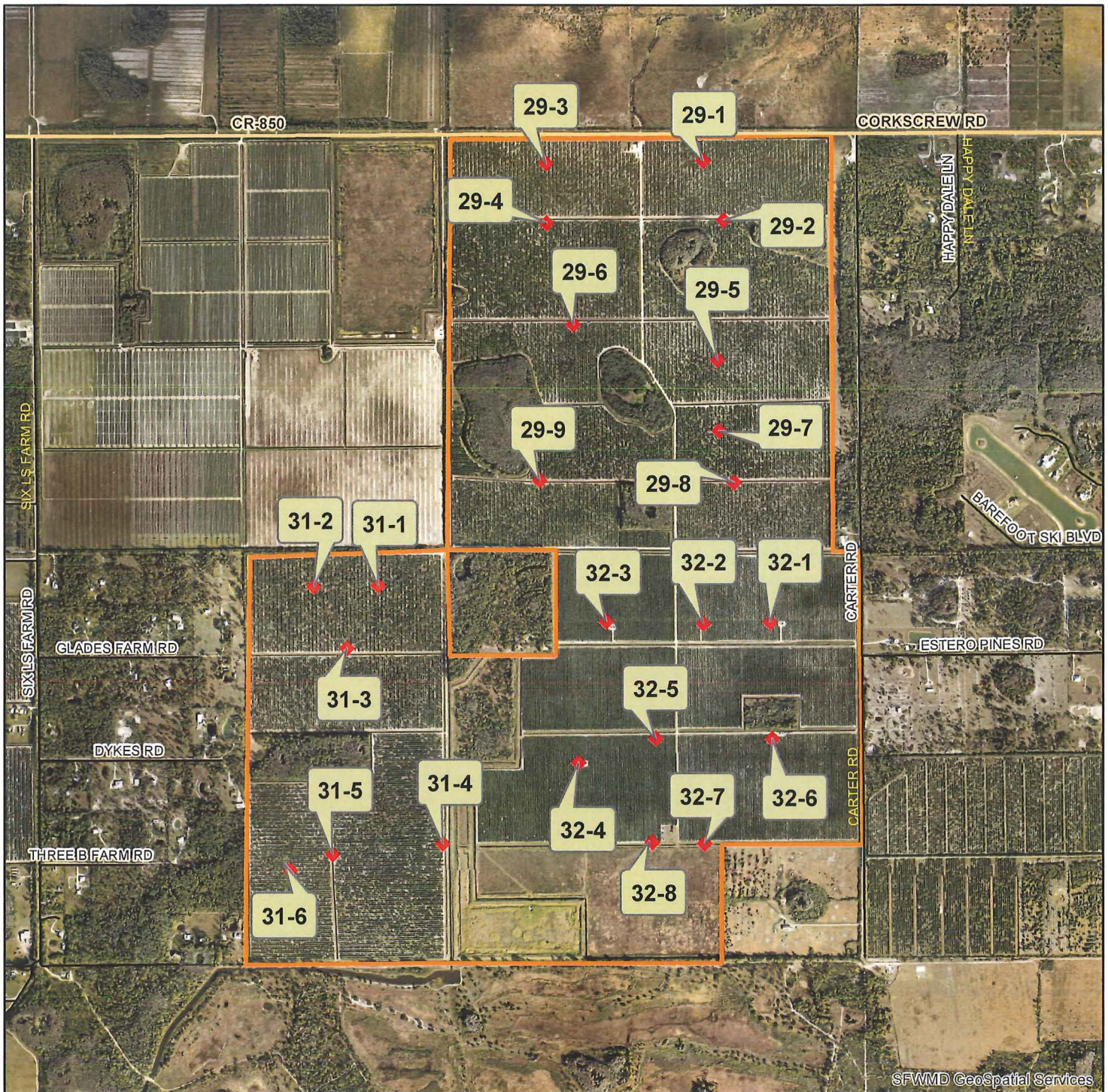
Project Name: PAN TERRA HOLDINGS



Map Date: 2016-08-19

Permit No: 36-00327-W





LEE COUNTY, FLORIDA

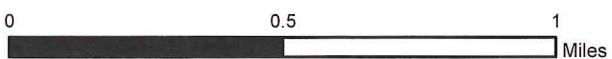
 Application

 WELL

Application No: 160805-19

Sec 29, 31, 32 / Twp 46 / Rge 27

Project Name: PAN TERRA HOLDINGS



Map Date: 2016-08-16

Permit No: 36-00327-W

TABLE - A
Description Of Wells.

Application Number: 160805-19

Well ID	45588	45597	45589	45598	45590	45610
Name	29-1	29-2	29-3	29-4	29-5	29-6
Map Designator	29-1	29-2	29-3	29-4	29-5	29-6
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	12	12	12	12	12	12
Total Depth(feet)	140	140	140	140	140	110
Cased Depth(feet)	60	60	60	60	60	60
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0	0	0	0	0
To	0	0	0	0	0	0
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)	0	0	0	0	0	0
Pump Capacity(GPM)	700	700	600	600	600	650
Year Drilled						
Planar Location						
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	448843	449103	446832	446843	449028	447182
Feet North	769631	768874	769596	768839	767091	767540
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Primary	Primary	Primary	Primary	Primary
Water Use Type	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

TABLE - A
Description Of Wells.

Application Number: 160805-19

Well ID	45591	45603	45615	118004	45594	45604
Name	29-7	29-8	29-9	31-1	31-2	31-3
Map Designator	29-7	29-8	29-9	31-1	31-2	31-3
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	12	12	12	12	12	12
Total Depth(feet)	140	140	140	140	140	140
Cased Depth(feet)	60	60	60	60	60	60
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0	0		0	0
To	0	0	0		0	0
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine	Diesel Turbine
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)	0	0	0	0	0	0
Pump Capacity(GPM)	700	650	700	600	700	650
Year Drilled			9999			
Planar Location						
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	449047	449239	446753	444674	443837	444267
Feet North	766184	765529	765552	764209	764196	763405
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Primary	Primary	Primary	Primary	Primary
Water Use Type	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

TABLE - A
Description Of Wells.

Application Number: 160805-19

Well ID	45586	45587	45607	4756	4755	4754
Name	31-4	31-5	31-6	32-1	32-2	32-3
Map Designator	31-4	31-5	31-6	32-1	32-2	32-3
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	12	12	12	8	8	8
Total Depth(feet)	140	140	140	200	200	200
Cased Depth(feet)	60	60	60	145	145	145
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0	0	0	0	0
To	0	0	0	0	0	0
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	Diesel Turbine	Diesel Turbine	Diesel Turbine	Turbine	Turbine	Turbine
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)	0	0	0	50	50	50
Pump Capacity(GPM)	650	700	650	600	600	590
Year Drilled				1996	1996	1996
Planar Location						
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	445510	444086	443533	449707	448851	447602
Feet North	760908	760772	760569	763738	763723	763749
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Primary	Primary	Primary	Standby	Primary
Water Use Type	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation Freeze Protection	Irrigation	Freeze Protection	Irrigation
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Sandstone Aquifer	Sandstone Aquifer	Sandstone Aquifer

TABLE - A
Description Of Wells.

Application Number: 160805-19

Well ID	4747	4752	4757	4748	4751
Name	32-4	32-5	32-6	32-7	32-8
Map Designator	32-4	32-5	32-6	32-7	32-8
FLUWID Number					
Well Field					
Existing/Proposed	E	E	E	E	E
Well Diameter(Inches)	8	8	8	9.5	12
Total Depth(feet)	95	95	200	95	95
Cased Depth(feet)	45	45	145	45	45
Facility Elev. (ft. NGVD)					
Screened Interval					
From	0	0	0	0	0
To	0	0	0	0	0
Pumped Or Flowing	P	P	P	P	P
Pump Type	Turbine	Turbine	Turbine	Turbine	Turbine
Pump Int. Elev. Feet (NGVD)					
Feet (BLS)	50	50	50	50	40
Pump Capacity(GPM)	610	600	600	570	600
Year Drilled	9999	9999	1996	1996	9999
Planar Location					
Source	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	447254	448237	449740	448867	448194
Feet North	761947	762254	762249	760906	760928
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Standby	Primary	Standby	Standby
Water Use Type	Irrigation	Freeze Protection	Irrigation	Freeze Protection	Freeze Protection
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Sandstone Aquifer	Surficial Aquifer System	Surficial Aquifer System

Calculations Of Irrigation Requirements

APPLICATION NUMBER: 160805-19

RAINFALL STATION: Immokalee
 IRRIGATION SYSTEM: Micro-Sprinkler
 PARCEL ACREAGE: 1,134
 LAND USE: Agricultural

CROP: Citrus
 SOIL TYPE: 0.8
 PARCEL NAME: CITRUS
 IRR. MULTIPLIER: 1.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MEAN RAINFALL	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
EVAPOTRANSPIRATION	2.39	2.50	3.43	4.04	5.18	5.67	5.98	5.82	5.69	4.17	2.81	2.52	50.20
AVG. EFFECTIVE RAIN	1.02	1.07	1.49	1.16	2.17	4.09	3.69	3.61	3.31	1.47	0.96	0.74	24.78
DROUGHT RAINFALL	0.83	0.88	1.22	0.95	1.78	3.35	3.03	2.96	2.72	1.21	0.78	0.61	20.32
AVERAGE IRRIGATION	1.37	1.43	1.94	2.88	3.01	1.58	2.29	2.21	2.38	2.70	1.85	1.78	25.42
DROUGHT IRRIGATION	1.56	1.62	2.21	3.09	3.40	2.32	2.95	2.86	2.97	2.96	2.03	1.91	29.88

ANNUAL SUPPLEMENTAL CROP REQUIREMENT: 29.88 INCHES

ANNUAL SUPPLEMENTAL CROP WATER USE:

$$29.88 \text{ IN} \times 1,134 \text{ AC} \times 1.18 \times 0.02715 \text{ MG/AC-IN} = 1,085.54 \text{ MG}$$

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 5.18 INCHES

MAXIMUM MONTHLY SUPPLEMENTAL CROP WATER USE:

$$5.18 \text{ IN} \times 1,134 \text{ AC} \times 1.18 \times 0.02715 \text{ MG/AC-IN} = 188.19 \text{ MG}$$

TOTAL ANNUAL DEMAND: 1,149.84 MG

TOTAL MAXIMUM MONTHLY DEMAND: 188.19 MG

Calculations Of Irrigation Requirements

APPLICATION NUMBER: 100902-25

RAINFALL STATION: Immokalee

CROP: Citrus

IRRIGATION SYSTEM: Drip

SOIL TYPE: 0.8

PARCEL ACREAGE: 404

PARCEL NAME:

LAND USE: Agricultural

IRR. MULTIPLIER: 1.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MEAN RAINFALL	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
EVAPOTRANSPIRATION	2.39	2.50	3.43	4.04	5.18	5.67	5.98	5.82	5.69	4.17	2.81	2.52	50.20
AVG. EFFECTIVE RAIN	1.02	1.07	1.49	1.16	2.17	4.09	3.69	3.61	3.31	1.47	0.96	0.74	24.78
DROUGHT RAINFALL	0.84	0.88	1.22	0.95	1.78	3.35	3.03	2.96	2.71	1.21	0.79	0.61	20.33
AVERAGE IRRIGATION	1.37	1.43	1.94	2.88	3.01	1.58	2.29	2.21	2.38	2.70	1.85	1.78	25.42
DROUGHT IRRIGATION	1.55	1.62	2.21	3.09	5.18	2.32	2.95	2.86	2.98	2.96	2.02	1.91	31.65

ANNUAL SUPPLEMENTAL CROP REQUIREMENT: 31.65 INCHES

ANNUAL SUPPLEMENTAL CROP WATER USE:

31.65 IN X 404 AC X 1.18 X 0.02715 MG/AC-IN = 409.64 MG

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 5.18 INCHES

MAXIMUM MONTHLY SUPPLEMENTAL CROP WATER USE:

5.18 IN X 404 AC X 1.18 X 0.02715 MG/AC-IN = 67.04 MG

TOTAL ANNUAL DEMAND: 409.64 MG

TOTAL MAXIMUM MONTHLY DEMAND: 67.04 MG

Calculations Of Irrigation Requirements

APPLICATION NUMBER: 051031-48

RAINFALL STATION: Immokalee
 IRRIGATION SYSTEM: Micro-Sprinkler
 PARCEL ACREAGE: 730
 LAND USE: Agricultural

CROP: Citrus
 SOIL TYPE: 0.8
 PARCEL NAME: CITRUS
 IRR. MULTIPLIER: 1.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MEAN RAINFALL	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
EVAPOTRANSPIRATION	2.39	2.50	3.43	4.04	5.18	5.67	5.98	5.82	5.69	4.17	2.81	2.52	50.20
AVG. EFFECTIVE RAIN	1.02	1.07	1.49	1.16	2.17	4.09	3.69	3.61	3.31	1.47	0.96	0.74	24.78
DROUGHT RAINFALL	0.84	0.88	1.22	0.95	1.78	3.35	3.03	2.96	2.71	1.21	0.79	0.61	20.33
AVERAGE IRRIGATION	1.37	1.43	1.94	2.88	3.01	1.58	2.29	2.21	2.38	2.70	1.85	1.78	25.42
DROUGHT IRRIGATION	1.55	1.62	2.21	3.09	5.18	2.32	2.95	2.86	2.98	2.96	2.02	1.91	31.65

ANNUAL SUPPLEMENTAL CROP REQUIREMENT: 31.65 INCHES

ANNUAL SUPPLEMENTAL CROP WATER USE:

31.65 IN X 730 AC X 1.18 X 0.02715 MG/AC-IN = 740.20 MG

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 5.18 INCHES

MAXIMUM MONTHLY SUPPLEMENTAL CROP WATER USE:

5.18 IN X 730 AC X 1.18 X 0.02715 MG/AC-IN = 121.14 MG

TOTAL ANNUAL DEMAND: 740.20 MG

TOTAL MAXIMUM MONTHLY DEMAND: 121.14 MG

Requirement by Permit Condition Report

App No: 160805-19

Permit No: 36-00327-W

Project Name: PAN TERRA HOLDINGS

Permit Condition No: 9		Permit Condition Code: <u>WUSTD021-2</u>		
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - 29-1	Calibration report for WELL 29-1	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-2	Calibration report for WELL 29-2	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-3	Calibration report for WELL 29-3	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-4	Calibration report for WELL 29-4	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-5	Calibration report for WELL 29-5	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-6	Calibration report for WELL 29-6	Every Five Years	Every Five Years	31-DEC-2016
WELL - 29-7	Calibration report for WELL 29-7	Every Five Years	Every Five Years	28-FEB-2017
WELL - 29-8	Calibration report for WELL 29-8	Every Five Years	Every Five Years	28-FEB-2017
WELL - 29-9	Calibration report for WELL 29-9	Every Five Years	Every Five Years	31-DEC-2016
WELL - 31-1	Calibration report for WELL 31-1	Every Five Years	Every Five Years	31-DEC-2016
WELL - 31-2	Calibration report for WELL 31-2	Every Five Years	Every Five Years	28-FEB-2017
WELL - 31-3	Calibration report for WELL 31-3	Every Five Years	Every Five Years	31-DEC-2016
WELL - 31-4	Calibration report for WELL 31-4	Every Five Years	Every Five Years	31-DEC-2016
WELL - 31-5	Calibration report for WELL 31-5	Every Five Years	Every Five Years	31-DEC-2016
WELL - 31-6	Calibration report for WELL 31-6	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-1	Calibration report for WELL 32-1	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-2	Calibration report for WELL 32-2	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-3	Calibration report for WELL 32-3	Every Five Years	Every Five Years	28-FEB-2017
WELL - 32-4	Calibration report for WELL 32-4	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-5	Calibration report for WELL 32-5	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-6	Calibration report for WELL 32-6	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-7	Calibration report for WELL 32-7	Every Five Years	Every Five Years	31-DEC-2016
WELL - 32-8	Calibration report for WELL 32-8	Every Five Years	Every Five Years	28-FEB-2017

Permit Condition No: 10		Permit Condition Code: <u>WUSTD022-1</u>		
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - 29-1	Monthly withdrawal for WELL 29-1	Monthly	Semi-Annually	30-APR-2017
WELL - 29-2	Monthly withdrawal for WELL 29-2	Monthly	Semi-Annually	30-APR-2017
WELL - 29-3	Monthly withdrawal for WELL 29-3	Monthly	Semi-Annually	30-APR-2017
WELL - 29-4	Monthly withdrawal for WELL 29-4	Monthly	Semi-Annually	30-APR-2017
WELL - 29-5	Monthly withdrawal for WELL 29-5	Monthly	Semi-Annually	30-APR-2017
WELL - 29-6	Monthly withdrawal for for WELL 29-6	Monthly	Semi-Annually	30-APR-2017
WELL - 29-7	Monthly withdrawal for WELL 29-7	Monthly	Semi-Annually	30-APR-2017
WELL - 29-8	Monthly withdrawal for WELL 29-8	Monthly	Semi-Annually	30-APR-2017
WELL - 29-9	Monthly withdrawal for for Well	Monthly	Semi-Annually	30-APR-2017

Requirement by Permit Condition Report

Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
	29-9			
WELL - 31-1	Monthly withdrawal for for WELL 31-1	Monthly	Semi-Annually	30-APR-2017
WELL - 31-2	Monthly withdrawal for WELL 31-2	Monthly	Semi-Annually	30-APR-2017
WELL - 31-3	Monthly withdrawal for WELL 31-3	Monthly	Semi-Annually	30-APR-2017
WELL - 31-4	Monthly withdrawal for WELL 31-4	Monthly	Semi-Annually	30-APR-2017
WELL - 31-5	Monthly withdrawal for WELL 31-5	Monthly	Semi-Annually	30-APR-2017
WELL - 31-6	Monthly withdrawal for for WELL 31-6	Monthly	Semi-Annually	30-APR-2017
WELL - 32-1	Monthly withdrawal for WELL 32-1	Monthly	Semi-Annually	30-APR-2017
WELL - 32-2	Monthly withdrawal for WELL 32-2	Monthly	Semi-Annually	30-APR-2017
WELL - 32-3	Monthly withdrawal for WELL 32-3	Monthly	Semi-Annually	30-APR-2017
WELL - 32-4	Monthly withdrawal for WELL 32-4	Monthly	Semi-Annually	30-APR-2017
WELL - 32-5	Monthly withdrawal for WELL 32-5	Monthly	Semi-Annually	30-APR-2017
WELL - 32-6	Monthly withdrawal for WELL 32-6	Monthly	Semi-Annually	30-APR-2017
WELL - 32-7	Monthly withdrawal for WELL 32-7	Monthly	Semi-Annually	30-APR-2017
WELL - 32-8	Monthly withdrawal for WELL 32-8	Monthly	Semi-Annually	30-APR-2017
Permit Condition No: 11		Permit Condition Code: <u>WURWF004-1</u>		
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
PERMIT	5 Year Reclaimed Report	Every Five Years	Every Five Years	31-OCT-2021

STAFF REPORT DISTRIBUTION LIST

PAN TERRA HOLDINGS

Application No: 160805-19

Permit No: 36-00327-W

INTERNAL DISTRIBUTION

X Lindy Cerar, P.G.

EXTERNAL DISTRIBUTION

- X Permittee - Pan Terra Holdings Ltd
- X Agent - Progressive Water Resources
- X Previous Owner - R L F Corkscrew Holdings L L C

GOVERNMENT AGENCIES

- X Div of Recreation and Park - District 4 FDEP

Exhibit No:7



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
WATER USE INDIVIDUAL PERMIT**

APPLICATION NO: 160614-14

PERMIT NUMBER: 36-00883-W

DATE ISSUED: October 5, 2017

EXPIRATION DATE: October 5, 2022

PERMITTEE: PEPPERLAND LLC
107 ENTERPRISE COURT
OXFORD, NC 27565

PROJECT NAME: PEPPERLAND LANDSCAPE IRRIGATION

PROJECT LOCATION: Lee County, S30/T46S/R27E

PROJECT DESCRIPTION/AUTHORIZING:

The use of groundwater from the surficial aquifer system for agricultural irrigation of 482 acres of potatoes using a seepage/furrow irrigation system with an annual allocation of 421.38 million gallons, with a proposed modification to convert the agricultural site to residential using surface water from on-site lakes replaced with groundwater from the SAS for sprinkler irrigation of 115.43 acres of landscape, reducing the annual allocation to 150.66 million gallons.

This is to notify you of South Florida Water Management District's (District) agency action concerning Permit Application Number 160614-14, received June 14, 2016. This action is taken pursuant to Chapter 373, Part II, Florida Statutes (F.S.), Rule 40E-1.603 and Chapter 40E-2, Florida Administrative Code (F.A.C.). Based on the information provided, District rules have been adhered to and a Water Use Individual Permit is in effect for this project subject to:

1. Not receiving a filed request for an administrative hearing pursuant to Section 120.57, F.S. and Section 120.569, F.S., or a request for a judicial review pursuant to Section 120.68, F.S.
2. The attached 35 permit conditions.
3. The attached 10 exhibits.

By acceptance and utilization of the water authorized under this permit, the Permittee agrees to hold and save the District and its successors harmless from any and all damages, claims or liabilities that may arise by reason of the construction, maintenance or use of activities authorized by this permit. Should you object to the permit, please refer to the attached "Notice of Rights" that addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Should you wish to object to the proposed agency action or file a petition or request, please provide written objections, petitions, requests and/or waivers to: Office of the District Clerk, South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, or by email to clerk@sfwmd.gov.

CERTIFICATION OF SERVICE

I HEREBY CERTIFY THAT this written notice has been mailed or electronically transmitted to the Permittee (and the persons listed in the attached distribution list) this 6th day of October, 2017, in accordance with Section 120.60(3), F.S. Notice was also electronically posted on this date through a link on the home page of the District's website (my.sfwmd.gov/ePermitting).

BY: _____


LISANDRA JONES

DEPUTY CLERK, SOUTH FLORIDA WATER MANAGEMENT DISTRICT

SPECIAL PERMIT CONDITIONS

1. This permit is issued to:
Pepperland, LLC
107 Enterprise Court
Oxford, NC 27565
2. This permit shall expire on October 5, 2022.

3. Use classification is:

Agricultural Irrigation
Landscape Irrigation

4. Source classification is:

Groundwater from:
Surficial Aquifer System

Surface Water from:
On-site Lake(s)

5. Allocation:

Total annual allocation is 421.38 million gallons (MG). (1.15 MGD)

Total maximum monthly allocation is 109.66 million gallons (MG).

These allocations represent the amount of water required to meet the water demands as a result of a rainfall deficit during a drought with the probability of recurring one year in ten. The Permittee shall not exceed these allocations in hydrologic conditions less than a 1-in-10 year drought event. Compliance with the annual allocation is based on the quantity withdrawn over a 12-month time period. Compliance with the maximum monthly allocation is based on the greatest quantity withdrawn in any single month. The annual allocation expressed in GPD or MGD is for informational purposes only.

If the rainfall deficit is more severe than that expected to recur once every ten years, the withdrawals shall not exceed that amount necessary to continue to meet the reasonable-beneficial demands under such conditions, provided no harm to the water resources occur and:

1. All other conditions of the permit are met; and

2. The withdrawal is otherwise consistent with applicable declared Water Shortage Orders in effect pursuant to Chapter 40E-21, F.A.C.

6. Withdrawal facilities:

Groundwater - Proposed:

2 - 8" X 80' X 1500 GPM Wells Cased To 40 Feet

Surface Water - Proposed:

3 - 12" x 50 HP X 3500 GPM Submersible Pumps

7. The Permittee shall submit all data as required by the implementation schedule for each of the permit conditions to: SFWMD at www.sfwmd.gov/ePermitting, or Regulatory Support, 3301 Gun Club Road, West Palm Beach, FL 33406.
8. The Permittee must submit the appropriate application form incorporated by reference in Rule 40E-2.101, F.A.C., to the District prior to the permit expiration date in order to continue the use of water.
9. The Permittee shall secure a well construction permit prior to construction, repair, or abandonment of all wells, as described in Chapter 40E-3, F.A.C.
10. Every five years from the date of last calibration, the Permittee shall submit re-calibration data for each withdrawal facility.
11. Prior to any withdrawals at the project, the Permittee shall provide the results of the calibration testing of the identified water accounting method(s) and equip all existing and proposed withdrawal facilities with approved water use accounting method(s) pursuant to Subsection 4.1.1 of the Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District.
12. Monthly withdrawals for each withdrawal facility shall be reported to the District quarterly. The water accounting method and means of calibration shall be stated on each report.
13. Withdrawal from the surface water source(s) for irrigation shall be equal to the amount of water used for replacement/recharge on a monthly basis (for example, the volume of water withdrawn from the lake must be the same volume of water put into the lake), except when the surface water drainage system is discharging. The replacement/recharge of groundwater into surface water is for water quality treatment or supplementation and not the artificial maintenance of lake levels.
14. If at any time there is an indication that the well casing, valves, or controls leak or have become inoperative, repairs or replacement shall be made to restore the system to an operating condition. Failure to make such repairs shall be cause for filling and abandoning the well, in accordance with procedures outlined in Chapter 40E-3, F.A.C.

15. The Permittee shall submit to the District an updated "Summary of Groundwater (Well) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379) within 90 days of completion of the proposed wells identifying the actual total and cased depths, pump manufacturer and model numbers, pump types, intake depths and type of meters.
16. The Permittee shall submit to the District an updated "Summary of Surface Water (Pump) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379) within 90 days of installation of the proposed pumps identifying the surface water source, local drainage district (if applicable), pump type, diameter, capacity and horsepower, intake elevation (feet, NGVD), and water use accounting method.
17. If a proposed well location is different from a location specified in the application, the Permittee shall submit to the District an evaluation of the impact of pumpage from the proposed well location on adjacent existing legal uses, pollution sources, environmental features, the saline water interface, and water bodies one month prior to all new well construction. The Permittee is advised the proposed well locations and resulting impacts must be in compliance with all permitting criteria and performance standards in effect at that time.
18. Permittee must comply with the water conservation plan submitted pursuant to Subsection 2.3.2.E.1 of the Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District and described in the Staff Report.
19. Landscape irrigation shall be restricted to the hours and days described in Rule 40E-24.201, F.A.C., or alternative landscape irrigation conservation measures adopted by local government ordinance in accordance with Rule 40E-24.301, F.A.C.
20. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water. The permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the project site, and the necessary on-site modifications and authorizations are obtained.
21. Within six months of permit issuance, the Permittee shall implement the Wetland/Environmental Monitoring Program described in the District staff report prepared in support of recommendation for permit issuance.
Wetland monitoring shall be done in accordance with the Wetland Monitoring and Maintenance Plan, submitted in support of Water Use Permit Application 160614-14 (Exhibit 8). Hydrographs, as described in the plan, shall be submitted to the District annually.
22. The Permittee shall complete Form No. 1376, Report of Planting and Harvest of Seasonal Crops Form, incorporated by reference in subsection 40E-2.091, F.A.C., and submit it with Form No. 1378, Water Use Pumpage Report Form, incorporated by reference in Rule 40E-2.091, F.A.C.

The form shall be submitted to the District on a quarterly basis.

23. The Permittee shall submit an application to modify this permit to cancel the allocations for agricultural irrigation upon approval of the first development order and termination of the agricultural activities, as required by Lee County Resolution Number Z-17-013, adopted on August 2, 2017.
24. Within six months of issuance of the first development order which requires termination of the agricultural activities, the Permittee shall plug and abandon the following wells in accordance with Chapter 40E-3, F.A.C. and submit to the District an updated "Summary of Groundwater (Well) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379):

30-1, 30-2, 30-3, 30-4, 30-5, 30-6, 30-7, 30-8, 30-9, 30-10, 30-11, 30-12, 30-13

STANDARD PERMIT CONDITIONS

1. All water uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance.

The Permittee shall immediately notify the District in writing of any previously submitted material information that is later discovered to be inaccurate.

2. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.
3. The Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit a new or modified lease showing that it continues to have legal control or documentation showing a transfer in control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40E-1.6107, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
4. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order. The Permittee is advised that during a water shortage, pumpage, water levels, and water quality data shall be collected and submitted as required by District orders issued pursuant to Chapter 40E-21, F.A.C.
5. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
6. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.
7.
 - A. The Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that Section 373.239, F.S., and Rule 40E-2.331, F.A.C., are applicable to permit modifications.
 - B. The Permittee shall notify the District in writing 30 days prior to any changes to the project that

could potentially alter the reasonable demand reflected in the permitted allocation. Such changes include, but are not limited to, change in irrigated acreage, crop type, irrigation system, large users agreements, or water treatment method. Permittee will be required to apply for a modification of the permit for any changes in permitted allocation.

8. If any condition of the permit is violated, the permit shall be subject to review and modification, enforcement action, or revocation pursuant to Chapter 373, F.S.
9. The Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the Permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1-in-10 year drought event that results in the:

A. Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

B. Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

10. The Permittee shall mitigate harm to the natural resources caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

A. Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

B. Reduction in water levels that harm the hydroperiod of wetlands,

C. Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

D. Harmful movement of contaminants in violation of state water quality standards, or

E. Harm to the natural system including damage to habitat for rare or endangered species.

11. The Permittee shall mitigate harm to existing off-site land uses caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm as determined through reference to the conditions for permit issuance, includes:

A. Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

B. Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or,

C. Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

NOTICE OF RIGHTS

As required by Sections 120.569 and 120.60(3), Fla. Stat., the following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all of the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a SFWMD decision which affects or may affect their substantial interests shall file a petition for hearing with the Office of the District Clerk of the SFWMD, in accordance with the filing instructions set forth herein, within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, or posting that the SFWMD has or intends to take final agency action, or publication of notice that the SFWMD has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action which materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional Rule 28-106.111, Fla. Admin. Code, point of entry.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Fla. Stat., shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

FILING INSTRUCTIONS

A petition for administrative hearing must be filed with the Office of the District Clerk of the SFWMD. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at SFWMD headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the District Clerk, 3301 Gun Club Road, West Palm Beach, Florida 33406.

- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to the SFWMD's security desk does not constitute filing. It will be necessary to request that the SFWMD's security officer contact the Office of the District Clerk. An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at clerk@sfwmd.gov. The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

INITIATION OF AN ADMINISTRATIVE HEARING

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Fla. Stat., and Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, SFWMD file number or any other SFWMD identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

MEDIATION

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401–405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Section 120.68, Fla. Stat., and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal with the Office of the District Clerk of the SFWMD in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the clerk of the appropriate district court of appeal.

Last Date for Agency Action:
November 20, 2017

WATER USE STAFF REPORT

Application Number: 160614-14
Permit Number: 36-00883-W
Project Name: PEPPERLAND LANDSCAPE IRRIGATION
Water Use Permit Status: MODIFICATION
Location: LEE COUNTY, S30/T46S/R27E
Applicant's Name and Address: PEPPERLAND LLC
 107 ENTERPRISE COURT
 OXFORD, NC 27565
Water Use Classification: Agricultural
 Landscape
Total Serviced Acreage: (115.43 acres of turf)
 (482 acres of potatoes)

Sources:

Groundwater from: Surficial Aquifer System
 Surface Water from: On-site Lake(s)

Authorized Allocation:

Annual Allocation: 421.38 Million Gallons (MG)
 Maximum Monthly Allocation: 109.66 Million Gallons (MG)

Proposed Withdrawal Facilities - Groundwater

Source: Surficial Aquifer System
 2 - 8" X 80' X 1500 GPM Wells Cased to 40 Feet

Proposed Withdrawal Facilities - Surface Water

Source: On-site Lake(s)
 3 - 12" X 50 HP X 3500 GPM Submersible Pumps

<u>Rated Capacity Source</u>	<u>Status Code</u>	<u>GPM</u>	<u>MGM</u>	<u>MGY</u>
On-site Lake(s)	P	10,500	459.6	5,519
Surficial Aquifer System	P	3,000	131.3	1,577
Totals:		13,500	590.9	7,096

PURPOSE

The purpose of this application is to modify Water Use Permit 36-00883-W. Existing withdrawals are from the surficial aquifer system (SAS) for agricultural irrigation of 482 acres of potatoes. Proposed primary withdrawals are from on-site lakes for irrigation of 115.43 acres of landscape with groundwater recharge from the SAS.

PROJECT DESCRIPTION

Pepperland Landscape Irrigation (the Project) is an existing agricultural irrigation site located in southeastern Lee County, southeast of the intersection of Corkscrew Road and Six L's Farm Road (Exhibits 1 and 2). The Applicant has proposed to continue agricultural irrigation until the planned modification of the site to conservation areas and a residential development with landscape irrigation, in accordance with the concurrent Environmental Resource Permit (ERP) Application 160520-30. The proposed residential development and withdrawal facilities are depicted in Exhibit 3, Page 1. Withdrawal facility details are listed in Exhibits 4 and 5. Primary withdrawals for sprinkler irrigation of 115.43 acres of proposed landscape are from on-site lakes via three proposed pumps. Two proposed wells withdrawing groundwater from the SAS will be used to replace the landscape irrigation withdrawals from the on-site lakes to prevent lake drawdown and minimize drawdown impacts to the water table and wetlands. In accordance with Special Permit Condition 13, irrigation withdrawals from the on-site lakes shall be replaced/recharged with an equal amount of groundwater on a monthly basis. The volume of water withdrawn from the lakes must be the same volume of groundwater put into the lake, except when the surface water drainage system is discharging.

Existing withdrawals for flood/seepage irrigation of 482 acres of potatoes are from 13 existing SAS wells, as depicted in Exhibit 3, Page 2. In accordance with Special Permit Condition 23, the Permittee shall submit an application to modify this permit to cancel the allocations for agricultural irrigation upon approval of the first development order and termination of the agricultural activities, as required by Lee County Resolution Number Z-17-013, adopted on August 2, 2017. The existing wells shall be abandoned in accordance with Special Permit Condition 24.

Permit History:

The Project has been an existing small vegetable farm utilizing groundwater from the SAS wells since the 1990's. Prior to 1994, the Project was permitted for the irrigation of 520 acres of citrus. Based on an inspection of historical aerial photographs, the existing irrigated acreage (approximately 482 acres) has remained actively irrigated since the 1990's, as depicted in Exhibit 3, Page 2. In addition, the crop type has been potatoes since at least 2007 based on historical pumpage records and data submittals.

PROJECTED WATER USE DEMANDS

The recommended allocations for flood/seepage irrigation of 482 acres of potatoes at the Project site, 109.66 million gallons (MG) maximum month and 421.38 MG total annually, are based on the Supplemental Irrigation Requirements as defined in Subsection 2.3.1.C of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). Calculations of the

PROJECTED WATER USE DEMANDS (CONTINUED)

supplemental irrigation requirements for the existing agricultural operation are listed in Exhibit 6, Page 1.

As discussed above, upon Lee County's approval of the development order, agricultural operations will cease and the Permittee is required to submit an application to modify the water use permit to remove the allocations for agricultural irrigation (Special Permit Condition 23). The assessments for the modifications proposed in this application are based on the proposed reduction in withdrawals that will occur at the site, as limited by the irrigation demand for residential landscape irrigation. Calculations of the supplemental sprinkler irrigation requirements for 115.43 acres of residential landscape, 18.94 MG maximum month and 150.66 MG total annually, are listed in Exhibit 6, Page 2.

IMPACT EVALUATION

The proposed modification to the SAS wellfield was evaluated using AquiferWin32 (Environmental Simulations, Inc.), pursuant to the criteria for analytic assessments set forth in Subsection 3.1.2.A of the AH. Aquifer parameters were obtained by averaging the data from the three nearest aquifer performance tests of the SAS. To conservatively overestimate the effect of withdrawing the recommended maximum monthly allocation from the aquifer during a 1-in-10 year drought scenario, the model simulated 90 days of pumping with no recharge. Model data and cumulative drawdown contours relative to a reference head elevation of 0.0 feet, including the drawdown effects of the withdrawals of existing legal users, are depicted in Exhibit 7.

WATER RESOURCE IMPACT EVALUATION

Water Resource Availability

Surficial Aquifer System

The SAS in Lee County consists of the water table and Lower Tamiami aquifers. Based on the technical publication, "Water Resources Management Project for Lee County", (Montgomery, 1988), on-site lithologic well data, and data from nearby soil boring profiles (Water Use Permit 36-06874-W), the Lower Tamiami confining bed which separates the water table and Lower Tamiami aquifers is negligible or not present in this area of Lee County. Therefore, the two aquifers are hydraulically connected and function as one unconfined unit. The average land surface elevation of the Project is approximately 25 feet National Geodetic Vertical Datum (NGVD). The base of the SAS occurs at an approximate elevation of -70 feet NGVD. Information obtained from the Lee County SAS monitor well 49-GW25, located adjacent to the northeastern corner of the Project, indicates the average end of dry season water level, inclusive of the effects of the historical withdrawals of the Project and existing legal users, is 20.17 feet NGVD. Water levels observed since 2007 have remained stable while the Project's withdrawals have been occurring. This application requests a reduction in the historical, permitted use of water, which has not resulted in any known harm to the water resource availability of the SAS. The results of the analytic modeling assessment discussed above indicate a maximum drawdown of 0.5 feet at the well nodes, resulting from the proposed withdrawals for landscape irrigation. The

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

remaining average end of dry season saturated thickness of the aquifer is 89.7 feet. Therefore, the potential for harm to occur to water resource availability of the aquifer as a result of the withdrawal of the recommended allocation is considered minimal.

On-site Lake(s)

Special Permit Condition 13 requires all irrigation withdrawals from the on-site lakes to be replaced/recharged with an equal amount of groundwater from the SAS on a monthly basis, except when the surface water drainage system is discharging. Therefore, irrigation withdrawals from the on-site lakes will not result in any drawdown of the lakes or the surficial aquifer system. The potential for harm to occur to the water resource availability of the lakes due to the withdrawal of the recommended allocations is considered minimal.

Existing Legal Users

Surficial Aquifer System

The nearest existing legal user of the SAS is Pan Terra Holdings (Water Use Permit 36-00327-W), with several wells located near the southeastern corner of the Project. As stated above, this application requests a significant reduction in the permitted historical withdrawals at the Project. The results of the analytical modeling assessment discussed above indicate the maximum off-site drawdown resulting from the proposed withdrawals is 0.3 feet. The maximum cumulative drawdown of 1.25 feet occurs at the nearest well for Pan Terra Holdings, resulting primarily from the withdrawals at the well. Therefore, the potential for interference with existing legal users as a result of the proposed withdrawal of the recommended allocations from the SAS is considered minimal.

On-site Lake(s)

As stated above, irrigation withdrawals from the on-site lakes are required to be replaced/recharged with the same volume of groundwater from the SAS on a monthly basis. Therefore, the potential for interference with existing legal users as a result of the proposed withdrawal of the recommended allocations from the on-site lakes is considered minimal.

Existing Off Site Land Uses

Surficial Aquifer System

As stated above, this application requests a significant reduction in the permitted historical withdrawals at the Project, and the results of the analytical modeling assessment indicate the proposed withdrawals result in a maximum off-site drawdown of 0.3 feet. Therefore, the proposed withdrawal of the recommended allocation from the SAS is not expected to result in significant reduction in water levels on the property of an existing off-site land use to the extent that: the designed function of a water body and related surface water management improvements are damaged (not including aesthetic values); or result in damage to agriculture, including damage resulting from reduction in soil moisture resulting from water use, or land collapse or subsidence caused by reduction in water levels associated with water use.

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

On-site Lake(s)

Irrigation withdrawals from the on-site lakes will be replaced with the same volume of groundwater from the SAS on a monthly basis, resulting in no net use from the lakes. Therefore, the use of the on-site lakes is not expected to result in significant reduction in water levels on the property of an existing off-site land use to the extent that: the designed function of a water body and related surface water management improvements are damaged (not including aesthetic values); or result in damage to agriculture, including damage resulting from reduction in soil moisture resulting from water use, or land collapse or subsidence caused by reduction in water levels associated with water use.

Migration of Saline Water

Surficial Aquifer System

The nearest source of surface saline water is Estero Bay, located approximately 12 miles to the west of the Project. The SAS is not known to contain saline groundwater near the Project. Chloride concentrations observed in the Lee County Utilities (Water Use Permit 36-00003-W) Corkscrew wellfield SAS monitor wells, located within one mile of the Project, range below 100 milligrams per liter. Deeper sources of saline groundwater are separated from the SAS by approximately 80 feet of confining material with lower permeability within the Upper Hawthorn confining unit. Due to the large distance to the nearest source of saline surface water and the confinement separating deeper sources of saline groundwater from the SAS, the potential for saline water intrusion or upconing to occur as a result of the withdrawal of the recommended allocation is considered minimal.

On-site Lake(s)

Irrigation withdrawals from the on-site lakes will be replaced with the same volume of groundwater from the SAS on a monthly basis, resulting in no net use from the lakes. As discussed above, the SAS does not contain saline water. Therefore, the potential for saline water intrusion or upconing to occur as a result of the withdrawal of the recommended allocation from the on-site lakes is considered minimal.

Wetland Environments

Surficial Aquifer System

Wetland communities within the Project consist of freshwater wetlands that are permanently flooded, semi-permanently flooded and seasonally flooded and include cypress, willow, exotic forested, freshwater marsh, and ephemeral freshwater marsh and wet prairie habitats. District environmental staff performed a detailed review of historic documentation of site conditions, aerials and relevant hydrologic data, including an in-depth site inspection conducted during the wet season on August 22, 2013. Additionally, a site inspection was conducted on July 27, 2017 for the review of the current ERP (Application No. 160520-30) to document site conditions. Aside from the presence of the invasive Brazilian pepper along the margins and/or transitional areas of the wetlands, on-site wetlands were determined to be in good condition and

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

to have experienced adequate and persistent hydrology during the two decades of the historically existing agricultural water use. Based upon this evaluation, there is no evidence of historic harm to existing on-site wetlands resulting from the existing water use.

The results of the analytic impact assessment discussed above indicate a maximum cumulative drawdown of 0.8 feet at the centrally located on-site wetland preserve, and 0.4 feet of drawdown at the wetland preserve located in the northwestern corner of the Project. In accordance with Special Permit Condition 21, the on-site wetlands will be monitored in accordance with the Wetland Monitoring and Maintenance Plan (Exhibit 8), submitted in support of this application and ERP Application 160520-30. The most significant drawdown of the SAS within the Project's cone of depression occurs off-site, resulting primarily from the existing withdrawals for Pan Terra Holdings. The cone of depression is defined as the 0.1 foot drawdown contour for an unconfined aquifer. However, this application proposes a significant reduction in the permitted and historical withdrawals from the SAS. Based upon the good condition of the wetland communities and well-defined signs of hydrologic stability over the period of the historically existing water use, the proposed reduction in withdrawals from the SAS, and the proposed monitoring plan, the potential for adverse impacts to occur to wetlands or other surface waters as a result of the withdrawal of the recommended allocation is considered minimal.

On-site Lake(s)

As discussed above, irrigation withdrawals from the on-site lakes are required to be replaced/recharged with the same volume of groundwater from the SAS on a monthly basis. Therefore, irrigation withdrawals from the on-site lakes will not result in any drawdown of the lakes or the SAS. The potential for adverse impacts to occur to wetlands as a result of the withdrawal of the recommended allocation from the on-site lakes is minimal.

Sources of Pollution

Surficial Aquifer System

The nearest known source of groundwater pollution is the Estero Group Facility (Florida Department of Environmental Protection Number 9809654), a petroleum site located approximately 3.5 miles northeast of the Project and outside of the cone of depression. Therefore, due to the distance to the nearest known source, the potential for the induced movement of contaminants, if present, from known pollution sources as a result of the withdrawal of the recommended allocation from the SAS is considered minimal.

On-site Lake(s)

Irrigation withdrawals from the on-site lakes will not result in any drawdown of the lakes or the SAS, since lake withdrawals are required to be replaced with the same volume of groundwater on a monthly basis, resulting in no net use from the lakes. Therefore, the potential for the induced movement of contaminants, if present, from

WATER RESOURCE IMPACT EVALUATION (CONTINUED)

known sources of pollution to occur as a result of the withdrawal of the recommended allocation from the on-site lakes is considered minimal.

ADDITIONAL INFORMATION

Project Site Issues

Legal Control and Land Use

A copy of the warranty deed was provided with the application demonstrating that the Permittee (Pepperland, L.L.C.) maintains legal control of the Project. All existing and proposed withdrawal facilities are located within the boundaries of the Project. Lee County Zoning Resolution Number Z-17-013, Adopted August 2, 2017, was submitted in support of this application, demonstrating approval of the proposed land use change to residential.

Water Conservation Plan

The Applicant indicated that Florida-Friendly landscaping principles and rain sensor devices will be used throughout the Project.

Potential Use of Reclaimed Water

There are no reclaimed water distribution lines within five miles of the Project. Therefore, use of reclaimed water is technically infeasible at this time. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water (Special Permit Condition 20). The Permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the Project, and the necessary on-site modifications and authorizations are obtained.

Water Use Accounting

The existing wells are equipped with flowmeters for water use accounting. Re-calibration reports are due for the existing wells (Special Permit Condition 10). The Applicant indicated the proposed withdrawal facilities will be equipped with flowmeters. Prior to initiating withdrawals from the proposed facilities, the Permittee shall provide documentation of calibration (Special Permit Condition 11).

Permit Duration

The Project is located within the Lower West Coast Regional Water Supply Planning Area, and withdrawals are from the SAS which is considered a Source of Limited Availability. Initial permits authorizing withdrawals from a Source of Limited Availability are limited to a permit duration of five years. Therefore, the recommended permit duration is five years, in accordance with Subsection 1.5 of the AH.

ENVIRONMENTAL RESOURCE PERMIT STATUS:

MODIFICATION TO PERMIT 36-02292-S, PROPOSED CONCURRENTLY
WITH APPLICATION NO. 160520-30.

RIGHT OF WAY PERMIT STATUS:

Not Applicable

RECOMMENDATIONS


Project Name: PEPPERLAND LANDSCAPE IRRIGATION
Application Number: 160614-14
Permit Number: 36-00883-W

RECOMMENDATION


Authorizing: The use of groundwater from the surficial aquifer system for agricultural irrigation of 482 acres of potatoes using a seepage/furrow irrigation system with an annual allocation of 421.38 million gallons, with a proposed modification to convert the agricultural site to residential using surface water from on-site lakes replaced with groundwater from the SAS for sprinkler irrigation of 115.43 acres of landscape, reducing the annual allocation to 150.66 million gallons.

STAFF EVALUATION

REVIEWER:



Jewelene S. Harris, NRM



Chad Brcka, WU

SUPERVISOR:



Laura Layman, NRM



Alberto J. Naya, P.G., WU

QUALITY ASSURANCE REVIEW:



Stephanie Lancaster, P.G.

Date: 9/1/2017

WATER USE BUREAU CHIEF:



Maria C. Clemente, P.E.

Date: 9/5/17

SPECIAL PERMIT CONDITIONS

1. This permit is issued to:
Pepperland, LLC
107 Enterprise Court
Oxford, NC 27565

2. This permit shall expire on October 5, 2022.

3. Use classification is:

Agricultural Irrigation
Landscape Irrigation

4. Source classification is:

Groundwater from:
Surficial Aquifer System

Surface Water from:
On-site Lake(s)

5. Allocation:

Total annual allocation is 421.38 million gallons (MG). (1.15 MGD)

Total maximum monthly allocation is 109.66 million gallons (MG).

These allocations represent the amount of water required to meet the water demands as a result of a rainfall deficit during a drought with the probability of recurring one year in ten. The Permittee shall not exceed these allocations in hydrologic conditions less than a 1-in-10 year drought event. Compliance with the annual allocation is based on the quantity withdrawn over a 12-month time period. Compliance with the maximum monthly allocation is based on the greatest quantity withdrawn in any single month. The annual allocation expressed in GPD or MGD is for informational purposes only.

If the rainfall deficit is more severe than that expected to recur once every ten years, the withdrawals shall not exceed that amount necessary to continue to meet the reasonable-beneficial demands under such conditions, provided no harm to the water resources occur and:

1. All other conditions of the permit are met; and
2. The withdrawal is otherwise consistent with applicable declared Water Shortage Orders in effect pursuant to Chapter 40E-21, F.A.C.

SPECIAL PERMIT CONDITIONS

6. Withdrawal facilities:

Groundwater - Proposed:

2 - 8" X 80' X 1500 GPM Wells Cased To 40 Feet

Surface Water - Proposed:

3 - 12" x 50 HP X 3500 GPM Submersible Pumps

7. The Permittee shall submit all data as required by the implementation schedule for each of the permit conditions to: SFWMD at www.sfwmd.gov/ePermitting, or Regulatory Support, 3301 Gun Club Road, West Palm Beach, FL 33406.
8. The Permittee must submit the appropriate application form incorporated by reference in Rule 40E-2.101, F.A.C., to the District prior to the permit expiration date in order to continue the use of water.
9. The Permittee shall secure a well construction permit prior to construction, repair, or abandonment of all wells, as described in Chapter 40E-3, F.A.C.
10. Every five years from the date of last calibration, the Permittee shall submit re-calibration data for each withdrawal facility.
11. Prior to any withdrawals at the project, the Permittee shall provide the results of the calibration testing of the identified water accounting method(s) and equip all existing and proposed withdrawal facilities with approved water use accounting method(s) pursuant to Subsection 4.1.1 of the Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District.
12. Monthly withdrawals for each withdrawal facility shall be reported to the District quarterly. The water accounting method and means of calibration shall be stated on each report.
13. Withdrawal from the surface water source(s) for irrigation shall be equal to the amount of water used for replacement/recharge on a monthly basis (for example, the volume of water withdrawn from the lake must be the same volume of water put into the lake), except when the surface water drainage system is discharging. The replacement/recharge of groundwater into surface water is for water quality treatment or supplementation and not the artificial maintenance of lake levels.
14. If at any time there is an indication that the well casing, valves, or controls leak or have

SPECIAL PERMIT CONDITIONS

become inoperative, repairs or replacement shall be made to restore the system to an operating condition. Failure to make such repairs shall be cause for filling and abandoning the well, in accordance with procedures outlined in Chapter 40E-3, F.A.C.

15. The Permittee shall submit to the District an updated "Summary of Groundwater (Well) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379) within 90 days of completion of the proposed wells identifying the actual total and cased depths, pump manufacturer and model numbers, pump types, intake depths and type of meters.
16. The Permittee shall submit to the District an updated "Summary of Surface Water (Pump) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379) within 90 days of installation of the proposed pumps identifying the surface water source, local drainage district (if applicable), pump type, diameter, capacity and horsepower, intake elevation (feet, NGVD), and water use accounting method.
17. If a proposed well location is different from a location specified in the application, the Permittee shall submit to the District an evaluation of the impact of pumpage from the proposed well location on adjacent existing legal uses, pollution sources, environmental features, the saline water interface, and water bodies one month prior to all new well construction. The Permittee is advised the proposed well locations and resulting impacts must be in compliance with all permitting criteria and performance standards in effect at that time.
18. Permittee must comply with the water conservation plan submitted pursuant to Subsection 2.3.2.E.1 of the Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District and described in the Staff Report.
19. Landscape irrigation shall be restricted to the hours and days described in Rule 40E-24.201, F.A.C., or alternative landscape irrigation conservation measures adopted by local government ordinance in accordance with Rule 40E-24.301, F.A.C.
20. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water. The permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the project site, and the necessary on-site modifications and authorizations are obtained.
21. Within six months of permit issuance, the Permittee shall implement the Wetland/Environmental Monitoring Program described in the District staff report prepared in support of recommendation for permit issuance.

SPECIAL PERMIT CONDITIONS

Wetland monitoring shall be done in accordance with the Wetland Monitoring and Maintenance Plan, submitted in support of Water Use Permit Application 160614-14 (Exhibit 8). Hydrographs, as described in the plan, shall be submitted to the District annually.

22. The Permittee shall complete Form No. 1376, Report of Planting and Harvest of Seasonal Crops Form, incorporated by reference in subsection 40E-2.091, F.A.C., and submit it with Form No. 1378, Water Use Pumpage Report Form, incorporated by reference in Rule 40E-2.091, F.A.C.

The form shall be submitted to the District on a quarterly basis.

23. The Permittee shall submit an application to modify this permit to cancel the allocations for agricultural irrigation upon approval of the first development order and termination of the agricultural activities, as required by Lee County Resolution Number Z-17-013, adopted on August 2, 2017.

24. Within six months of issuance of the first development order which requires termination of the agricultural activities, the Permittee shall plug and abandon the following wells in accordance with Chapter 40E-3, F.A.C. and submit to the District an updated "Summary of Groundwater (Well) Facilities" table ("Section IV - Sources of Water", Water Use Permit Application Form 1379):

30-1, 30-2, 30-3, 30-4, 30-5, 30-6, 30-7, 30-8, 30-9, 30-10, 30-11, 30-12, 30-13

STANDARD PERMIT CONDITIONS

1. All water uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance.

The Permittee shall immediately notify the District in writing of any previously submitted material information that is later discovered to be inaccurate.

2. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.
3. The Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit a new or modified lease showing that it continues to have legal control or documentation showing a transfer in control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40E-1.6107, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
4. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order. The Permittee is advised that during a water shortage, pumpage, water levels, and water quality data shall be collected and submitted as required by District orders issued pursuant to Chapter 40E-21, F.A.C.
5. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
6. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.

7. A. The Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that Section 373.239, F.S., and Rule 40E-2.331, F.A.C., are applicable to permit modifications.

B. The Permittee shall notify the District in writing 30 days prior to any changes to the project that could potentially alter the reasonable demand reflected in the permitted allocation. Such changes include, but are not limited to, change in irrigated acreage, crop type, irrigation system, large users agreements, or water treatment method. Permittee will be required to apply for a modification of the permit for any changes in permitted allocation.

8. If any condition of the permit is violated, the permit shall be subject to review and modification, enforcement action, or revocation pursuant to Chapter 373, F.S.

9. The Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the Permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1-in-10 year drought event that results in the:

A. Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

B. Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

10. The Permittee shall mitigate harm to the natural resources caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

A. Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

B. Reduction in water levels that harm the hydroperiod of wetlands,

C. Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

D. Harmful movement of contaminants in violation of state water quality standards, or

E. Harm to the natural system including damage to habitat for rare or endangered species.

11. The Permittee shall mitigate harm to existing off-site land uses caused by the Permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the Permittee to modify withdrawal rates or mitigate the harm. Harm as determined through reference to the conditions for permit issuance, includes:

A. Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

B. Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or,

C. Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

R 21

R 22

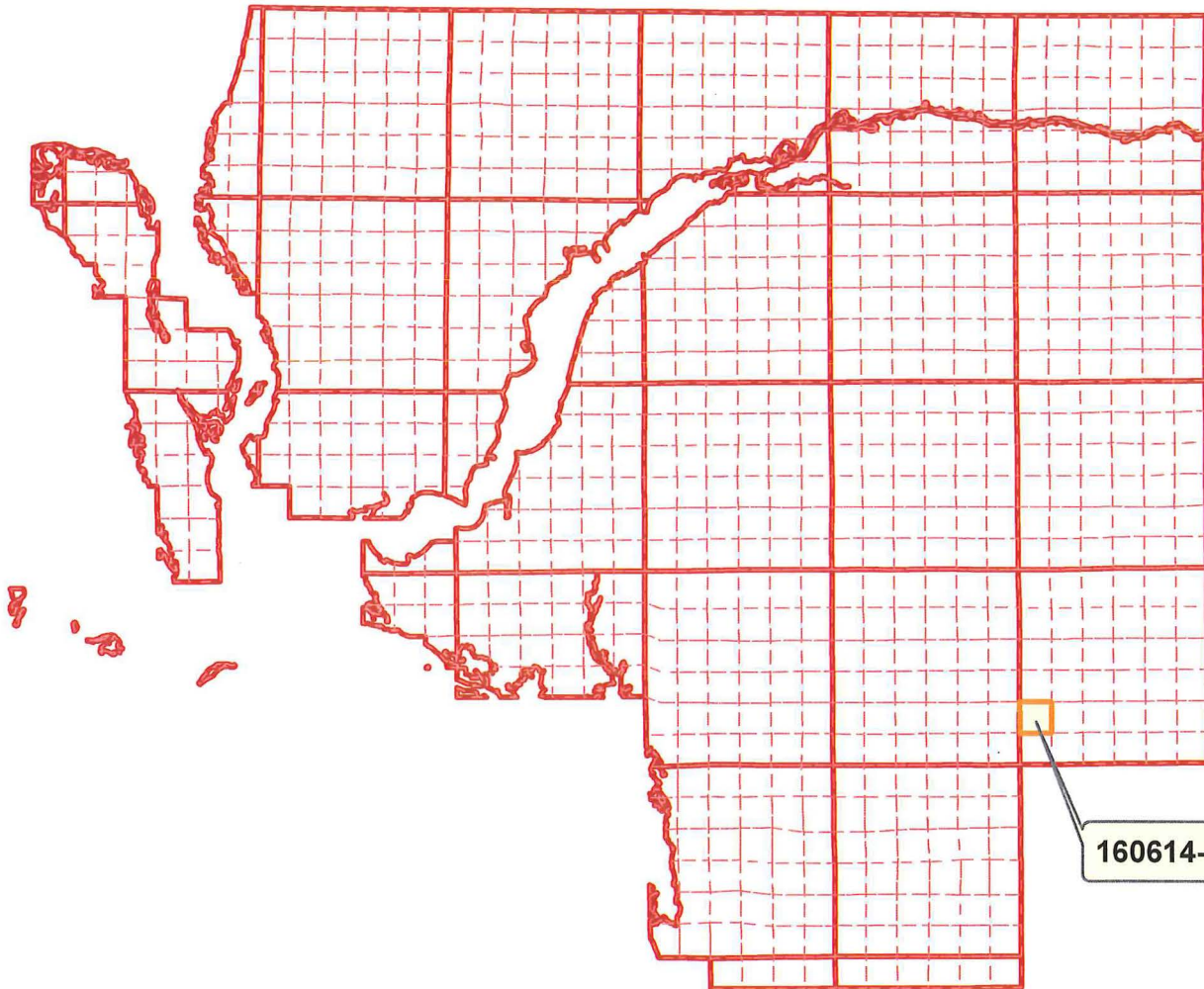
R 23

R 24

R 25

R 26

R 27



T 43

T 44

T 45

T 46

T 47

T 48

160614-14



LEE COUNTY, FLORIDA

Application No: 160614-14

Permit No: 36-00883-W

Sec 30 / Twp 46 / Rge 27

Project Name: PEPPERLAND LANDSCAPE IRRIGATION

N

Map Date: 2017-08-28

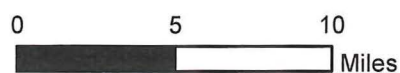


Exhibit No: 1

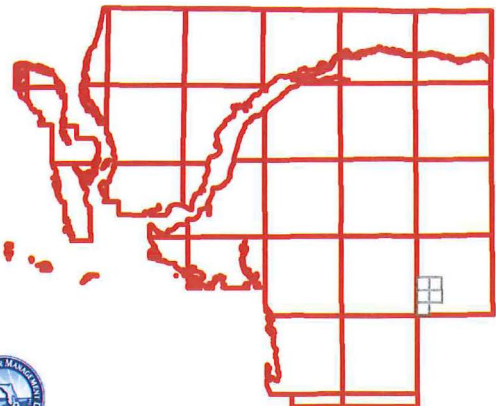




CORKSCREW RD


CR-850

Six L's Farm Road



LEE COUNTY, FLORIDA

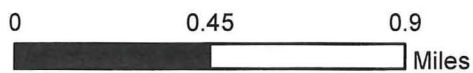
Legend

 Application

Application No: 160614-14

Sec 30 / Twp 46 / Rge 27

Project Name: PEPPERLAND LANDSCAPE IRRIGATION

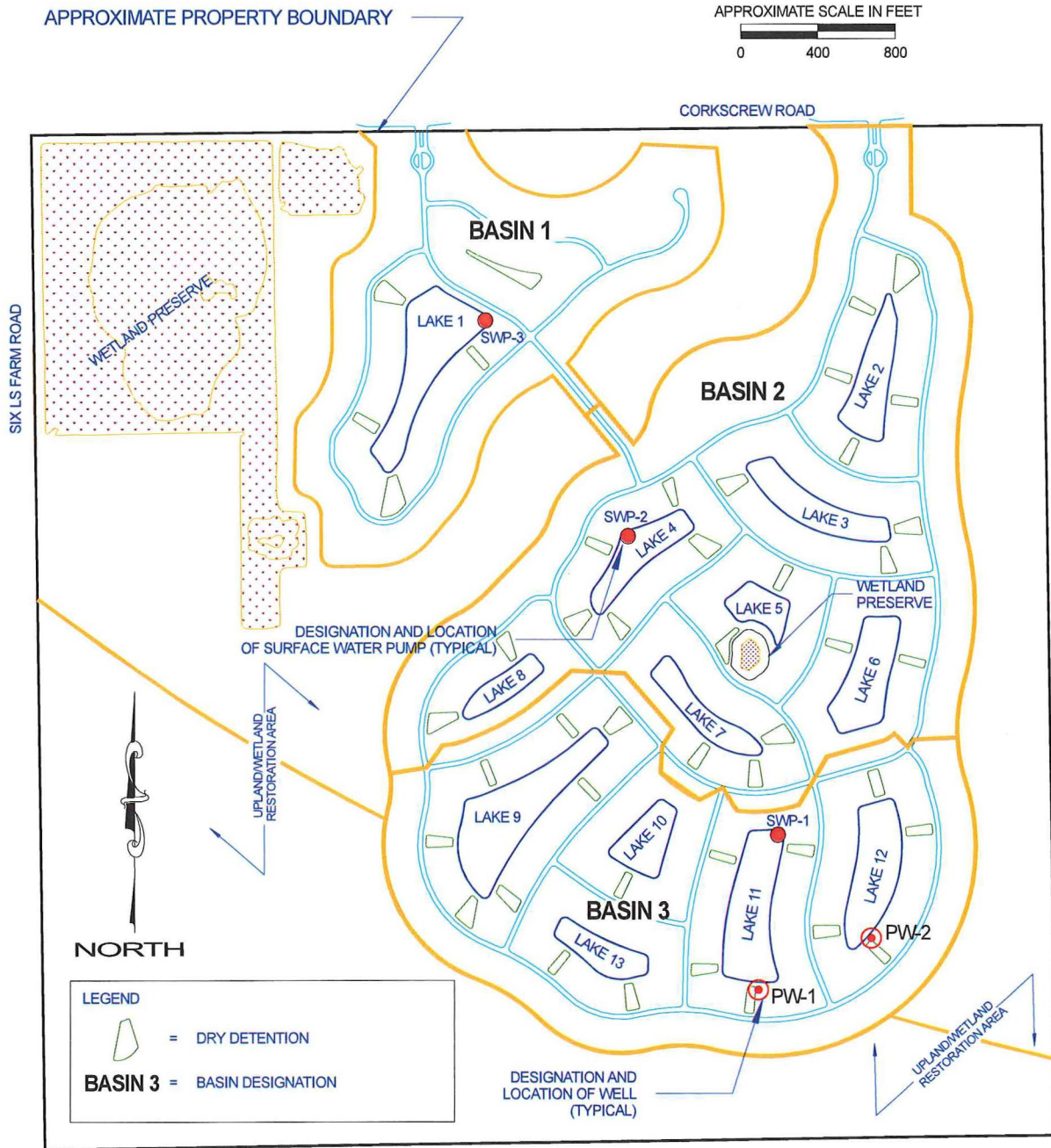


Map Date: 2017-08-28

Permit No: 36-00883-W



Exhibit No: 2



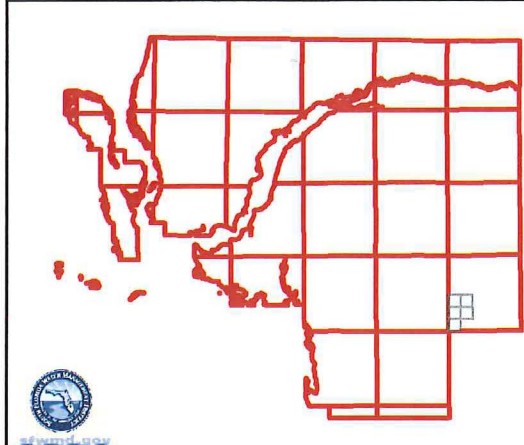
Water Science Associates

PROJECT NAME: PEPPERLAND RANCH
PROJECT NUMBER: 6915-1

COA 30437
SEPTEMBER 2016

FIGURE 1. PERTINENT FEATURES OF THE PROPOSED RESIDENTIAL DEVELOPMENT

Existing Agricultural Project and Wells (To be Abandoned)



LEE COUNTY, FLORIDA

Application

WELL

Map Date: 2017-08-28

Application No: 160614-14

Permit No: 36-00883-W

Sec 30 / Twp 46 / Rge 27

Project Name: PEPPERLAND LANDSCAPE IRRIGATION

0 1,050 2,100
 Feet

N

TABLE - A
Description Of Wells.

Application Number: 160614-14

Well ID	45642	45643	45644	45646	45649	45647
Name	30-1	30-2	30-3	30-4	30-5	30-6
Map Designator	30-1	30-2	30-3	30-4	30-5	30-6
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	8	8	8	8	8	8
Total Depth(feet)	32	30	42	40	60	60
Cased Depth(feet)	25	20	25	25	25	25
Facility Elev. (ft. NGVD)						
Screened Interval From						
To						
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)						
Pump Capacity(GPM)	1222	1182	311	757	1182	1012
Year Drilled						
Planar Location						
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	444219	444219	442945	442958	442961	442943
Feet North	766708	765637	765356	766097	766570	769474
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned
Water Use Type	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

TABLE - A
Description Of Wells.

Application Number: 160614-14

Well ID	45650	45651	45652	45653	45654	45648
Name	30-7	30-8	30-9	30-10	30-11	30-12
Map Designator	30-7	30-8	30-9	30-10	30-11	30-12
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	8	8	8	8	8	12
Total Depth(feet)	50	55	60	40	50	100
Cased Depth(feet)	25	30	30	25	30	54
Facility Elev. (ft. NGVD)						
Screened Interval From						
To						
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)						
Pump Capacity(GPM)	1399	1182	1255	1255	1430	2045
Year Drilled						
Planar Location						
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate
Feet East	442024	445518	445531	440350	440352	442961
Feet North	769482	769520	768657	766827	766252	768648
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned	To be Plugged and Abandoned
Water Use Type	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

TABLE - A
Description Of Wells.

Application Number: 160614-14

Well ID	266384	277448	277449
Name	30-13 (PS 6E & 6W)	PW-1	PW-2
Map Designator	30-13W(PS-6W)	PW-1	PW-2
FLUWID Number			
Well Field			
Existing/Proposed	E	P	P
Well Diameter(Inches)	12	8	8
Total Depth(feet)	98	80	80
Cased Depth(feet)	52	40	40
Facility Elev. (ft. NGVD)			
Screened Interval			
From			
To			
Pumped Or Flowing	P	P	P
Pump Type	Centrifugal	Submersible	Submersible
Pump Int. Elev. Feet (NGVD)			
Feet (BLS)		15	15
Pump Capacity(GPM)	1491	1500	1500
Year Drilled			
Planar Location			
Source	DIGITIZED	REVIEWER	REVIEWER
Feet East	443968	444152	444738
Feet North	767266	765339	765665
Accounting Method	Flow Meter	Flow Meter	Flow Meter
Use Status	To be Plugged and Abandoned	Recharge	Recharge
Water Use Type	Irrigation	Irrigation Water Replacement	Irrigation Water Replacement
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

TABLE - B
Description Of Surface Water Pumps

Application Number: 160614-14

Pump ID	277450	277454	277455
Name	SWP-1	SWP-2	SWP-3
Map Designator	SWP-1	SWP-2	SWP-3
Facility Group			
Existing/Proposed Pump Type	P Submersible	P Submersible	P Submersible
Diameter(Inches)	12	12	12
Pump Capacity(GPM)	3,500	3,500	3,500
Pump Horse Power	50	50	50
Two Way Pump ?	N	N	N
Elevation (ft. NGVD)	5	5	5
Planar Location			
Source	REVIEWER	REVIEWER	REVIEWER
Feet East	444397	443033	442556
Feet North	765920	767739	768923
Accounting Method	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Primary	Primary
Water Use Type	Irrigation	Irrigation	Irrigation
Surface Water Body	On-site Lake(s)	On-site Lake(s)	On-site Lake(s)

CALCULATIONS OF IRRIGATION REQUIREMENTS

APPLICATION NUMBER: 160614-14

RAINFALL STATION: IMMOKALEE
IRRIGATION SYSTEM: Seepage/furrow
PARCEL ACREAGE: 482
LAND USE: AGRICULTURAL

CROP: potatoes
SOIL TYPE: .8
PARCEL NAME:
MULTIPLIER: 2

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MEAN RAINFALL	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
EVAPOTRANSPIRATION	5.17	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	3.27	4.73	20.69
AVG. EFFECTIVE RAIN	1.19	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.98	0.84	5.59
DROUGHT RAINFALL	0.98	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	0.80	0.69	4.59
AVERAGE IRRIGATION	3.98	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	2.29	3.89	15.10
DROUGHT IRRIGATION	4.19	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	2.47	4.04	16.10
SUPL. CROP WATER USE	109.7	101.3	0	0	0	0	0	0	0	40.04	64.65	105.7	421.38

ANNUAL SUPPLEMENTAL CROP REQUIREMENT: 16.10 INCHES

ANNUAL SUPPLEMENTAL CROP WATER USE:
 16.10 IN X 482 AC X 2.00 X 0.02715 MG/AC-IN = 421.38 MG

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 4.19 INCHES

MAXIMUM MONTHLY SUPPLEMENTAL CROP WATER USE:
 4.19 IN X 482 AC X 2 X 0.02715 MG/AC-IN = 109.66 MG

TOTAL ANNUAL ALLOCATION: 421.38 MG

TOTAL MAXIMUM MONTHLY ALLOCATION: 109.66 MG

Calculations Of Irrigation Requirements

APPLICATION NUMBER: 160614-14

RAINFALL STATION: Immokalee

CROP: Turf

IRRIGATION SYSTEM: Sprinkler

SOIL TYPE: 0.8

PARCEL ACREAGE: 115.43

PARCEL NAME: COMMON AREA

LAND USE: Landscape

IRR. MULTIPLIER: 1.3

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MEAN RAINFALL	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
EVAPOTRANSPIRATION	1.86	2.16	3.68	4.91	6.57	7.34	7.75	7.46	7.07	4.84	2.81	2.17	58.62
AVG. EFFECTIVE RAIN	0.99	1.05	1.51	1.21	2.34	4.49	4.08	3.95	3.58	1.53	0.96	0.73	26.42
DROUGHT RAINFALL	0.81	0.86	1.24	0.99	1.92	3.68	3.34	3.24	2.93	1.25	0.78	0.60	21.64
AVERAGE IRRIGATION	0.87	1.11	2.17	3.70	4.23	2.85	3.67	3.51	3.49	3.31	1.85	1.44	32.20
DROUGHT IRRIGATION	1.05	1.30	2.44	3.92	4.65	3.66	4.41	4.22	4.14	3.59	2.03	1.57	36.98

ANNUAL SUPPLEMENTAL CROP REQUIREMENT: 36.98 INCHES

ANNUAL SUPPLEMENTAL CROP WATER USE:

36.98 IN X 115.43 AC X 1.3 X 0.02715 MG/AC-IN = 150.66 MG

MAXIMUM MONTHLY SUPPLEMENTAL CROP REQUIREMENT: 4.65 INCHES

MAXIMUM MONTHLY SUPPLEMENTAL CROP WATER USE:

4.65 IN X 115.43 AC X 1.3 X 0.02715 MG/AC-IN = 18.94 MG

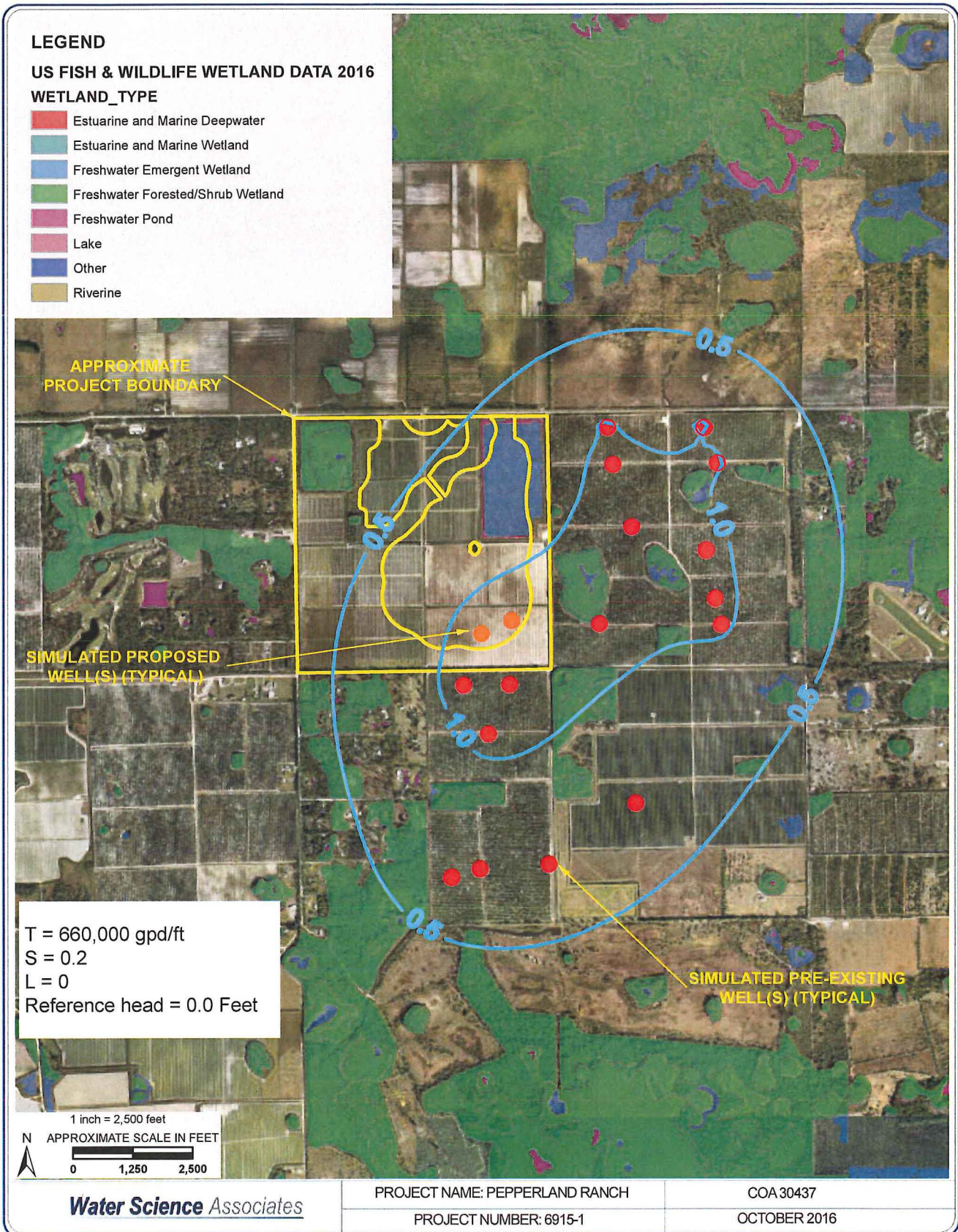


FIGURE 2. MAP SHOWING 0.5 AND 1.0-FOOT CUMULATIVE DRAWDOWN CONTOURS AND WETLAND CLASSIFICATIONS

**PEPPERLAND RANCH
WATER USE MONITORING PLAN
SFWMD PERMIT APPLICATION NO. 160614-14**

August 2017

Monitoring for the water use at the Pepperland Ranch project will include recording pumpage and water levels, and obtaining nearby rainfall data. Key items that will be monitored and reported to the South Florida Water Management District (SFWMD) are;

Pumpage

Pumpage data from production wells PW-1 and PW-2, and surface water pumps SWP-1, SWP-2, and SWP-3 will be recorded monthly and submitted to the SFWMD on a quarterly basis.

Water Levels

Water levels will be recorded daily in three monitoring wells (MW-1, MW-2, and MW-3) at the project site and data reported to SFWMD in annual reports. The locations of the wells are shown in Exhibit B. The wells will be constructed of 2-inch diameter PVC materials and installed by hand within the wetlands (where there is no access to a drill rig). The wells will be installed as deep as practical using hand tools, and are expected to range between about five and eight feet below grade. The wells will consist of 0.01-inch slotted pipe that will extend from the base of the well to at least one foot above land surface with one to two feet of solid riser above the screen. The wells will be equipped with electronic pressure transducer and dataloggers programmed to record water levels on a daily basis. The elevation of the top of casing and land surface at each well will be surveyed to NGVD29. The daily water levels in the monitoring wells will be converted to NGVD29 and submitted to the SFWMD on a quarterly basis.

Rainfall

Daily rainfall data will be obtained from the nearest SFWMD rainfall station (FPWX – Flint Pen Strand Weather Station) which is located about 4 miles west of the project site.

Reporting

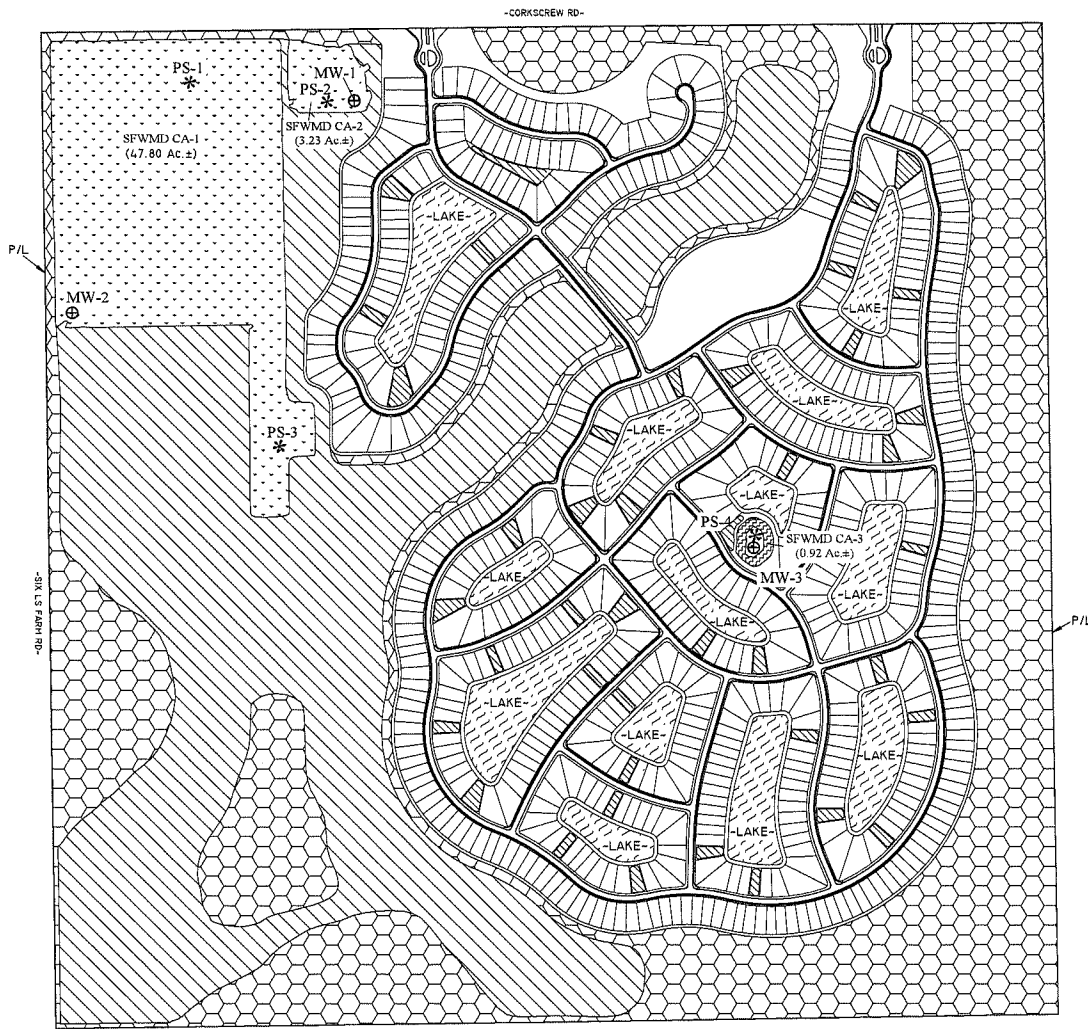
Rainfall data, water elevations, and monthly pumpage quantities from project wells and surface water pumps will be submitted to the SFWMD via hydrographs in PDF format on an annual basis. Hydrographs will include land surface elevation at each water level monitoring point.

EXHIBIT B

Map Showing Locations of Wetland Monitoring Wells

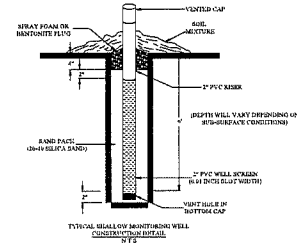


SCALE: 1" = 300'



- LEGEND:
- SFWMD WETLAND PRESERVE - NOT USED FOR SFWMD WETLAND MITIGATION (51.31 AC.±)
 - LEE COUNTY INDIGENOUS PRESERVE AND RESTORATION - NOT USED FOR SFWMD WETLAND MITIGATION (299.43 AC.±)
 - SFWMD "OTHER SURFACE WATERS" PRESERVE (0.01 AC.±)
 - UPLAND PRESERVE / UPLAND BUFFER (0.83 AC.±)
 - LEE COUNTY INDIGENOUS WETLAND RESTORATION - NOT USED FOR SFWMD WETLAND MITIGATION (148.94 AC.±)
 - LEE COUNTY INDIGENOUS UPLAND RESTORATION - NOT USED FOR SFWMD WETLAND MITIGATION (149.85 AC.±)
 - DRY DETENTION
 - SURVEYED WETLAND LINE
 - PHOTO STATION
 - PS-1 PHOTO STATION NUMBER (TYP.)
 - MONITORING WELL
 - MW-1 MONITORING WELL NUMBER (TYP.)

CONSERVATION AREA NO.	ACREAGE
1	47.80 AC.±
2	3.23 AC.±
3	0.92 AC.±
TOTAL	51.95 AC.±



NOTES

SITE PLAN PER BANKS ENGINEERING, INC. DRAWING No. 811Z.DWG DATED AUGUST 29, 2016.

SURVEYED WETLAND LINES PER BANKS ENGINEERING, INC. DRAWING No. 811Z-WET-FLAG-LOC-2-13-16.DWG DATED FEBRUARY 18, 2016.

UPLAND/WETLAND LIMITS WERE FIELD REVIEWED AND APPROVED BY SFWMD STAFF ON JULY 27, 2016.

REVISIONS	DATE	DRAWN BY	DATE
New site plan	8/31/16	D.B.	5/3/16
Added county restoration; dry detention	11/28/16	K.S.	5/3/16
		S.J.	5/3/16

13620 Metropolis Avenue
Suite 200
Fort Myers, Florida 33912
Phone (239) 274-0067
Fax (239) 274-0069



PEPPERLAND RANCH
MONITORING AND MAINTENANCE PLAN

DRAWING No.	15BCF2389
SHEET No.	E-6

Requirement by Permit Condition Report

App No: 160614-14

Permit No: 36-00883-W

Project Name: PEPPERLAND LANDSCAPE IRRIGATION

Permit Condition No: 10

Permit Condition Code: WUSTD021-2

Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - 30-1	Calibration report for WELL 30-1	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-2	Calibration report for WELL 30-2	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-3	Calibration report for WELL 30-3	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-4	Calibration report for WELL 30-4	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-5	Calibration report for WELL 30-5	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-6	Calibration report for WELL 30-6	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-7	Calibration report for WELL 30-7	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-8	Calibration report for WELL 30-8	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-9	Calibration report for WELL 30-9	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-10	Calibration report for WELL 30-10	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-11	Calibration report for WELL 30-11	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-12	Calibration report for WELL 30-12	Every Five Years	Every Five Years	28-FEB-2018
WELL - 30-13 (PS 6E & 6W)	Calibration report for WELL 30-13 (PS 6E & 6W)	Every Five Years	Every Five Years	28-FEB-2018
WELL - PW-1	Calibration report for WELL PW-1	Every Five Years	Every Five Years	31-MAY-2018
WELL - PW-2	Calibration report for WELL PW-2	Every Five Years	Every Five Years	31-MAY-2018
PUMP - SWP-1	Calibration report for PUMP SWP-1	Every Five Years	Every Five Years	31-MAY-2018
PUMP - SWP-2	Calibration report for PUMP SWP-2	Every Five Years	Every Five Years	31-MAY-2018
PUMP - SWP-3	Calibration report for PUMP SWP-3	Every Five Years	Every Five Years	31-MAY-2018

Permit Condition No: 12

Permit Condition Code: WUSTD022-2

Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - 30-1	Monthly withdrawal for WELL 30-1	Monthly	Quarterly	31-OCT-2017
WELL - 30-2	Monthly withdrawal for WELL 30-2	Monthly	Quarterly	31-OCT-2017
WELL - 30-3	Monthly withdrawal for WELL 30-3	Monthly	Quarterly	31-OCT-2017
WELL - 30-4	Monthly withdrawal for WELL 30-4	Monthly	Quarterly	31-OCT-2017
WELL - 30-6	Monthly withdrawal for WELL 30-6	Monthly	Quarterly	31-OCT-2017
WELL - 30-5	Monthly withdrawal for WELL 30-5	Monthly	Quarterly	31-OCT-2017
WELL - 30-7	Monthly withdrawal for WELL 30-7	Monthly	Quarterly	31-OCT-2017
WELL - 30-8	Monthly withdrawal for WELL 30-8	Monthly	Quarterly	31-OCT-2017
WELL - 30-9	Monthly withdrawal for WELL 30-9	Monthly	Quarterly	31-OCT-2017
WELL - 30-10	Monthly withdrawal for WELL 30-10	Monthly	Quarterly	31-OCT-2017

Requirement by Permit Condition Report

Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
	10			
WELL - 30-11	Monthly withdrawal for WELL 30-11	Monthly	Quarterly	31-OCT-2017
WELL - 30-12	Monthly withdrawal for WELL 30-12	Monthly	Quarterly	31-OCT-2017
WELL - 30-13 (PS 6E & 6W)	Monthly withdrawal for WELL 30-13 (PS 6E & 6W)	Monthly	Quarterly	31-OCT-2017
WELL - PW-1	Monthly withdrawal for WELL PW-1	Monthly	Quarterly	31-OCT-2017
WELL - PW-2	Monthly withdrawal for WELL PW-2	Monthly	Quarterly	31-OCT-2017
PUMP - SWP-1	Monthly withdrawal for PUMP SWP-1	Monthly	Quarterly	31-OCT-2017
PUMP - SWP-2	Monthly withdrawal for PUMP SWP-2	Monthly	Quarterly	31-OCT-2017
PUMP - SWP-3	Monthly withdrawal for PUMP SWP-3	Monthly	Quarterly	31-OCT-2017
Permit Condition No:	15	Permit Condition Code:	<u>WUWC004-1</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - PW-1	Summary of Groundwater Facilities for WELL PW-1	One time Only	One time Only	01-MAY-2018
WELL - PW-2	Summary of Groundwater Facilities for WELL PW-2	One time Only	One time Only	01-MAY-2018
Permit Condition No:	16	Permit Condition Code:	<u>WUSTD026-1</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
PUMP - SWP-1	Summary of Surface Water Facilities for PUMP SWP-1	One time Only	One time Only	01-MAY-2018
PUMP - SWP-2	Summary of Surface Water Facilities for PUMP SWP-2	One time Only	One time Only	01-MAY-2018
PUMP - SWP-3	Summary of Surface Water Facilities for PUMP SWP-3	One time Only	One time Only	01-MAY-2018
Permit Condition No:	21	Permit Condition Code:	<u>WUWET001-2</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
PERMIT	Annual Hydrographs	Yearly	Yearly	31-MAY-2018
Permit Condition No:	22	Permit Condition Code:	<u>WUSTD024-1</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
PERMIT	Quarterly Seasonal Crops Report	Monthly	Quarterly	31-OCT-2017
Permit Condition No:	23	Permit Condition Code:	<u>WUZZUD001</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
PERMIT	Application for permit modification	One time Only	One time Only	01-DEC-2018
Permit Condition No:	24	Permit Condition Code:	<u>WUZZUD001</u>	
Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
WELL - 30-1	Summary of Abandoned Wells for WELL 30-1	One time Only	One time Only	01-MAY-2018
WELL - 30-2	Summary of Abandoned Wells for WELL 30-2	One time Only	One time Only	01-MAY-2018
WELL - 30-3	Summary of Abandoned Wells for WELL 30-3	One time Only	One time Only	01-MAY-2018
WELL - 30-4	Summary of Abandoned Wells for	One time Only	One time Only	01-MAY-2018

Requirement by Permit Condition Report

Facility Name	Requirement Name	Col Freq	Sub Freq	Due Date
	WELL 30-4			
WELL - 30-5	Summary of Abandoned Wells for WELL 30-5	One time Only	One time Only	01-MAY-2018
WELL - 30-6	Summary of Abandoned Wells for WELL 30-6	One time Only	One time Only	01-MAY-2018
WELL - 30-7	Summary of Abandoned Wells for WELL 30-7	One time Only	One time Only	01-MAY-2018
WELL - 30-8	Summary of Abandoned Wells for WELL 30-8	One time Only	One time Only	01-MAY-2018
WELL - 30-9	Summary of Abandoned Wells for WELL 30-9	One time Only	One time Only	01-MAY-2018
WELL - 30-10	Summary of Abandoned Wells for WELL 30-10	One time Only	One time Only	01-MAY-2018
WELL - 30-11	Summary of Abandoned Wells for WELL 30-11	One time Only	One time Only	01-MAY-2018
WELL - 30-12	Summary of Abandoned Wells for WELL 30-12	One time Only	One time Only	01-MAY-2018
WELL - 30-13 (PS 6E & 6W)	Summary of Abandoned Wells for WELL 30-13 (PS 6E & 6W)	One time Only	One time Only	01-MAY-2018

STAFF REPORT DISTRIBUTION LIST

PEPPERLAND LANDSCAPE IRRIGATION

Application No: 160614-14

Permit No: 36-00883-W

INTERNAL DISTRIBUTION

X Chad Brcka

EXTERNAL DISTRIBUTION

- X Permittee - Pepperland LLC
- X Engr Consultant - Water Science Associates

GOVERNMENT AGENCIES

- X Div of Recreation and Park - District 4 FDEP

Exhibit No:10

Appendix B
Calculations of
Irrigation Requirements

Calculations of Irrigation Requirements

(1-in-10)

Rainfall Station: Immokalee 1-in-10 **Crop No.:** 1
Irrigation System: Sprinkler **Parcel Name:**
Irrigated Acreage: 270.00 **Crop No. in Parcel:** 1
Crop: Turf Grass
Soil Type: 0.80
Multiplier 1.30
Efficiency 0.77

Calculations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Average Rainfall (inches)	2.14	2.26	3.09	2.23	4.23	8.61	7.48	7.35	6.71	2.90	1.95	1.51	50.46
Evapotranspiration (inches)	1.86	2.16	3.68	4.91	6.57	7.34	7.75	7.46	7.07	4.84	2.81	2.17	58.62
Average Effective Rainfall (inches)	0.99	1.05	1.51	1.21	2.34	4.49	4.08	3.95	3.58	1.53	0.96	0.73	26.42
1-in-10 Effective Rainfall (inches)	0.81	0.86	1.24	0.99	1.92	3.68	3.34	3.24	2.93	1.25	0.78	0.60	21.64
Average Irrigation (inches)	0.87	1.11	2.17	3.70	4.23	2.85	3.67	3.51	3.49	3.31	1.85	1.44	32.20
1-in-10 Irrigation (inches)	1.05	1.30	2.44	3.92	4.65	3.66	4.41	4.22	4.14	3.59	2.03	1.57	36.98

1-in-10 Annual Supplemental Crop Requirement = 36.98 inches

Annual Supplemental Crop Water Use:

$$36.98 \text{ inches} \times 270 \text{ Acres} \times 1.3 \times 0.02715 \text{ MG/AC-IN} = 352.41 \text{ MG}$$

1-in-10 Maximum Monthly Supplemental Crop Requirement = 4.65 inches

Maximum Monthly Supplemental Crop Water Use:

$$4.65 \text{ inches} \times 270 \text{ Acres} \times 1.3 \times 0.02715 \text{ MG/AC-IN} = 44.31 \text{ MG}$$

Notes:

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

EXHIBIT

Appendix C

Professional Geologist Certification

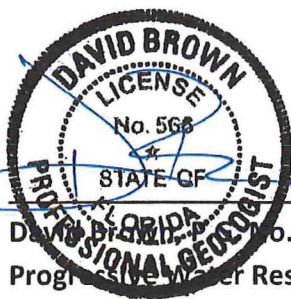


Progressive Water Resources
Integrated Water Resource Consultants

6561 Palmer Park Circle • Suite D • Sarasota, FL 34238 • (941) 552-5657

Professional Geologist Certification

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



David Brown, P.G. No. 566
Progressive Water Resources, LLC
Principal

7/11/19

Date



LEE COUNTY UTILITIES
REQUEST FOR LETTERS OF AVAILABILITY

DATE: **Date Requested: 08/21/2019**

TO: **MARY MCCORMIC**
Technician Senior

FROM: **CINDY C. LEAL BRIZUELA**

FIRM: **MORRIS-DEPEW ASSOCIATES, INC.**

ADDRESS: **2914 CLEVELAND AVE**

ADDRESS: **FORT MYERS, FL 33901 -**

PHONE#: **(239)337-3993 FAX: (239)337-3994**

E-MAIL ADDRESS: **CBRIZUELA@M-DA.COM**

PROJECT NAME: **EPCO COMMERCIAL TEXT AMENDMENT/VERDANA VILLAGE MPD**

PREVIOUS PROJECT NAME(S): **PEPPERLAND RANCH RPD AND VERDANA MPD**

STRAP NUMBER(S): **APPLICABLE TO ALL TIER 1 PROPERTIES OF EPC OVERLAY***

~~PRIOR STRAP NUMBER(S) (IF ANY):~~ ***MPD STRAPS: 30-46-27-00-00001.0000, 29-46-27-00-00001.0000, 32-46-27-00-00001.1000, 31-46-27-00-00001.1000, AND 32-46-27-00-00001.0000**

LOCATION/SITE ADDRESS: **SOUTHEAST LEE COUNTY PLANNING COMMUNITY**

PURPOSE OF LETTER:

- DEVELOPMENT ORDER SUBMITTAL FINANCING EFFLUENT REUSE
- PERMITTING OF SURFACE WATER MANAGEMENT (SOUTH FLORIDA WATER MANAGEMENT DISTRICT)
- OTHER: (PLEASE SPECIFY) **COMPREHENSIVE PLAN TEXT AMENDMENT & MIXED USE PLANNED**

DEVELOPMENT

PLANNED USE:

- COMMERCIAL INDUSTRIAL RESIDENTIAL - (SINGLE-FAMILY MULTI-FAMILY)
- OTHER: (PLEASE SPECIFY) _____

PLANNED # OF COMMERCIAL/INDUSTRIAL BUILDINGS: **1** TOTAL SQUARE FOOTAGE: **100,000**

RESIDENTIAL UNITS: SINGLE-FAMILY: **2,459** MULTI-FAMILY: **N/A**

AVERAGE ESTIMATED DAILY FLOW (GPD): **SEE BELOW** (WATER WASTE-WATER) (GPD): _____

REUSE

PLEASE SHOW CALCULATION USED TO DETERMINE AVERAGE ESTIMATED DAILY FLOW (GPD) PER CRITERIA SET FORTH IN LEE COUNTY UTILITIES DESIGN MANUAL: **CALCULATION PROVIDED BY LCU VIA EMAIL FOR 2,400 UNITS AND 100,000 SF OF COMMERCIAL IS 610,000 GPD.**

Please e-mail the completed form at mmccormic@leegov.com.



August 21, 2019

Mr. Benjamin Abes

Chief

Lee County Emergency Medical Services

14752 Six Mile Cypress Parkway

Fort Myers, FL 33912

RE: Letter of Availability

Chief Abes,

We are requesting a Letter of Availability for a proposed text amendment (CPA2019-00008) that would allow for 100,000 SF of commercial to be located within the Tier 1 properties of the Environmental Enhancement and Preservation Communities Overlay (EEPCO), as well as provide a 15% density increase for properties that are greater than 2,000 acres and provide additional surface water storage for two (2) sequential 3-day 100 year storm events. This would allow for a maximum development of up to 2,459 units to occur as demonstrated in the table below. The units are being limited to 2,400 units via DCI2019-00018.

Project	Approved Dwelling Units	Maximum Dwelling Units	Notes
Pepperland	638	2098	Approved per Z-17-013
Verdana	1,460		Approved per Z-18-010
CAM40		40	Pending Map Amendment (CPA2019-00005)
Subtotal	2,098	2,138	
15% Density Increase		320.7	Proposed Text Amendment (CPA2019-00008)
TOTAL		2,458.7	Limited to 2,400 per Verdana Village MPD (DCI2019-00018)

The STRAPs for the Verdana Village MPD are follows; 30-46-27-00-00001.0000, 29-46-27-00-00001.0000, 32-46-27-00-00001.1000, 31-46-27-00-00001.1000, and 32-46-27-00-00001.0000.

An exhibit delineating the subject parcels as well as Lee Plan Maps 1 (page 4 of 7) and 17 have been included to facilitate your review.

If any additional information is needed please let me know.

Thank you,

A handwritten signature in blue ink that reads "Cindy Leal Brizuela". The signature is written in a cursive, flowing style.

Cindy Leal Brizuela
Assistant Planner

August 21, 2019

Ms. Brigitte Kantor
 Public Utilities Manager
 Lee County Solid Waste Division
 P.O. Box 398
 Fort Myers, FL 33902
BKantor@leegov.com

RE: Letter of Availability

Ms. Kantor,

We are requesting a Letter of Availability for a proposed text amendment (CPA2019-00008) that would allow for 100,000 SF of commercial to be located within the Tier 1 properties of the Environmental Enhancement and Preservation Communities Overlay (EEPCO), as well as provide a 15% density increase for properties that are greater than 2,000 acres and provide additional surface water storage for two (2) sequential 3-day 100 year storm events. This would allow for a maximum development of up to 2,459 units to occur as demonstrated in the table below. The units are being limited to 2,400 units via DCI2019-00018.

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If any additional information is needed please let me know.

Thank you,

A handwritten signature in blue ink, appearing to read "Cindy Leal Brizuela". The signature is fluid and cursive, with the first name "Cindy" being the most prominent.

Cindy Leal Brizuela
Assistant Planner

MORRIS

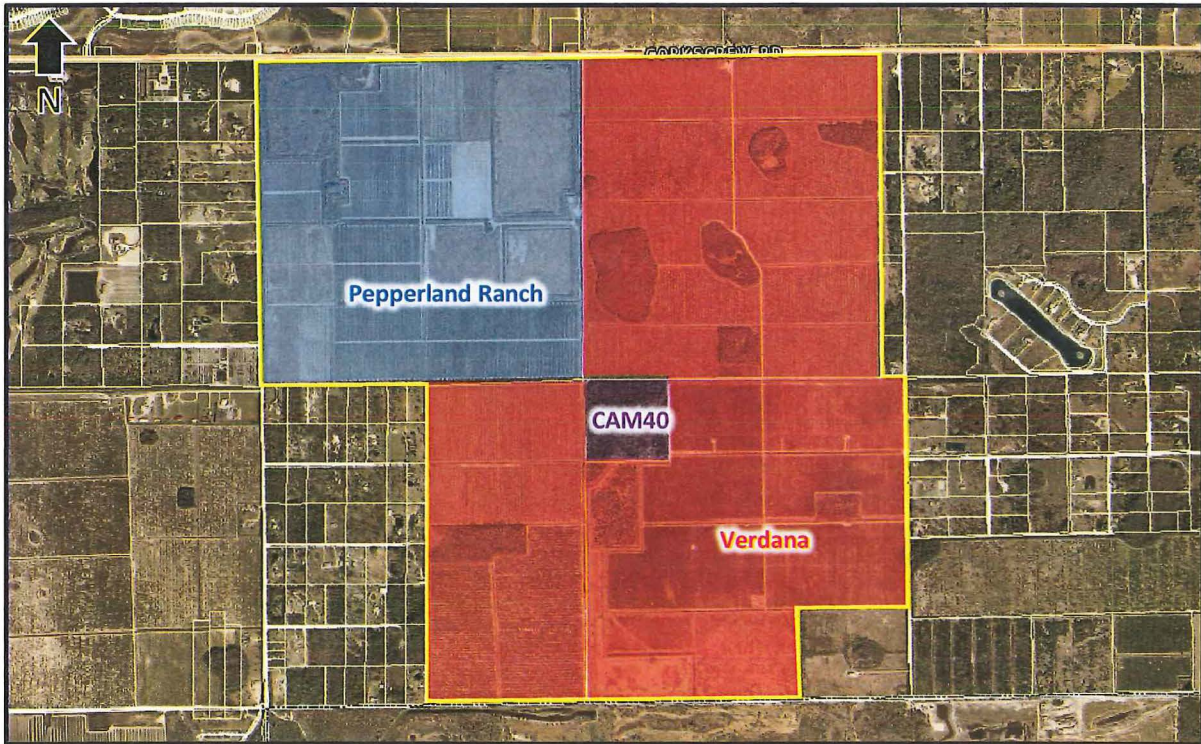
DEPEW

ENGINEERS · PLANNERS · SURVEYORS
LANDSCAPE ARCHITECTS

2914 Cleveland Avenue | Fort Myers, Florida 33901

Phone (239) 337-3993 | Toll Free (866) 337-7341
www.morris-depew.com

Verdana Village
Mixed Use Planned Development
Property Map



Pepperland Ranch

- STRAP: 30-46-27-00-00001.0000

CAM40

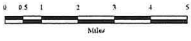
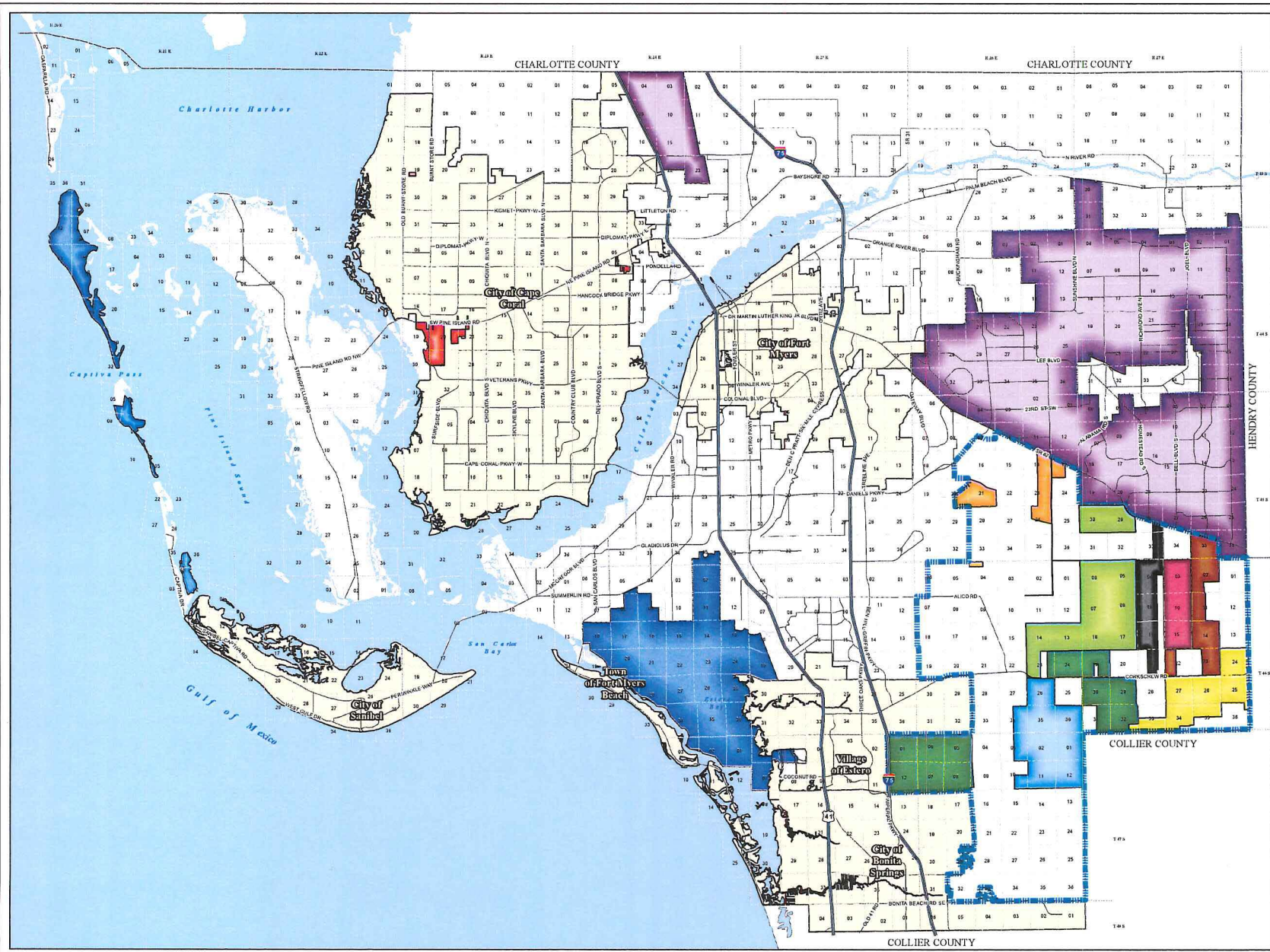
- STRAP: 32-46-27-00-00001.0000

Verdana

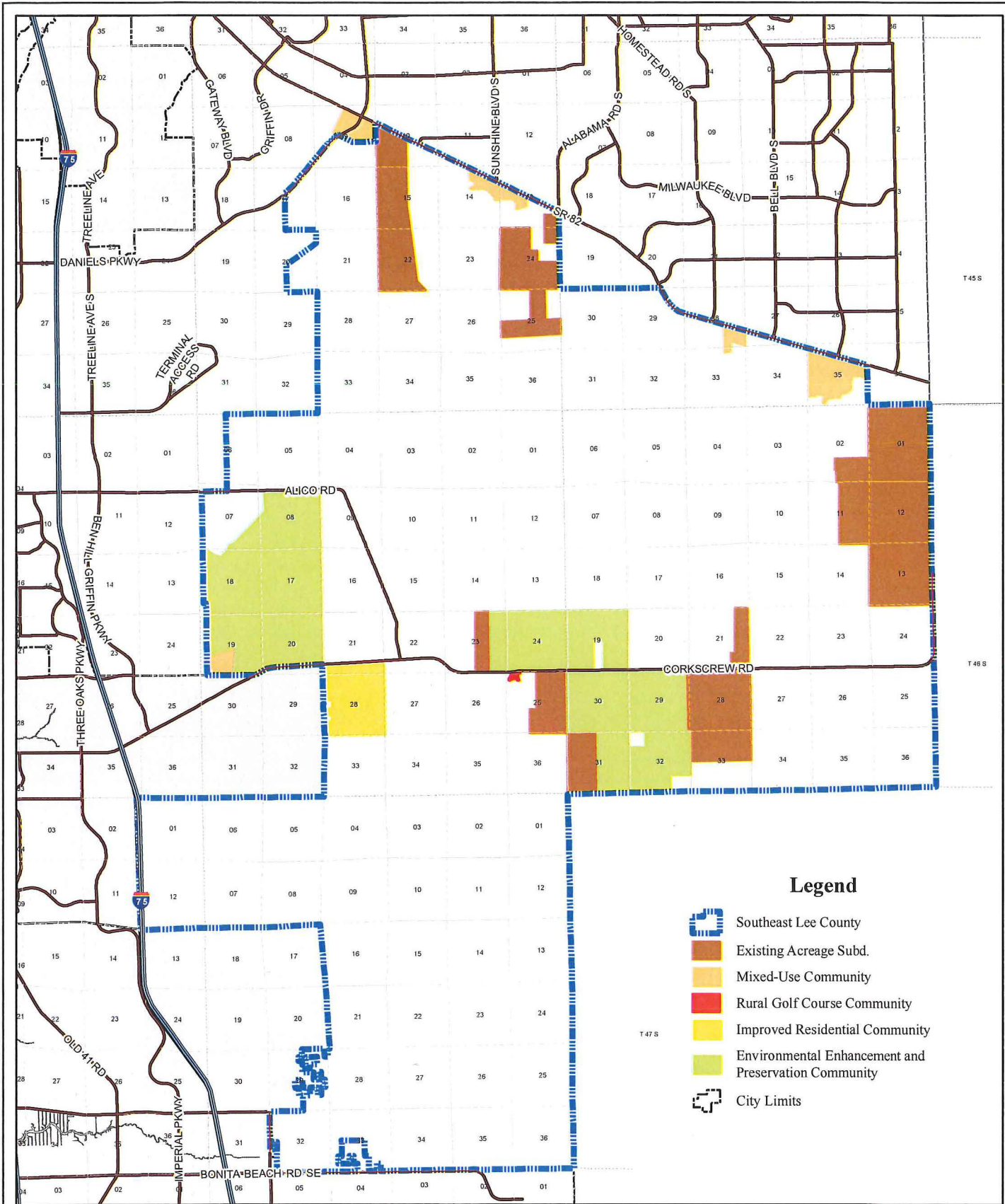
- STRAP: 29-46-27-00-00001.0000
- STRAP: 32-46-27-00-00001.1000
- STRAP: 31-46-27-00-00001.1000

SPECIAL TREATMENT AREAS








- Urban Reserve**
Ordinance No. 89-02, 93-25, 18-18
- Privately Funded Infrastructure**
Ordinance No. 89-02, 92-35, 18-18
- Public Acquisition***
Ordinance No. 91-19, 10-19, 18-18
- Airport Mitigation Overlay**
Ordinance No. 04-16, 19-02
- Priority Restoration Strategy**
See Policy 33.2.2
- Tier 1 (highest priority)
- Tier 2
- Tier 3
- Tier 4
- Tier 5
- Tier 6
- Tier 7
- Ordinance No. 10-19
- Southeast Lee County
- County Line
- City Limits



Map Generated: May 2019
 City limits current to date of map generation
 *Because of the dynamic nature of land acquisition, portions of the land shown are publicly owned at the time of printing.



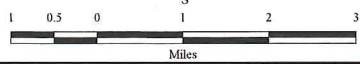
Legend

-  Southeast Lee County
-  Existing Acreage Subd.
-  Mixed-Use Community
-  Rural Golf Course Community
-  Improved Residential Community
-  Environmental Enhancement and Preservation Community
-  City Limits



Map Generated: April 2018
 City Limits current to date of map generation

Adopted by Ords 10-19, 10-21 (3/3/10), & 10-43 (11/1/10)
 Amended By: 12-24, 14-21, 15-13, 15-14, 17-06, 17-23, 17-24



**SOUTHEAST DR/GR
 RESIDENTIAL OVERLAY**

Lee Plan Map 17



LEE COUNTY

SOUTHWEST FLORIDA

BOARD OF COUNTY COMMISSIONERS

John E. Manning
District One

June 6, 2019

Cecil L Pendergrass
District Two

District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjardais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
Hearing Examiner

Ms. Cindy Leal Brizuela
Morris Depew
2914 Cleveland Ave.
Fort Myers, FL 33901

**SUBJECT: Text Amendment to Lee Plan within Tier 1 properties of the
Environmental Enhancement and Preservation Communities
Overlay - Letter of Availability**

Dear Ms. Leal Brizuela:

The Lee County Solid Waste Division is capable of providing solid waste collection service for 100,000 sf of commercial dwellings within the Tier 1 properties of the Environmental Enhancement and Preservation Communities Overlay (EEPCO). I understand this is currently comprised of The Place, Pepperland Ranch, and Verdana planned developments within the boundaries of the Tier 1 EEPCO properties.

Service is provided through Lee County's franchised hauling contractors. Disposal of the solid waste from there 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. Businesses are required to subscribe with the Franchise hauler for the collection service and have containers in place prior to the start of operation.

If you have any questions, please call me at (239) 533-8000.

Sincerely,

Brigitte Kantor
Public Utilities Manager
Lee County Solid Waste Division

Carmine Marceno
Sheriff



State of Florida
County of Lee

"Proud to Serve"

August 27, 2019

Cindy Leal Brizuela
Morris-Depew Associates
2914 Cleveland Ave.
Fort Myers, FL 33901

Ms. Leal Brizuela,

A proposal text amendment to the Lee Plan that would 1) allow for 100,000 square feet of commercial development to be located within the Tier 1 properties of the Environmental Enhancement and Preservation Communities Overlay, 2) provide a 15% density increase for properties that are greater than 2,000 acres and 3) provide additional surface water storage for two sequential 3-day 100 year storm events does not affect the ability of the Lee County Sheriff's Office to provide core services at this time.

This change would allow for a maximum development of up to 2,459 units at the Pepperland Ranch and Verdana sites currently located within the boundaries of the Tier 1 EEPCO properties, as well as the CAM40 parcel pending CPA2019-00005.

The STRAPs for Verdana are 29-46-27-00-00001.0000, 32-46-27-00-00001.1000 and 31-46-27-00-00001.1000; the STRAP for Pepperland Ranch is 30-46-27-00-00001.0000; and the STRAP for CAM40 is 32-46-27-00-00001.0000.

We will provide law enforcement services primarily from our South District office in Bonita Springs. At the time of application for new development orders or building permits, the applicant shall provide a Crime Prevention Through Environmental Design (CPTED) report to the Lee County Sheriff's Office for review and comments. Please contact Community Relations Supervisor Beth Schell at 258-3287 with any questions regarding the CPTED study.

Respectfully,

A handwritten signature in black ink, appearing to read "Rich Snyder".

Rich Snyder
Major, Patrol Bureau



"The Lee County Sheriff's Office is an Equal Opportunity Employer"
14750 Six Mile Cypress Parkway • Fort Myers, Florida 33912-4406 • (239) 477-1000



Estero Fire Rescue
21500 Three Oaks Parkway
Estero, Florida 33928
(239) 390.8000
(239) 390.8020 (Fax)
www.esterofire.org

August 21, 2019

Cindy Leal Brizuela
Assistant Planner
Morris/Depew
2914 Cleveland Avenue
Fort Myers, Florida 33901

Re: CPA2019-00008

Ms. Brizuela,

This correspondence will serve as notice of service availability for the above listed text amendment. This includes the proposed 100,000 square feet of commercial and 2,459 dwelling units. Estero Fire Rescue will provide fire suppression and non-transport advanced life support EMS service for the following strap numbers Pepperland Ranch 30-46-27-00-00001.0000, CAM40 32-46-27-00-00001.0000, Verdana 29-46-27-00-00001.0000, 32-46-27-00-00001.1000, 31-46-27-00-00001.1000.

If you require any additional information please feel free to contact me at 239-390-8000.

Respectfully,

Phillip Green
Fire Marshal



BOARD OF COUNTY COMMISSIONERS

John Manning
District One

Cecil L. Pendergrass
District Two

Ray Sandelli
District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjarlais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
Hearing Examiner

September 18, 2019

Mr. Joseph Cameratta
TPL-Land-Sub, LLC
c/o Cameratta Companies, LLC
4954 Royal Gulf Circle
Fort Myers, FL 33966

RE: Verdana Village

Dear Mr. Cameratta:

It is my understanding that you have pending comprehensive plan and zoning applications that would result in the merger of the Pepperland Ranch property approved in Zoning Resolution Z-17-013 and the Verdana property approved in Zoning Resolution Z-18-010 with an additional 40 acres that was an enclave in the midst of Verdana and Pepperland. It is also understood that the 40 acres will not be included in the water and sewer franchise area because no units will be built on the 40 acres and there is no need for utilities.

As you have described, the total number of units proposed for the combined projects, now known as Verdana Village, will be a maximum of 2,400 units. The Rezoning Application will also include a request for approximately 100,000 square feet of Neighborhood Commercial along with master and neighborhood amenity tracts.

To assist the County in review of its existing infrastructure capacity in anticipation of the intensity of the proposed Project, County staff has worked with their consultants and your consultant, Patrick Day of DRMP, Inc, to model the capacity in the existing system. The design criteria and methodology was provided by Lee County to perform the hydraulic analysis of the Verdana Village project and the Corkscrew Road force main to the Pinewoods Master Pump Station, see attached report dated September 10, 2019. The County accepts the attached report analysis, findings and conclusions confirming the LCU existing wastewater system has sufficient capacity, including flows and velocity, to service the Verdana Village development downstream from the Project.

You have requested the County to confirm there is sufficient force main sewer and Three Oaks WWTP capacity to service the Verdana Village development and to identify the required offsite wastewater system upgrades or improvements that must be funded by the Developer for the project. Based on the proposed Project and the agreed upon analysis, the required offsite wastewater system upgrades or improvements funded by the Developer will only consist of the utility extensions shown on the previously approved LDO2018-00310 for the Verdana property.

If the Project is approved at the proposed intensity, the County will not delay or deny Verdana Village construction or cap the future issuance of Verdana Village building permits due to any future Lee County wastewater system upgrades or improvements. However, in situations resulting from natural or manmade disasters, temporary holds on new services within the service area, not limited to Verdana Village, may be required. The County will have sufficient capacity in the system or has plans for future capacity improvements that will make the necessary modifications to the system to be able to provide service to Verdana Village.

Sincerely,



Pamela Keyes, P.E.
Lee County Public Utilities Director

c: Neale Montgomery, Pavese Law
Ray Blacksmith, Cameratta Companies
Patrick Day, DRMP
Michael Jacob, County Attorney's Office
Glen Salyer, County Manager's Office
Mark Sunyak, P.E., LCU
Nathan Beals, LCU



THE SCHOOL DISTRICT OF LEE COUNTY

2855 COLONIAL BLVD. ♦ FORT MYERS, FLORIDA 33966 ♦ WWW.LEESCHOOLS.NET

DOMINIC GEMELLI
PLANNER
239-335-1478

GWYNETTA S. GITTENS
CHAIR, DISTRICT 5

CHRIS N. PATRICCA
VICE CHAIR, DISTRICT 3

MARY FISCHER
DISTRICT 1

MELISA W. GIOVANNELLI
DISTRICT 2

DEBBIE JORDAN
DISTRICT 4

BETSY VAUGHN
DISTRICT 6

CATHLEEN O'DANIEL MORGAN
DISTRICT 7

GREGORY K. ADKINS, ED. D.
SUPERINTENDENT

ALAN L. GABRIEL, ESQ.
BOARD ATTORNEY

November 22, 2019

Cindy Leal Brizuela, Assistant Planner
Morris-Depew Associates, Inc.
2914 Cleveland Ave.
Fort Myers, Florida 33901

RE: Veranda Village MPD

Strap: 30-46-27-00-00001.0000/29-46-27-00-00001.0000/32-46-27-00-00001.10000
31-46-27-00-00001-1000/32-46-27-00-00001.0000

Dear Ms. Leal Brizuela:

This letter is in response to your request for comments dated August 21, 2019 for the Development Order in regard to educational impact. The project is located in the South Choice Zone, S3.

This development is a request for an additional 59 Single Family housing units to be added to the 2400 (now 2459) units approved previously for Pepperland Ranch and Verdana, to now be known as the Verdana Village MPD. With regard to the inter-local agreement for school concurrency the generation rates are created from the type of dwelling unit and further broken down by grade level.

For Single-Family homes, the generation rate is .297 and further broken down by grade level into the following, .149 for elementary, .071 for middle and .077 for high. A total of 730 school-aged children would be generated and utilized for the purpose of determining sufficient capacity to serve the entire development.

The Concurrency Analysis attached, displays the impact of this development. Capacity is not an issue within the Concurrency Service Area (CSA)

Thank you and if I may be of further assistance, please contact me at 239-335-1478

Sincerely,

Dominic Gemelli

Dominic Gemelli, Planner

LEE COUNTY SCHOOL DISTRICT'S SCHOOL CONCURRENCY ANALYSIS

REVIEWING AUTHORITY Lee County School District
NAME/CASE NUMBER Verdana Village
OWNER/AGENT V-LAND-SUB, LLC & Pan Terra Holding LTD
ITEM DESCRIPTION MPD impacts in South CSA, sub area S3
32-46-27-00-0001.1000 32-46-27-00-00001.0000
LOCATION South of Corkscrew Rd. and East of I75 STRAPS 32-46-27-00-00001.0000 29-46-27-00-00001.0000
ACRES 2129.49 31-46-27-00-00001.1000
CURRENT FLU PRSSTA Tier 1 (Priority Restoration Strategy Special Treatment Area)
CURRENT ZONING AG-2 / Orchard - Groves / Unclass AG

PROPOSED DWELLING UNITS BY TYPE

Single Family	Multi Family	Mobile Home
2459	0	0

0

STUDENT GENERATION

Student Generation Rates				
	SF	MF	MH	Projected Students
Elementary School	0.149			366.39
Middle School	0.071			174.59
High School	0.077			189.34
Source: Lee County School District, September 8, 2018 letter				

CSA SCHOOL NAME 2023/24

	CSA Capacity (1)	CSA Projected Enrollment (2)	CSA Available Capacity	Projected Impact of Project	Available Capacity W/Impact	LOS is 100% Perm FISH Capacity	Adjacent CSA Available Capacity w/Impact
South CSA, Elementary	13,291	11,993	1,298	366	932	93%	
South CSA, Middle	6,904	5,561	1,343	175	1168	83%	
South CSA, High	8,703	8,347	356	189	167	98%	

(1) Permanent Capacity as defined in the Interlocal Agreement and adopted in the five (5) years of the School District's Five Year Plan
 (2) Projected Enrollment per the five (5) years of the School District's Five Year Plan plus any reserved capacity (development has a valid finding of capacity)
 (3) Available Adjacent CSA capacity is subject to adjacency criteria as outlined in the Interlocal Agreement and the School District's School Concurrency Manual

Prepared by:

Dominic Gemelli, Planner