



**South Florida Water Management District**  
**Individual Environmental Resource Permit No. 11-02031-P**  
**Date Issued: May 4, 2021**

**Permittee:** Esplanade Golf & Country Club Of Naples, Inc.  
Flow Way Community Development District

**Project:** Esplanade Golf and Country Club of Naples

**Application No.** 210225-5451

**Location:** Collier County, See Exhibit 1

Your application for an Individual Environmental Resource Permit is approved. This action is taken based on Chapter 373, Part IV, of Florida Statutes (F.S.) and the rules in Chapter 62-330, Florida Administrative Code (F.A.C.). Unless otherwise stated, this permit constitutes certification of compliance with state water quality standards under section 401 of the Clean Water Act, 33 U.S.C. 1341, and a finding of consistency with the Florida Coastal Management Program. Please read this entire agency action thoroughly and understand its contents.

This permit is subject to:

- Not receiving a filed request for a Chapter 120, F.S., administrative hearing.
- The attached General Conditions for Environmental Resource Permits.
- The attached Special Conditions.
- All referenced Exhibits.

All documents are available online through the District's ePermitting site at [www.sfwmd.gov/ePermitting](http://www.sfwmd.gov/ePermitting).

If you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights", we will assume that you concur with the District's action.

The District does not publish notices of action. If you wish to limit the time within which a person may request an administrative hearing regarding this action, you are encouraged to publish, at your own expense, a notice of agency action in the legal advertisement section of a newspaper of general circulation in the county or counties where the activity will occur. Legal requirements and instructions for publishing a notice of agency action, as well as a noticing format that can be used, are available upon request. If you publish a notice of agency action, please send a copy of the affidavit of publication provided by the newspaper to the District's West Palm Beach office for retention in this file.

If you have any questions regarding your permit or need any other information, please call us at 1-800-432-2045 or email [epermits@sfwmd.gov](mailto:epermits@sfwmd.gov).

A handwritten signature in blue ink that reads "Jennifer Krumlauf".

Jennifer Krumlauf  
Section Administrator, Regulatory Support

Permittees:

Esplanade Golf & Country Club Of Naples, Inc.  
28100 Bonita Grande Drive, Suite 203  
Bonita Grande, FL 34135

Flow Way Community Development District  
2301 Northeast 37 Street  
Ft. Lauderdale, FL 33308

**South Florida Water Management District  
Individual Environmental Resource Permit No. 11-02031-P**

**Date Issued:** May 4, 2021

**Project Name:** Esplanade Golf and Country Club of Naples

**Permittees:** Esplanade Golf & Country Club Of Naples, Inc.  
28100 Bonita Grande Drive, Suite 203  
Bonita Grande, FL 34135

Flow Way Community Development District  
2301 Northeast 37 Street  
Ft. Lauderdale, FL 33308

**Operating Entity:** Esplanade Golf & Country Club Of Naples, Inc.  
28100 Bonita Grande Drive, Suite 203  
Bonita Grande, FL 34135

Flow Way Community Development District  
2301 Northeast 37 Street  
Ft. Lauderdale, FL 33308

**Location:** Collier County  
Lee County

**Permit Acres:** 1828.02 acres

**Project Land Use:** Residential

**Special Drainage District:** N/A

**Water Body Classification:** CLASS III

**FDEP Water Body ID:** 3278D

**Conservation Easement to District:** No

**Sovereign Submerged Lands:** No

**Project Summary**

This Environmental Resource Permit authorized construction and operation of a stormwater management (SWM) system and preserves serving a 671.51-acre mixed-use residential and golf course development within a 1,828.02-acre site, known as Esplanade Golf & Country Club of Naples.

**Current Authorization (Application No. 210225-5451)**

This authorization transfers the permit to the operating entities, Esplanade Golf & Country Club of Naples, Inc. (HOA) and Flow Way Community Development District (CDD). The operating entities are perpetually bound by all terms and conditions of the permit, including all compliance requirements.

Authorization for future works related to the permitted SWM system must be applied for and obtained prior to conducting such activities.

### **Site Description**

The site is located north of Immokalee Road and approximately 2.8 miles east of I-75 in Naples, Collier County, Florida. A location map is attached as Exhibit No. 1.0.

### **Permit Modification History**

Please see Exhibit No. 5.0 for a list of previous authorizations.

### **Ownership, Operation and Maintenance**

Perpetual operation and maintenance of the SWM system and preserves is the responsibility of Esplanade Golf & Country Club of Naples, Inc. and/or the Flow Way Community Development District.

### **Engineering Evaluation**

Please see Exhibit No. 5.0 for a list of previous authorizations.

### **Environmental Evaluation**

Please see Exhibit No. 5.0 for a list of previous authorizations.

**Related Concerns:**

Please see Exhibit No. 5.0 for a list of previous authorizations.

## General Conditions for Individual Environmental Resource Permits, 62-330.350, F.A.C.

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, Florida Administrative Code (F.A.C.). Any deviations that are not so authorized shall subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.
2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.
3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the "State of Florida Erosion and Sediment Control Designer and Reviewer Manual" (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), and the "Florida Stormwater Erosion and Sedimentation Control Inspector's Manual" (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.
4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice" indicating the expected start and completion dates. If available, an Agency website that fulfills this notification requirement may be used in lieu of the form.
5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.
6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:
  - a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex- "Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or
  - b. For all other activities- "As-Built Certification and Request for Conversion to Operational Phase" [Form 62-330.310(1)].
  - c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.
7. If the final operation and maintenance entity is a third party:
  - a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as- built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.3 of Applicant's Handbook Volume I) as filed with the Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
  - b. Within 30 days of submittal of the as- built certification, the permittee shall submit "Request for Transfer of Environmental Resource Permit to the Perpetual Operation Entity" [Form

62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.

8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.
9. This permit does not:
  - a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;
  - b. Convey to the permittee or create in the permittee any interest in real property;
  - c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
  - d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.
10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.
11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.
12. The permittee shall notify the Agency in writing:
  - a. Immediately if any previously submitted information is discovered to be inaccurate; and
  - b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.
13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.
14. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, work involving subsurface disturbance in the immediate vicinity of such discoveries shall cease. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section, at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Such subsurface work shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and notification shall be provided in accordance with Section 872.05, F.S.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule

62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.
17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.
18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.



**Special Conditions for Individual Environmental Resource Permits, 62-330.350, F.A.C.**

1. Operation and maintenance of the stormwater management system and conservation areas required by this permit shall be the responsibility of Esplanade Golf and Country Club of Naples, Inc. and/or the Flow Way Community Development District.

Please see the permits listed on Exhibit No. 5.0 for additional special conditions.

## Project Work Schedule for Permit No. 11-02031-P

The following activities are requirements of this Permit and shall be completed in accordance with the Project Work Schedule below. Please refer to both General and Special Conditions for more information. Any deviation from these time frames will require prior approval from the District's Environmental Resources Bureau and may require a minor modification to this permit. Such requests must be made in writing and shall include: (1) reason for the change, (2) proposed start/finish and/or completion dates, and (3) progress report on the status of the project.

Condition No.	Date Added	Description (Application Number)	Due Date	Date Satisfied
GC 2	12/27/2019	Certification (190726-11)	03/31/2021	03/17/2021
GC 7	11/05/2012	Submit Operation Transfer for entire permit, including but not limited to (120425-8)	03/28/2021	02/16/2021
SC 3	12/27/2019	Submit Mitigation Bank Ledger Documentation	08/31/2020	08/10/2020
SC 4	11/05/2012	Mirasol Submit Mirasol Submit Title Opinion Or Ownership For The Conservation Easement	12/31/2013	03/07/2013
SC 4	11/05/2012	Mirasol Submit Boundary Survey By Professional Land Surveyor	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Boundary Sketch And Legal Description Of Conservation Area	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Gis Disk	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Paper Map Of Conservation Easement Over Aerial Imagery	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Gps Disk Of Boundaries Of Conservation Easement	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Plat	12/31/2013	09/26/2017
SC 4	11/05/2012	Mirasol Submit Recorded Conservation Easement	04/01/2014	09/26/2017
SC 5	12/23/2019	Submit Financial Assurances	12/31/2013	03/13/2013
SC 6	04/29/2021	Submit Preserved Wetland Monitoring Report Report for Internal Preserves - 1	05/1/2015	12/29/2016
SC 6	04/29/2021	Submit Preserved Wetland Monitoring Report Report for Internal Preserves - 2	05/1/2016	12/29/2016
SC 6	04/29/2021	Submit Preserved Wetland Monitoring Report Report for Internal Preserves - 3	05/1/2017	09/25/2017
SC 6	04/29/2021	Submit Preserved Wetland Monitoring Report Report for Internal Preserves - 4	05/1/2018	08/6/2018
SC 6	04/29/2021	Submit Preserved Wetland Monitoring Report Report for Internal Preserves - 5	05/1/2019	07/15/2019
SC 7	12/23/2019	Submit Preserved Wetland Monitoring Report for Western Preserve Area 3 - 1	07/15/2015	08/26/2015
SC 7	12/23/2019	Submit Preserved Wetland Monitoring Report for Western Preserve Area 3 - 2	07/15/2017	09/25/2017
SC 7	12/23/2019	Submit Preserved Wetland Monitoring Report for Western Preserve Area 3 - 3	07/31/2019	07/15/2019
SC 7	12/23/2019	Submit Preserved Wetland Monitoring Report for Western Preserve Area 3 - 4	07/15/2019	08/10/2020

SC 7	12/23/2019	Submit Preserved Wetland Monitoring Report for Western Preserve Area 3 - 5	1 year after previous submission	
SC 8	12/23/2019	Submit Preserved Wetland Monitoring Report for Northern External Preserve Area 4 - 1	07/15/2018	08/06/2018
SC 8	12/23/2019	Submit Preserved Wetland Monitoring Report for Northern External Preserve Area 4 - 2	07/15/2019	08/08/2019
SC 8	12/23/2019	Submit Preserved Wetland Monitoring Report for Northern External Preserve Area 4 - 3	08/08/2020	08/10/2020
SC 8	12/23/2019	Submit Preserved Wetland Monitoring Report for Northern External Preserve Area 4 - 4	1 year after previous submission	
SC 8	12/23/2019	Submit Preserved Wetland Monitoring Report for Northern External Preserve Area 4 - 5	1 year after previous submission	
SC 9	12/23/2019	Submit Preserved Wetland Monitoring Report for Northeastern External Preserve Area 5 - 1	07/15/2018	08/06/2018
SC 9	12/23/2019	Submit Preserved Wetland Monitoring Report for Northeastern External Preserve Area 5 - 2	07/15/2019	08/08/2019
SC 9	12/23/2019	Submit Preserved Wetland Monitoring Report for Northeastern External Preserve Area 5 - 3	08/08/2020	08/10/2020
SC 9	12/23/2019	Submit Preserved Wetland Monitoring Report for Northeastern External Preserve Area 5 - 4	1 year after previous submission	
SC 9	12/23/2019	Submit Preserved Wetland Monitoring Report for Northeastern External Preserve Area 5 - 5	1 year after previous submission	
SC 10	12/23/2019	Submit Preserved Wetland Monitoring Report for Woodstork Foraging Area -1	07/15/2017	09/25/2017
SC 10	12/23/2019	Submit Preserved Wetland Monitoring Report for Woodstork Foraging Area - 2	07/15/2018	08/06/2018
SC 10	12/23/2019	Submit Preserved Wetland Monitoring Report for Woodstork Foraging Area - 3	07/31/2019	07/15/2019
SC 10	12/23/2019	Submit Preserved Wetland Monitoring Report for Woodstork Foraging Area - 4	07/15/2020	08/10/2020
SC 10	12/23/2019	Submit Preserved Wetland Monitoring Report for Woodstork Foraging Area - 5	1 year after previous submission	
SC 11	12/23/2019	Submit Baseline Monitoring Report for Mitigation Areas	12/31/2013	04/28/2014
SC 12	12/23/2019	Submit Time Zero Report for Internal Preserve, Western Preserve and Woodstork Foraging Areas Preserve 1	07/15/2014	04/28/2014
SC 12	12/23/2019	Submit Time Zero Report for Northern and Northeastern Preserve	07/15/2017	07/15/2017

GC = General Condition

SC = Special Condition

**Distribution List**

Barbara Kininmonth, Taylor Morrison Esplanade Naples, LLC

Michelle Diffenderfer, Lewis, Longman & Walker, PA

Gregory N. Woods, Esq., Woods, Weidenmiller, Michetti & Rudnick, LLP

Dawn Hatcher

Jackie Larocque, PE, Waldrop Engineering, PA

Audubon of Florida - Charles Lee

Div of Recreation and Park - District 4

US Army Corps of Engineers - Permit Section

## **Exhibits**

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website at <http://my.sfwmd.gov/ePermitting> and searching under this application number 210225-5451 .

[Exhibit No. 1.0 Location Map](#)

[Exhibit No. 3.5.1 Internal Preserve Mitigation, Monitoring and Maintenance Plan](#)

[Exhibit No. 3.6.1 Main Preserve Mitigation, Monitoring and Maintenance Plan](#)

[Exhibit No. 3.8.1 Conservation Easements Maps](#)

[Exhibit No. 5.0 Permit History](#)

## **NOTICE OF RIGHTS**

As required by Chapter 120, Florida Statutes, the following provides notice of the opportunities which may be available for administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes, or judicial review pursuant to Section 120.68, Florida Statutes, 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. Some of the legal proceedings detailed below may not be applicable or appropriate for your situation. 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 (District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Florida Statutes. Persons seeking a hearing on a District decision which affects or may affect their substantial interests shall file a petition for hearing 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, Florida Statutes; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Florida Statutes. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, posting, or publication that the District has taken or intends to take final agency action. Any person who receives written notice of a District 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 that materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional point of entry pursuant to Rule 28-106.111, Florida Administrative Code.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Florida Statutes, 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 District may grant the request for good cause. Requests for extension of time must be filed with the District 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 whether the District 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. 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 the District's 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 District's security desk does not constitute filing. It will be necessary to request that the District's security officer contact the Office of the District Clerk. An employee of the District's Clerk's office will receive and process the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at [clerk@sfwmd.gov](mailto: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.

### **INITIATION OF ADMINISTRATIVE HEARING**

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Rules 28-106.201 and 28-106.301, Florida Administrative Code, initiation of an administrative hearing shall be made by written petition to the District 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, District file number or any other District identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner, petitioner's attorney or qualified 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 District'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 District's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the District'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 District to take with respect to the District's proposed action.

### **MEDIATION**

The procedures for pursuing mediation are set forth in Section 120.573, Florida Statutes, and Rules 28-106.111 and 28-106.401-.405, Florida Administrative Code. The District is not proposing mediation for this agency action under Section 120.573, Florida Statutes, at this time.

### **RIGHT TO SEEK JUDICIAL REVIEW**

Pursuant to Section 120.68, Florida Statutes, and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final District action may seek judicial review of the District's final decision by filing a notice of appeal with the Office of the District Clerk 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 appropriate district court of appeals via the Florida Courts E-Filing Portal.







SFWMD GeoSpatial Services

Exhibit No: 1

Exhibit Created On:  
2021-04-27

COLLIER COUNTY, FL

 Application

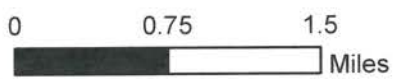
Permit No: 11-02031-P

Application Number: 210225-5451



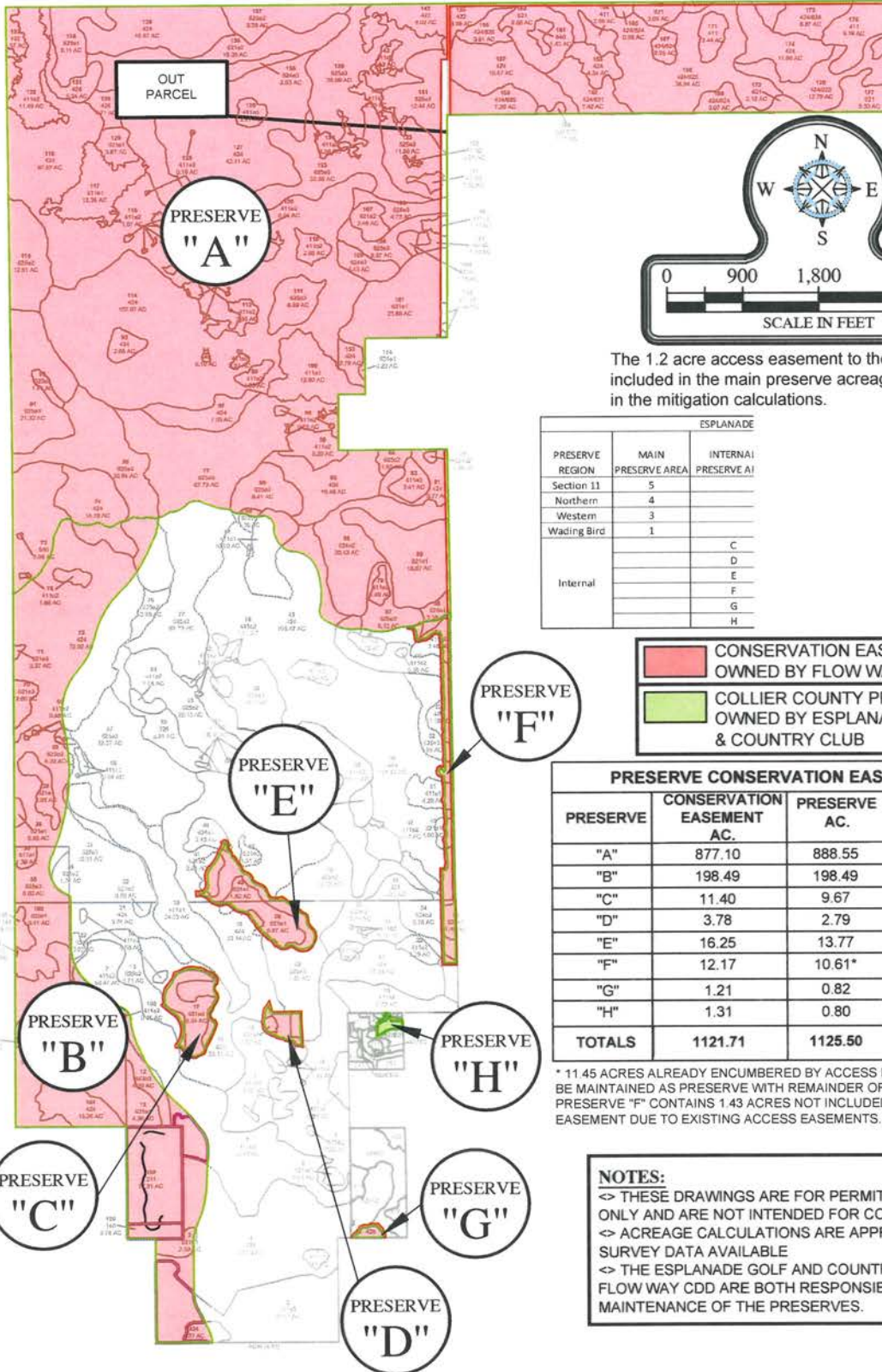
**REGULATION DIVISION**

Project Name: Esplanade



South Florida Water Management District





The 1.2 acre access easement to the 20 acre outparcel is included in the main preserve acreage but is not included in the mitigation calculations.

ESPLANADE		
PRESERVE REGION	MAIN PRESERVE AREA	INTERNAL PRESERVE AI
Section 11	5	
Northern	4	
Western	3	
Wading Bird	1	
Internal		C
		D
		E
		F
		G
		H

<span style="display:inline-block; width:15px; height:15px; background-color: #FFB6C1; border: 1px solid black;"></span>	CONSERVATION EASEMENTS OWNED BY FLOW WAY CDD
<span style="display:inline-block; width:15px; height:15px; background-color: #90EE90; border: 1px solid black;"></span>	COLLIER COUNTY PRESERVE OWNED BY ESPLANADE GOLF & COUNTRY CLUB

PRESERVE CONSERVATION EASEMENTS			
PRESERVE	CONSERVATION EASEMENT AC.	PRESERVE AC.	PRESERVE BUFFER & RETAINED LANDS AC.
"A"	877.10	888.55	11.45*
"B"	198.49	198.49	0
"C"	11.40	9.67	1.73
"D"	3.78	2.79	0.99
"E"	16.25	13.77	2.48
"F"	12.17	10.61*	2.99
"G"	1.21	0.82	0.39
"H"	1.31	0.80	0.51
<b>TOTALS</b>	<b>1121.71</b>	<b>1125.50</b>	<b>20.54</b>

\* 11.45 ACRES ALREADY ENCUMBERED BY ACCESS EASEMENTS BUT WILL BE MAINTAINED AS PRESERVE WITH REMAINDER OF PRESERVE AREA. PRESERVE "F" CONTAINS 1.43 ACRES NOT INCLUDED IN CONSERVATION EASEMENT DUE TO EXISTING ACCESS EASEMENTS.

**NOTES:**

- <> THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
- <> ACREAGE CALCULATIONS ARE APPROXIMATE: NO SURVEY DATA AVAILABLE
- <> THE ESPLANADE GOLF AND COUNTRY CLUB AND THE FLOW WAY CDD ARE BOTH RESPONSIBLE FOR MAINTENANCE OF THE PRESERVES.

 **Turrell & Associates, Inc.**  
Marine & Environmental Consulting  
3584 Exchange Ave. Suite B. Naples, FL 34104-3732  
Email: tuna@turrell-associates.com Phone: (239) 643-0166 Fax: (239) 643-6632

**ESPLANADE GOLF & COUNTRY CLUB**  
EXHIBIT 3.8  
**CONSERVATION EASEMENTS MAP**

DESIGNED:	TH	REVISION:	TAB NAME:	Conservation
DRAWN BY:	RMJ	N/A	SHEET:	
CREATED:	10-12-20	N/A	SCALE:	1"=1,800'
JOB NO.:	9418	N/A		
SECTION- TOWNSHIP- 48 S RANGE- 26 E				



**Mitigation/Monitoring/  
Maintenance Plan  
for  
Internal Preserves**

**Revised: July 17, 2020**

**Prepared By:**

**TURRELL, HALL &**  
**ASSOCIATES, INC.**   
**Marine & Environmental Consulting**  

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**PHONE: 239-643-0166    WWW.THANAPLES.COM**

Exhibit 3.5  
Application No. 120425-8

## **I. INTRODUCTION:**

The purpose of this report is to document the proposed mitigation activities for preserves internal to the development project known as *Esplanade (formerly Mirasol)*. A Mitigation and Monitoring Plan for the large preserve (Main Preserve) that is proposed outside of the development footprint is presented in its own, independent document.

The proposed project encompasses a total of approximately 1,828 acres in four sections of northern Collier County north of CR 846 and east of Interstate 75. A residential and golf course community is constructed, with access from Immokalee Road (CR 846) along the southern property boundary. Most of the southern two sections were historically mowed and these two Sections (15 & 22) in addition to the northern Section (10) were used as cattle pasture. Altered sheet flows from further north and east currently flow across the property and because of constricted and limited outfall, the property was abnormally flooded (to increased depths) on an annual basis.

The historic use of the property as cattle pasture coupled with the annual flooding contributed to unchecked proliferation of melaleuca across the entire property. A majority of the site had melaleuca densities of greater than 50% coverage. This infestation in conjunction with the flooding led to a degradation of the uplands and severely depressed the functional values for the entire area. Native vegetation, wildlife forage value, and actual wildlife utilization all suffered drastic reductions due to the conditions present on the site.

Within the development area the project originally proposed to preserve 34.7 acres of wetlands and 2.1 acres of uplands. Subsequent modifications added additional internal preserve areas which included an approximately 0.82 area preserved to avoid potential archaeological impacts (App No.140425-12) and an approximately 1.84 acre area preserved (App No.190726-11) to minimize secondary impacts. Both of these additional preserve areas will be managed and maintained to the same standards as the originally established 36.8 acres of internal preserves though neither of these two additional preserve areas have requirements for monitoring or reporting.

## **II. EXISTING CONDITIONS:**

The project site consists of approximately 1,828 acres located in four sections of northern Collier County north of CR 846 and east of Interstate 75. The project is a mix of development (691.94 acres) and substantial preserve (1,136.08 acres) areas present on the site.

### **Habitat Descriptions:**

The following paragraphs outline the basic composition of species assemblages found on-site within the preserves and as-yet undeveloped portions of the property. While many

more species are present than presented in this report, the following gives a brief description of the vegetative communities.

#### **411 - Pine Flatwoods**

This is the predominant upland habitat present on the property. The canopy component of this area consists of mature slash pines (*Pinus elliottii*) and melaleuca (*Melaleuca quinquenervia*). Melaleuca concentrations vary in these upland areas but some areas exhibit densities approaching 75%. Wax myrtle (*Myrica cerifera*) and small melaleuca form the midstory. These uplands exist as remnant islands throughout the site, most likely due to the altered, elevated water levels present. Understory species include saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*) and wild grape vine (*Vitis rotundifolia*).

#### **422 - Brazilian Pepper**

These two small areas are present in the northeast and northwest corners of the property. There are both upland and wetland areas present. Brazilian pepper (*Schinus terebinthifolius*) dominates this vegetative community.

#### **617 - Disturbed Mixed Hydric Hardwoods**

This small community in the southwestern corner of Section 15 is the only example of this community on the site. The dominant plant species are bald cypress (*Taxodium distichum*), melaleuca, wax myrtle, swamp bay (*Persea palustris*), saltbush (*Baccharis halimifolia*), and live oak (*Quercus virginiana*). A few cabbage palms (*Sabal palmetto*) are also present. Herbaceous understory vegetation consists of sawgrass (*Cladium jamaicense*) and swamp fern (*Blechnum serrulatum*).

#### **621 - Cypress Swamp**

This habitat contains predominately bald cypress with scattered dahoon holly (*Ilex cassine*), wax myrtle, and rare swamp bays. Ground covers are sparse but consist mainly of swamp fern.

#### **424 - Hydric Melaleuca**

These areas are dominated by melaleuca (*Melaleuca quinquenervia*) with minimal groundcover of swampfern, sawgrass and several grasses. Melaleuca concentrations are 90 to 100 % of the canopy cover.

**624 – Cypress / Pine / Cabbage palm**

This habitat contains predominately bald cypress with scattered slash pine, wax myrtle, and rare cabbage palms. Ground covers are limited but consist mainly of swamp fern and assorted grasses and sedges.

**643 - Disturbed Wet Prairie**

This community appears as a disturbed area alongside a road in western Section 22 and in the northeast corner of Section 10. Little to no canopy is present and groundcovers include red root (*Lachnocaulon caroliniana*), Crinum lily (*Crinum americanum*), Broomsedge (*Andropogon spp.*), Pipeworts (*Eriocaulon spp.*), Hat pins (*Eriocaulon spp.*), Yellow-eyed grass (*Xyris spp.*), dog fennel (*Eupatorium leptophyllum*), etc.

**640 - Flag Pond**

This community appears in only one small area within the 160-acre adjacent mitigation parcel in Section 11. No canopy is present and the area is dominated by emergent vegetation, mostly alligator flag (*Thalia geniculata*).

**424 / 411 – Mixed Melaleuca / Pine flatwoods**

These areas contain vegetation from both communities as listed above. Areas are differentiated by the concentration of melaleuca found in each. The majority of the site contains melaleuca concentrations close to or over 50 % of canopy cover. Concentrations of individual areas are shown on the FLUCCS map that are a part of the permit submittal.

**621(624) / 424 – Cypress or Cypress / Pine and Melaleuca**

As above, these areas are a mix of the different communities differentiated by Melaleuca concentration.

**534 – Ponds**

These are small areas excavated as watering holes for the cattle which had been kept on-site.

**III. MITIGATION ACTIVITIES**

Conservation areas within the project site are identified with two (2) different labels; Internal preserves, and the Main preserve. This distinction was made in order to outline the proposed mitigation, monitoring, and maintenance activities for each individual preserve. This report details the activities planned for the Internal preserves while the



mitigation and monitoring activities planned for the Main preserve are presented under separate cover.

The Internal preserves are identified as 6 distinct areas identified as Preserves C through H on the attached map. The management activities associated with these preserve areas are outlined within this document and will be a requirement for the project.

Preserves C, D, E, and F shall be placed into conservation easements with the South Florida Water Management District, and enforcement rights shall be granted to the South Florida Water Management District and the US Army Corps of Engineers. Conservation easements to Collier County will be placed over these 4 preserve areas as well as Preserves G and H.

As stated above, there are six areas included within the development as Internal preserves. These areas combined are approximately 38.46 acres in size and are identified individually on the attached map.

#### **Preserve C**

This is a predominately cypress preserve located in the north central portion of Section 22. It is 9.67 acres in size all of which are wetlands. This preserve contains some hydric pine flatwoods around the central cypress area that have been heavily infested by melaleuca. All of the exotic vegetation will be cut by hand and removed from this preserve area. The hydrology will be maintained by a direct connection to the adjacent lake. Water from the lake will be able to enter the preserve as the water level rises but only after it has undergone treatment within the lake. The boundary will be clearly delineated as a preserve.

#### **Preserve D**

This is a small preserve located immediately east of Preserve C in the central portion of Section 22. It is 2.79 acres in size all of which are wetlands. This preserve also contains hydric pine flatwoods around the central cypress dome that have been heavily infested by melaleuca. All of the exotic vegetation will be cut by hand and removed from this preserve area. The hydrology will be maintained by a direct connection to the adjacent lake. Water from the lake will be able to enter the preserve as the water level rises but only after it has undergone treatment within the lake. The boundary will be clearly delineated as a preserve.

#### **Preserve E**

This is the largest Internal preserve area within the development footprint. It is 13.77 acres in size all of which are wetlands. This preserve is located along the border of Sections 22 and 15. It is composed of two cypress areas surrounded by hydric pine flatwoods. Melaleuca has extensively infested this preserve area. The current intent is for

all of the exotic vegetation to be cut by hand and removed from the preserve. However, because of the density of melaleuca, a portion of this preserve area may be mechanically cleared. If any mechanical clearing is done, the cleared portion will be immediately planted according to the planting plan outlined below in this report. Like Preserves C and D, this preserve will have a direct connection to the lake system and will receive water from the lakes once it has been treated. Since this is the largest internal preserve it offers the best opportunity to help educate the residents about the preserves and about wetlands in general. The owner may later explore the possibility of constructing an elevated, hand-railed boardwalk into this preserve to facilitate this. Any such proposal would be presented to and coordinated with the South Florida Water Management District and the Corps of Engineers prior to implementation and any necessary permits will be applied for and received prior to this occurring. The boundary will be clearly delineated as a preserve.

#### **Preserve F**

This preserve is located linearly along the eastern boundary of Section 15. The preserve is 10.61 acres in size and is composed of 8.52 acres of wetlands and 2.09 acres of uplands. The wetlands are a mix of cypress and hydric pine with widely varying melaleuca concentrations. All exotic vegetation will be removed from this preserve area and the boundary will be clearly delineated as a preserve. All exotic removal is currently anticipated to be done by hand clearing, but a couple of very dense areas may be mechanically cleared. If any mechanical clearing is done, the cleared portion will be immediately planted according to the planting plan outlined below in this report.

#### **Preserve G**

This is a small upland preserve located at the southern end of the Dilillo Parcel addition. It is about 0.82 acres in size all of which are uplands. This preserve was set aside to protect a potential archaeological midden site identified during the permitting of this addition. All of the exotic vegetation will be cut by hand and removed from this preserve area. Since this preserve area was not utilized as mitigation and does not contain protected wetlands, no monitoring or reporting is required for the SFWMD or USACE though exotic removal is still required by Collier County regulations. The boundary will be clearly delineated as a preserve.

#### **Preserve H**

This preserve is located within the Hatcher parcel addition in the south eastern area of the development. The preserve is 0.80 acres in size and is composed of 0.73 acres of wetlands and 0.07 acres of uplands. The wetlands are a mix of cypress and hydric pine with dense melaleuca concentrations. All exotic vegetation will be removed from this preserve area and the boundary will be clearly delineated as a preserve. All exotic removal is currently anticipated to be done by hand clearing. Since this preserve area was not utilized as mitigation and was considered 100% secondarily impacted, no monitoring

or reporting is required for the SFWMD or USACE though exotic removal is still required by Collier County regulations. The boundary will be clearly delineated as a preserve.

### ***Exotic Vegetation Eradication***

Melaleuca infestation was rampant throughout the site and an extensive eradication program was implemented to eliminate this noxious plant from all preserve spaces. This program entailed hand clearing within all the preserves internal to the development. All hand cleared debris was then removed from the preserves.

Because of the potential damage and destruction to groundcover vegetation and likely rutting of the ground by machinery, no mechanical clearing was conducted. After exotic removal, any areas which did not regenerate on their own were planted according to the planting plan outlined below in this report.

Annual maintenance inspections and treatments will be necessary to keep out the melaleuca that had at one time gained a stranglehold on the property. The annual maintenance treatments should be sufficient to control future exotic growth. The preserve areas will be exotic free immediately following a maintenance activity. At no time shall the density of exotic and nuisance plant species within these preserves exceed 4% of the total aerial cover.

### ***Replanting Plans***

The preserve areas will be left to regenerate naturally for at least a year before deciding if supplemental planting is necessary. If no immediate seed source is available, immediate replanting helps to re-establish the denuded areas more rapidly and contributes to the restoration of canopy components more efficiently. The preserve areas will be evaluated once the initial exotic removal activities are completed and any plantings felt necessary will be proposed and coordinated with SFWMD staff as part of the Time Zero Report.

Replanting will also be considered one year after the exotic removal activities for any area that shows less than 50% coverage by appropriate native vegetation. Appropriate vegetation will include canopy, mid-story, and ground cover vegetation. The one year of natural regeneration is proposed to allow for existing vegetation remaining after the exotic removal to re-establish itself in the newly opened areas. Natural regeneration is preferable to immediate planting because it allows for the local plants that will grow in the restoration areas to establish, and it allows for more natural biodiversity of plants. Replanting will be considered after two years for any area that shows less than 75% coverage by appropriate native vegetation.

Appropriate plant palettes will be applied for the affected areas. They will be dependant on existing ground elevations, anticipated high water elevations, and historic vegetative cover. Also, all areas disturbed as part of the construction or mitigation activities will be

replanted according to South Florida Water Management District guidelines and as outlined below:

**Cypress:** Cypress areas will be planted with sapling cypress, dahoon holly and scattered red maple trees with minimum heights of 4 feet. Depending on the size of the area being planted and the density of the adjacent vegetation, planting will be done on 10 foot or 15 foot centers. It is anticipated that adjacent ground cover vegetation will rapidly colonize the areas so no ground cover planting will be done until a full growing season has passed. If ground cover colonization has not occurred, sawgrass, cordgrass, and other appropriate, available vegetation will be planted in those areas. These plantings will be done on 3 foot centers.

The following table shows some of the representative species that can be considered for planting and restoration of the preserve areas.

CYPRESS PLANTING AREAS		
Canopy	Mid-story	Ground Cover
Cypress <i>(Taxodium distichum)</i>	Button Bush <i>(Cephalanthus occidentals)</i>	Sawgrass <i>(Cladium jamaicense)</i>
Red Maple <i>(Acer rubrum)</i>	Marlberry <i>(Ardisia escallonioides)</i>	Cinnamon Fern <i>(Osmunda cinnamomea)</i>
Dahoon Holly <i>(Ilex cassine)</i>	Pond Apple <i>(Annona glabra)</i>	Swamp Fern <i>(Blechnum serrulatum)</i>
Laurel Oak <i>(Quercus laurifolia)</i>	Cocoplum <i>(Chrysobalanus icaco)</i>	Alligator Flag <i>(Thalia geniculata)</i>
Slash Pine <i>(Pinus elliotii)</i>	Wax Myrtle <i>(Myrica cerifera)</i>	Crinum Lily <i>(Crinum americanum)</i>

**Flatwoods:** Pine flatwood areas will be planted with sapling slash pine on 50 to 75 foot centers. Trees will be from 4’ to 6’ in height. In very hydric areas, a few cypress saplings may also be used. Few midstory plantings are proposed because of the future management plan for the areas as potential fox squirrel and red-cockaded woodpecker habitat. As above, no ground cover plantings will be done for a full growing season unless no existing vegetation is present. Wiregrass, cordgrass, broomsedge, and other appropriate native vegetation will be used if no regeneration is seen within the first year. These will be planted on 3-foot centers to fill in open areas.

PINE FLATWOOD PLANTING AREAS		
Canopy	Mid-story	Ground Cover
Slash Pine <i>(Pinus elliottii)</i>	Wax Myrtle <i>(Myrica cerifera)</i>	Wiregrass <i>(Aristida spp.)</i>
Cypress <i>(Taxodium distichum)</i>	St. John's Wort <i>(Hypericum spp.)</i>	Swamp Fern <i>(Blechnum serrulatum)</i>
Cabbage Palm <i>(Sabal palmetto)</i>		Sand Cordgrass <i>(Spartina alterniflora)</i>
		Yellow-eyed Grass <i>(Xyris spp.)</i>

These lists are not all inclusive and alternative appropriate native vegetation may be used.

All plantings will be coordinated with the wet season so that expected rains will serve to keep the new plantings hydrated and no outside irrigation source will be needed.

***Educational Displays***

The applicant will establish two (2) wildlife displays for the proposed preserve areas. They will feature ‘Cypress Domes of Southwest Florida’ and ‘Pine Flatwoods of Southwest Florida’ along with their associated flora and fauna. They briefly describe the uniqueness of these communities, while highlighting plant and animal species which are typical of these habitats. Several 3’ x 4’ displays will be installed in prominent locations throughout the development. Additional 8.5 x 11 copies will also be available in the club house.

The proposed mitigation activities shall offset unavoidable, adverse wetland impacts and achieve mitigation success by providing viable and sustainable ecological and hydrological functions.

***Target Criteria***

All woody exotic vegetation will be removed from the internal preserve areas. Preserves will contain a minimum of 80% coverage by appropriate vegetation in all three strata combined. Hydric flatwood target conditions are as a very open canopy, prairie type ground cover with widely spaced trees. Trees will be a mix of slash pine and cypress depending on site specific hydrology. Tree density in the open flatwood areas should be between 10 to 50 trees per acre. Cypress dome target conditions are as a more closed canopy (110 to 175 trees per acre) with sparser ground cover. A minimum of 80% appropriate vegetative coverage will still be maintained. Mesic pine areas will contain tree densities in the 50 to 100 trees per acre range with midstory vegetation of saw palmetto, wax myrtle, myrsine, and other appropriate plantings. Ground cover may be scarce in dense midstory areas.

### ***Financial Assurances***

A cost estimate for the enhancement and maintenance activities has been presented to the SFWMD for Preserves C, D, E and F. Assurances that the project has the financial capability to undertake the work have been provided in the form of performance bonds. Once the activities have been completed as outlined in this document and the permit special conditions, the District will release the surety back to the project. Preserves G and H are not subject to the financial assurance criteria as they were not used for mitigation purposed in their respective permit amendments.

### ***Mitigation Calculations***

Pre and post development WRAP analysis were conducted. The proposed development consists of 514.4 acres of wetland impacts. The functional assessment depicting the mitigation credits and deficits associated with the preserve areas has been provided as part of the permit application.

## **IV. MONITORING / MAINTENANCE / MANAGEMENT:**

The goals and objectives of this monitoring plan will be to provide for ongoing progress and ultimate success of preserved and enhanced areas in a series of scheduled monitoring reports. The reports will quantify and describe conditions within the managed areas, comparing observations with the proposed standards and offering advice for corrective actions if needed.

In areas of heavy vegetation, a visual inspection for exotic plant invasion will be made and all exotic vegetation found will be flagged, mapped and reported for treatment. Meandering transects will be followed in the preserve areas for vegetative inventory and observation of wildlife during regular monitoring. Photo points will be established along with plot sampling stations to determine percent survival and percent coverage of planted and recruited plant species. Transect and plot sampling station locations will be determined at time zero, after exotic eradication and plantings are installed. The mitigation efforts shall be deemed successful when the area contains a minimum of 80% coverage of native vegetation, with less than 5% exotic and nuisance vegetation for a period of 2 years. The preserve areas will be maintained in this exotic free state in perpetuity.

The Baseline Monitoring Report describes the existing conditions of the conservation areas prior to exotic eradication and supplemental planting. The Time Zero Monitoring Report describes the aerial extent of exotic removal and other mitigation work, i.e. revegetation, photographs from referenced locations, qualitative observations of wildlife usage and other information such as climatic and hydrological conditions and health of existing vegetation. Annual Monitoring reports shall document changes from the baseline

conditions the success of the exotic eradication and identify ways to maintain or improve these conditions.

Baseline, Time Zero and Annual Reports will include the following:

- quantification of any revegetation of exotic species and recommendations for remedial actions.
- quantification of revegetation of cleared areas by native species including dominant species and % cover by species.
- percent coverage, open space and water depths as appropriate.
- direct and indirect wildlife observations.
- site hydrological characteristics.
- photographs from a referenced location and panoramic photographs. A photo point station will be identified with a PVC labeled stake.
- A staff gauge or constant monitoring groundwater logger will be installed with monthly readings provided in each annual monitoring report.

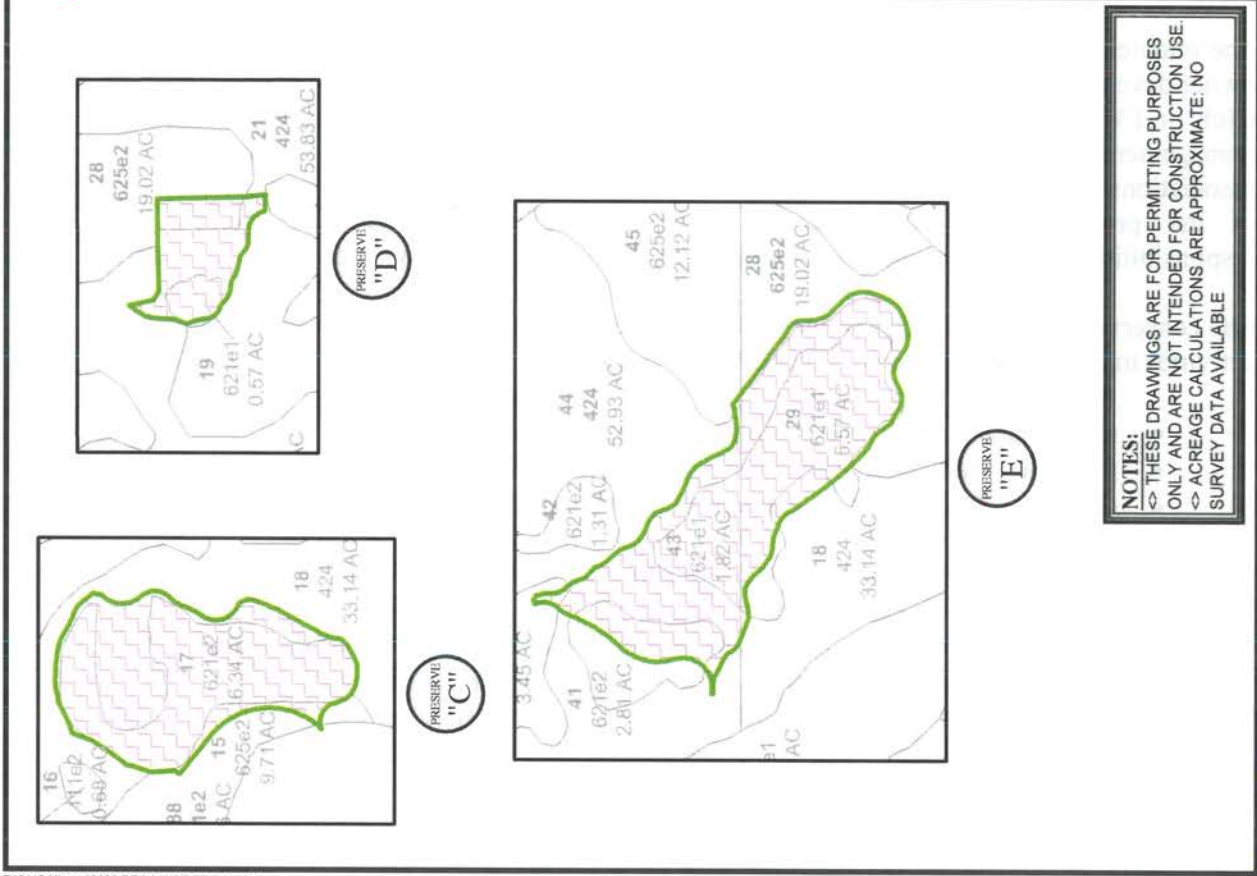
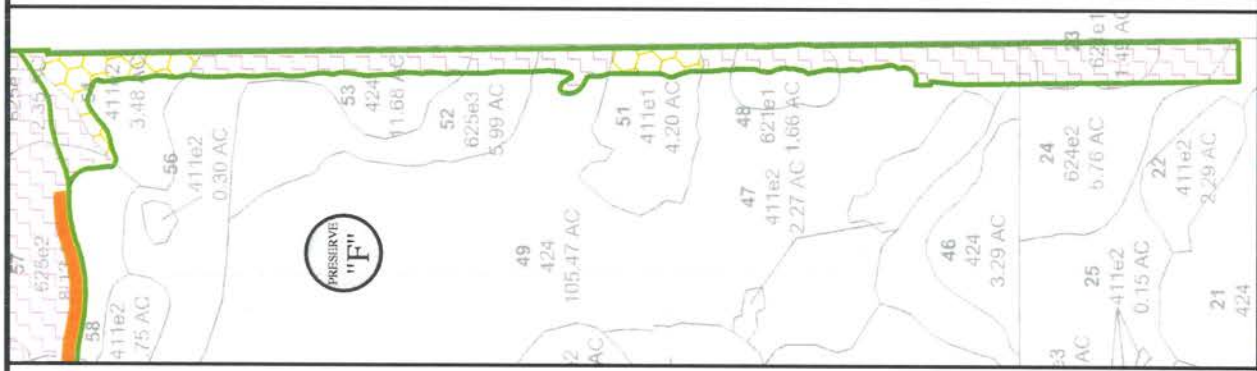
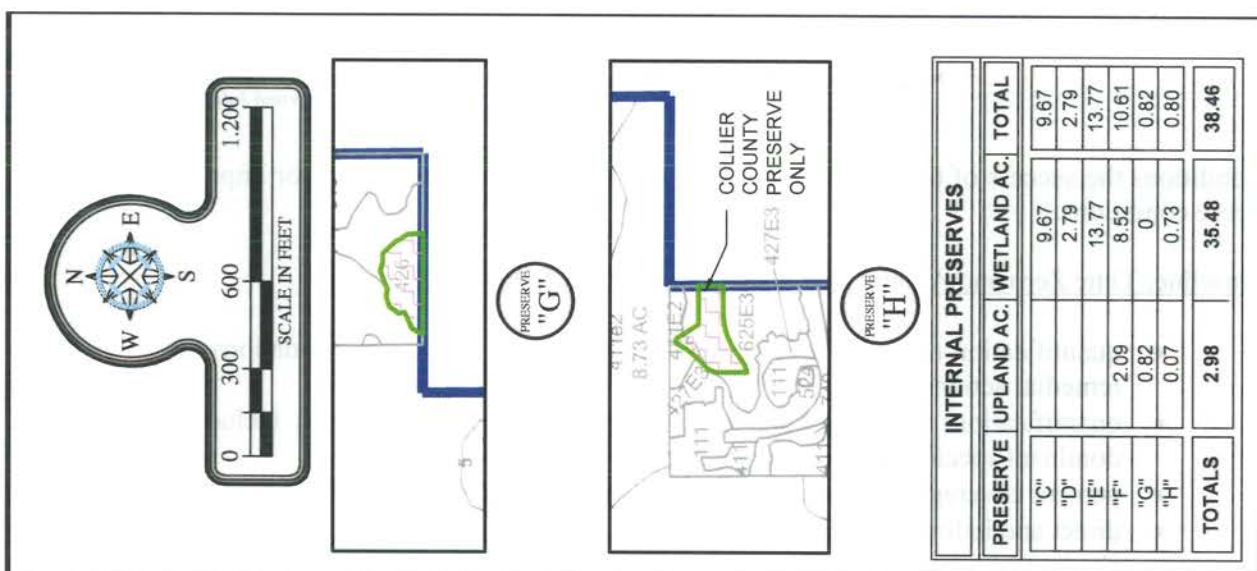
Once restoration and enhancement activities are deemed successful, the internal preserve areas will continue to be maintained in perpetuity and the Esplanade Golf and Country Club (Club) or the Flow Way Community Development District (FWCDD) will be responsible for this perpetual maintenance.

The maintenance and management of the preserve areas will be the responsibility of the owner/developer until such time as the ownership of the preserves are transferred to the Club or FWCDD. When the Club or FWCDD acquires ownership, maintenance and management responsibilities will transfer to that entity as well. At this time, the said associations shall assume responsibility for the perpetual maintenance and management of the preserve and retained areas. Association documents will indicate the responsibilities, restrictions and limitations associated with the conservation areas.

The conservation areas for *Esplanade* will require regular maintenance. The maintenance activities may include, but are not limited to, the following.

- maintenance, repair and/or replacement of monitoring wells,
- follow-up eradication of exotic vegetation,
- supplemental herbicidal treatment of trees/stumps to prevent re-growth after initial treatment.
- Upkeep and replacement of signage delineating preserve areas.

The maintenance activities will be performed on a quarterly basis for the first year, then biannually for the remaining four (4) years of the monitoring period. Perpetual maintenance after the monitoring period will be on an annual basis.



DESIGNED: TH	REVISION:	TAB NAME:	Internal
DRAWN BY: RMJ	N/A	SHEET:	
CREATED: 04-20-20	N/A	SCALE:	1"=600'
JOB NO.: 9418	N/A	TOWNSHIP- 48 S	RANGE- 26 E

SECTION- 15	TOWNSHIP- 48 S	RANGE- 26 E
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**MIRASOL**  
INTERNAL PRESERVES (DETAILED)

**Turrell & Associates, Inc.**  
Marine & Environmental Consulting  
3584 Exchange Ave, Suite B, Naples, FL 34104-3732  
Phone: (239) 643-0166 Fax: (239) 643-6632  
Email: [tuaa@turrell-associates.com](mailto:tuaa@turrell-associates.com)

INTERNAL PRESERVES	UPLAND AC.	WETLAND AC.	TOTAL
"C"	9.67	9.67	9.67
"D"	2.79	2.79	2.79
"E"	13.77	13.77	13.77
"F"	2.09	8.52	10.61
"G"	0.82	0	0.82
"H"	0.07	0.73	0.80
<b>TOTALS</b>	<b>2.98</b>	<b>35.48</b>	<b>38.46</b>

**NOTES:**  
 <> THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.  
 <> ACREAGE CALCULATIONS ARE APPROXIMATE; NO SURVEY DATA AVAILABLE



**Mitigation/Monitoring/  
Maintenance Plan  
for  
Main Preserve**

Revised: October 19, 2020

Prepared By:

**TURRELL, HALL &**  
**ASSOCIATES, INC.**   
Marine & Environmental Consulting  
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Exhibit 3.6  
Application No. 120425-8

## **I. INTRODUCTION:**

The purpose of this document is to outline and describe the proposed mitigation monitoring and maintenance activities for the Main Preserve associated with the Esplanade development project.

## **II. EXISTING CONDITIONS:**

The project site originally consisted of 1,798 acres located in four sections of northern Collier County north of CR 846 and east of Interstate 75. At the time of development, there were limited upland (302.5 acres) and substantial wetland (1,495.8 acres) communities present on the site, which had all been heavily impacted by melaleuca infestation and altered hydrology. Subsequent permit amendments have added 30 acres to the overall project increasing its size to 1,828 acres.

The Main preserve consists of all preserve areas depicted on the attached map. It is approximately 1,087 acres in size and was composed of 949.6 acres of wetlands and 137.4 acres of uplands. 14.5 acres of the preserved uplands were converted into wetlands as part of the wood stork enhancement activities. This resulted in a total of 964.1 acres of wetlands and 122.9 acres of uplands within this preserve area. The Main preserve encompasses the northern portion of the project site in Sections 10 and 15, the north quarter of Section 11, and approximately 200 acres along the western boundary of the site. There are no currently proposed impact areas within the main preserve but there is an access easement that has to be provided to the privately owned out parcel located in the center of Section 10. The access area is approximately 1.2 acres in size. The County roadway plans also show the extension of CR 951 passing through the preserve area, but any impacts associated with that roadway, if it is ever built, will be reviewed at the time that roadway is authorized. Boardwalks and at grade pedestrian access may be considered in the future but are not currently proposed. No vehicular or other motorized access will be allowed into the preserve except for monitoring or maintenance purposes.

## **III. MITIGATION ACTIVITIES**

This preserve is the main preserve on the site, and it is from enhancement activities conducted within this area that the majority of mitigation credit for the development impacts will be achieved. Historical vegetation communities within the preserve include cypress swamp, hydric and mesic pine flatwoods, and wet prairie. All of these habitats had been impacted by widespread exotic vegetation infestation as well as altered hydrological regimes.

### ***Exotic Vegetation Eradication***

Melaleuca infestation was rampant throughout the site and an extensive eradication program was implemented to eliminate this noxious plant from all preserve spaces. This

program included hand clearing and kill-in-place methods within the preserve. Because of the potential damage and destruction to groundcover vegetation and likely rutting of the ground by machinery, mechanical clearing was limited to the densest exotic areas in the northern portions of Sections 10 and 11. Approximately 228.22 acres was mechanically cleared of melaleuca and Brazilian pepper. Hand cleared debris was removed from the preserve where feasible but in areas where removal would cause additional, unwanted damage, the trees were killed in place (>6" dbh), or cut and stacked into piles (<6" dbh). If stacked in piles, the trunks were cut into manageable sections and stacked "teepee" style and the piles placed no closer than 100 feet (center to center) from each other. If possible, burn permits may be obtained from the local fire control district and the piles will be burned in place if they do not decompose on their own within the 5 year monitoring period.

The mechanical clearing that was undertaken was coordinated with appropriate USACE and SFWMD staff. Any portion of the cleared area(s) which does not experience sufficient natural recruitment once exotic seed sources are under control will be planted according to the planting plans outlined below in this report.

In addition to melaleuca, Brazilian pepper and several other exotics are also present on the property. All Category I and Category II exotics, as defined by the Florida Pest Plant Council, are included in this eradication program.

Initially, quarterly maintenance inspections and treatments will be necessary to eliminate the melaleuca that has already gained a stranglehold on the property. All category I and II exotic vegetation will be brought under control before any re-planting or species management techniques (i.e. fire or mowing) are employed. Once the removal efforts have been successful, annual maintenance treatments should be sufficient to control future exotic growth. The preserve areas will be exotic free immediately following a maintenance activity. At no time shall the density of exotic and nuisance plant species exceed 1% relative coverage in any vegetative strata or 4% of the relative coverage in all strata.

### ***Wetland Creation***

Three upland areas in the south west portion of the preserve were scraped down and contoured similarly to the wood stork foraging improvements of the farm field which is described below. Two of these areas were existing mesic pine communities (8.68 acres and 3.09 acres respectively) while the third area was a small commercial (2.78 acre) area that had been used for storage and repair work located at the south end of the farm field. The existing vegetation was removed and the fill from the contouring activities was utilized within the development area. Random inter-connected depressions and contours will concentrate prey as water levels recede and further enhance opportunities on the site for wood stork foraging (See Exhibit 3). Planting will be with ground cover vegetation only and maintenance of the areas will include removal of any canopy or midstory

vegetation that may recruit into the areas. Long term maintenance may occur through hand removal of vegetation, controlled burns, or mowing.

### ***Berm Removal***

An existing berm that surrounded the farm field area was mostly removed from the northern and eastern sides of the field. Where specimen trees were present on or adjacent to portions of the berm or would have been adversely impacted by the berm removal, then small sections of berm were left in place as long as sufficient breaches were created to allow for free flows across the area. This will allow for open sheet flow of surface waters onto and across the site during periods of high water. The berm was scraped down to the adjacent natural ground elevation and the disturbed area were planted with appropriate plantings to match the adjacent vegetative communities.

### ***Wood Stork and Other Wading Bird Foraging Improvements***

The 17.31 acre farm field was scraped down and contoured to create a series of depressional areas of varying depths. This work tied into and included the three wetland creation areas described above. The depressions will serve to concentrate forage fish and provide enhanced foraging opportunities to wood storks and other wading birds. Fill from the construction of these areas was utilized as needed in the development portion of the project.

Wood stork foraging sites are generally composed of a prey source and prey concentration areas. The foraging area concept is essentially a shallow trough 80 to 200 feet wide pocked with depressions which, depending on their depth serve either as aquatic fauna refugia, or as prey concentration zones to facilitate foraging. The trough is basically a small scale shallow slough, with a wet prairie hydroperiod target of around 3-4 months. This is slightly deeper than the existing ground elevations of the mesic and hydric pine flatwoods, or the prior farm field habitats that made up the areas under consideration for these activities, so the refuge and foraging depressions were created in a scattered pattern within the improvement areas.

The dry season refuge for aquatic fauna should not be large deep open water lakes. The entire dry season refuge can be as simple as a circular depression only 50' in diameter, the outer ring supporting a hydroperiod of 8-10 months, the intermediate ring 10-12 months and the center a permanently wet open water depression that may be as much as 6-8 feet deep during the peak of the wet season. The determining factor is that this center location retains about a foot of water during the average dry season. Since the proposed design incorporates refuges within the same trough as the forage concentration areas, a hydrologic connection will form between them in advance of sheet flow conditions on the site. This will allow prey to populate the adjacent foraging areas sooner than would occur without the connectivity provided by the trough.

The foraging depressions are designed as shallow cones excavated within the trough. These depressions are shallower than the refuges and will serve to concentrate prey as the water table drops. The foraging depression size varies between 0.15 and 0.50 acre in area. The target hydroperiod within the foraging depressions is 4-5 months along the outer edge and around 6 months nearing the center. A 300-400 square foot “dimple” in the middle of foraging depression serves as the actual foraging footprint. This “dimple” is approximately six inches deeper than the immediate surrounding area feeding into it. Incorporating narrow, shallow channels between the refuges and foraging depressions will mimic an alligator/wildlife trail and should provide prey access to the foraging areas earlier in the wet season. This will allow for more space and more time to reproduce which will in turn provide more biomass in the foraging depressions as the water levels recede.

Depressions range from one foot to eight feet in depth. Shallow contours encourage and facilitate concentration of the forage fish as water levels recede and provide foraging access over an extended period of time. Planting of this area was done with low herbaceous and graminoid vegetation only to ensure that foraging access to the area is maintained.

Since the main component of these areas is foraging improvement, dense vegetative coverage is not desired. Planting of the scraped down areas was done in conjunction with the wet season immediately following the contouring work as outlined below. Shallow open water areas and sparse emergent vegetation will be the desired condition during the wet season. More vegetation may volunteer into the depressions areas during the dry season should die off or substantially thin out as water levels rise. Vegetative coverage of 50% will be considered successful in these foraging improvement areas.

### ***Replanting Plans***

The preserve areas subject to exotic removal efforts will be left to regenerate naturally for at least a year (through a wet and following dry season) before deciding if replanting is necessary. The decision on whether or not to plant will be based on the target success criteria outlined below. In areas that are more than 75% melaleuca and that have no suitable groundcover vegetation present, replanting will be done immediately following the exotic eradication and contouring activities. If no immediate seed sources are available in these areas, immediate replanting helps to re-establish the denuded areas more rapidly and contributes to the restoration of canopy components more efficiently. The entire preserve area will be evaluated once the initial exotic removal activities are completed and any plantings felt necessary will be proposed and coordinated with USACE and SFWMD staff as part of the Time Zero Report.

Replanting will be considered two years after the exotic removal activities for any area that shows less than 50% coverage by appropriate native vegetation. Appropriate vegetation will include canopy, mid-story, and ground cover vegetation. The one year of

natural regeneration is proposed to allow for existing vegetation remaining after the exotic removal to re-establish itself in the newly opened areas. Natural regeneration is preferable to immediate planting because it allows for more natural biodiversity of plants. Replanting will be considered after three years for any area that shows less than 75% coverage by appropriate native vegetation.

Replanting was considered immediately after the mechanical removal of exotic vegetation however the remaining root stock and seed sources created a condition where intense re-treatments were required to get the exotic vegetation under control. Replanting will be required in any mechanically cleared areas that do not meet at least a 50% coverage by appropriate vegetation within 2 years as long as exotic regeneration is under control or once exotic regeneration is low enough to not adversely impact maintenance of the areas and survivability of the planted vegetation. Areas disturbed by the mechanical exotic removal will be re-graded to match adjacent elevations and remove any rutting, and then planted with the appropriate plant palette.

Appropriate plant palettes will be applied for the affected areas that will be dependant on existing ground elevations, anticipated high water elevations, and historic vegetative cover. Also, all areas disturbed as part of the construction or mitigation activities will be replanted as outlined below:

**Cypress:** Cypress areas will be planted primarily with sapling cypress trees. Slightly higher areas and interfaces with adjacent flatwood communities may also include slash pine, dahoon holly and a few red maple trees. All trees planted will be containerized stock with minimum heights of 4 feet above the substrate. Depending on the size of the area being planted and the density of the adjacent vegetation, planting will be done on 10 foot or 15 foot centers. Planting will be clumped to imitate a more natural community instead of in linear rows. Midstory plantings will be done with minimum 5-gal container stock and will be planted to mimic natural clumps or thickets within the cypress area. It is anticipated that adjacent ground cover vegetation will rapidly colonize the areas so no ground cover planting will be done until a full growing season has passed. If ground cover colonization has not occurred, sawgrass, cordgrass, and other appropriate, available vegetation will be planted in those areas. The ground cover plantings will be with bare root or container stock. Bare root plantings will have minimum 3 inch diameter root masses. These plantings will be done essentially on 3 foot centers to fill in areas that have not regenerated naturally. The following table shows some of the representative species that can be considered for planting and restoration of the cypress preserve areas.

<b>CYPRESS PLANTING AREAS</b>		
Canopy	Mid-story	Ground Cover
Cypress <i>(Taxodium distichum)</i>	Button Bush <i>(Cephalanthus occidentals)</i>	Sawgrass <i>(Cladium jamaicense)</i>
Red Maple <i>(Acer rubrum)</i>	Marlberry <i>(Ardisia escallonioides)</i>	Cinnamon Fern <i>(Osmunda cinnamomea)</i>
Dahoon Holly <i>(Ilex cassine)</i>	Pond Apple <i>(Annona glabra)</i>	Swamp Fern <i>(Blechnum serrulatum)</i>
Laurel Oak <i>(Quercus laurifolia)</i>	Cocoplum <i>(Chrysobalanus icaco)</i>	Alligator Flag <i>(Thalia geniculata)</i>
Slash Pine <i>(Pinus elliottii)</i>	Wax Myrtle <i>(Myrica cerifera)</i>	Crinum Lily <i>(Crinum americanum)</i>

**Flatwoods:** Pine flatwood areas will be planted with sapling slash pine on 50 to 75 foot centers. Trees will be from containerized stock and be between 4’ to 6’ in height. In very hydric areas, up to 15% cypress saplings may also be used. Few midstory plantings are proposed because of the future management plan for the areas as potential fox squirrel and red-cockaded woodpecker habitat. As above, no ground cover plantings will be done for a full growing season unless no existing vegetation is present. Wiregrass, cordgrass, broomsedge, and other appropriate native vegetation will be used if no regeneration is seen within the first year. These will be from both bare root and container stock and will be planted on the equivalent of 3-foot centers in clusters to fill in open areas.

<b>PINE FLATWOOD PLANTING AREAS</b>		
Canopy	Mid-story	Ground Cover
Slash Pine <i>(Pinus elliottii)</i>	Wax Myrtle <i>(Myrica cerifera)</i>	Wiregrass <i>(Aristida stricta, Aristida purpurascens)</i>
Cypress <i>(Taxodium distichum)</i>	St. John's Wort <i>(Hypericum fasciculatum)</i>	Swamp Fern <i>(Blechnum serrulatum)</i>
Cabbage Palm <i>(Sabal palmetto)</i>		Sand Cordgrass <i>(Spartina alterniflora)</i>
		Yellow-eyed Grass <i>(Xyris fimbriata, Xyris caroliniana)</i>

These lists are not all inclusive and alternative appropriate native wetland vegetation may be used.

**Wetland Creation and Wood Stork Enhancement:** Scraped down and contoured areas will be planted with ground cover herbaceous and graminoid species in clustered groups to more closely mimic natural communities. Plantings will be dependant on anticipated water depths and duration of inundation as outlined in the table below. Areas deeper than shown will not be planted.

<b>Zone 1:</b> ≥ high water (12.75' – 14' NGVD)	<b>Zone 2:</b> ≤ 1' below high water (11.75' – 12.5' NGVD)	<b>Zone 3:</b> 1' to 2' below high water (10.75' – 11.5' NGVD)	<b>Zone 4:</b> 2' to 4' below high water (8.75' – 9.5' NGVD)
Sand Cordgrass <i>(Spartina alterniflora)</i> Wiregrass <i>(Aristida purpurascens)</i> Yellow-eyed Grass <i>(Xyris fimbriata)</i> Swamp Fern <i>(Blechnum serrulatum)</i> Crinum Lily <i>(Crinum americanum)</i> Sawgrass <i>(Cladium jamaicense)</i> Red root <i>(Lachnanthes caroliniana)</i> St. John's Wort <i>(Hypericum fasciculatum)</i>	Bacopa <i>(Bacopa caroliniana)</i> Iris <i>(Iris virginica)</i> Alligator Flag <i>(Thalia geniculata)</i> Pickerelweed <i>(Pontedaria cordata)</i> Canna Lily <i>(Canna generalis)</i> Sand Cordgrass <i>(Spartina alterniflora)</i> Duck Potato <i>(Sagittaria latifolia)</i> Maidencane <i>(Panicum hemitomon)</i>	Duck Potato <i>(Sagittaria latifolia)</i> Bulrush <i>(Schoenoplectus californicus)</i> Spike Rush <i>(Eleocharis interstincta)</i> Alligator Flag <i>(Thalia geniculata)</i> Pickerelweed <i>(Pontedaria cordata)</i> Creeping Primrosewillow <i>(Ludwigia repens)</i>	Spatterdock <i>(Nuphar advena)</i> Water Lily <i>(Nymphaea odorata)</i> Soft-stem bulrush <i>(Schoenoplectus tabernaemontani)</i>

These lists are not all inclusive and alternative appropriate native wetland vegetation may be used.

All plantings will be coordinated with the wet season so that expected rains will serve to keep the new plantings hydrated and no outside irrigation source will be needed.

### **Prescribed Burning**

The predominate long-term management technique proposed is the use of periodic burning to control vegetation growth and promote the native pine flatwood communities desired as the result of the restoration activities. Home-owners will be made aware as part of their purchase agreements that prescribed burning may be undertaken on the preserve. Controlled burning will only be proposed for those areas where exotic vegetation has been successfully removed. These will be amended as the details are coordinated with the relevant agencies. Any proposed burning will be done in coordination with the land managers of the CREW Trust preserve, Division of Forestry, and the Corkscrew Swamp Sanctuary preserve.

The majority of the natural communities within the preserve historically rely on frequent fire to maintain their vegetative characteristics and biodiversity. Wildfires no longer occur with historical frequency or extent, and this has altered natural community structure and function. Prescribed fire attempts to mimic the benefits of natural wildfires that historically reduced fuel loads, recycled soil nutrients, and maintained natural communities by inhibiting hardwood encroachment and stimulating fire-adapted plant growth. A fire management plan will be developed for the preserve areas. The plan will include a description of location and natural community types, fire history, fire management objectives and constraints, and a burn prescription. Fire frequency schedules for each natural community will consider recommendations provided in FNAI's The Natural Communities of Florida. To mimic historic fire conditions, growing or lightning



season burns (April-August) will be attempted when possible, though weather conditions and smoke sensitive areas make the timing difficult. Existing firebreaks will be utilized where possible to avoid additional soil disturbance and reduce hydrologic flow disruption created by fire lines.

Burns will be executed using proven safety measures as defined by the Prescribed Burning Act of 1990, §590.026 F.S. This legislation and associated administrative rules outlines accepted forestry burn practices and is administered through the Division of Forestry.

Should burning not be possible due to climatic conditions, agency restrictions, residential proximity, or other reasons, fire alternatives such as mowing, chopping, or targeted vegetation removal may be implemented instead to substitute for a burn program and still provide benefits to the overall system.

#### ***Homeowner Education***

In addition to the prescribed burning information mentioned above, all homeowners will be given informational pamphlets regarding south Florida ecosystems and local wildlife. Preserve related information will also be included in the home-owners documents for the development so that residents are well informed that fire management techniques will be used on the property and pet controls will be required throughout the property.

The development also hopes to coordinate with Audubon of the Western Everglades and the CREW Land and Water Trust to provide educational lectures, walks, and classes on the preserve areas and the flora and fauna present.

#### ***Long-Term Protection***

The 964.1 acres of wetlands and 122.9 acres of uplands composing the Main Preserve have been placed into conservation easements, and enforcement rights are granted to the South Florida Water Management District, the US Army Corps of Engineers, the US Fish and Wildlife Service, and several Non-governmental Organizations (NGOs)(for the Western Preserve including the Wood Stork Foraging Improvements). The conservation easements for these areas have been filed and recorded in the county records as required in the USACE and SFWMD permits and NGO Settlement Agreement.

Once the initial exotic vegetation was completed, the Main Preserve was turned over to the Flow Way Community Development District (FWCDD) for interim maintenance. In September 2018, the developer transferred fee simple title to the Main Preserve to the FWCDD. The FWCDD is an independent special district established pursuant to Chapter 190, Florida, Statutes. Collier County, Florida established the District on March 4, 2002 by Ordinance No. 02-09 of Collier County and amended by Ordinance No. 2016-09 of Collier County. The District was established for two primary public purposes: First, is to

finance, construct/acquire the required infrastructure required for the Community. This infrastructure consisted of the construction/acquisition of a water management system, underground water and sewer utilities, which utility facilities are dedicated to Collier County for ownership, operation and maintenance. Second, is to finance, manage and maintain stormwater facilities, landscaping, wetland mitigation and off-site improvements.

As a special purpose local government CDDs have most of the general powers of a municipality or county. They can levy non-ad valorem assessments on benefitted properties within the district and have the statutory authority to finance, fund, plan, establish, construct, operate, and maintain projects and facilities including environmental remediation and mitigation projects (§190.0(1)(e) F.S.) and mitigation areas and wildlife habitat (§190.0(1)(f) F.S.). The SFWMD has long recognized CDD's as acceptable long term maintenance entities. See Applicant's Handbook I, Section 12.3.1(b).

The Declaration of Covenants, Conditions, Restrictions and Easements for Esplanade Golf and Country Club (Club) identifies the Preserve areas as protected common areas. The Declaration also states that *"The Preserve Tracts shall be ultimately owned by the Club and/or the CDD, and shall be maintained, administered and operated by the Club and/or the CDD in accordance with the provisions of this Declaration and the requirements of the appropriate governmental agencies."* The Declaration further states, *"The Preserve Tracts are hereby dedicated as common areas and they shall be the perpetual responsibility of the Club and/or the CDD, as applicable, and may in no way be altered from their natural state."*

The Preserve areas have been dedicated as common areas within the Community and have been platted as preserve areas in addition to the conservation easements being placed over them. As outlined in the Ordinance establishing the FWCDD and in the Declaration and Covenants for the Club, both entities (FWCDD and Club) are identified as potential long term managers of the Preserve areas and either entity (FWCDD or Club) may be identified as the long-term management entity once the preserves have met success criteria and transition into long-term management.

### ***Target Criteria***

All exotic vegetation will be killed within the Main Preserve. Hydric flatwood target conditions are as a very open canopy, prairie type ground cover with widely spaced trees. Trees will be a mix of slash pine and cypress depending on site specific hydrology. Tree density in the open flatwood areas should be between 10 to 50 trees per acre. Cypress dome target conditions are as a more closed canopy (110 to 175 trees per acre) with sparser ground cover. A minimum of 80% appropriate vegetative coverage will still be maintained. Mesic pine areas will contain tree densities in the 50 to 100 trees per acre range with midstory vegetation of saw palmetto, wax myrtle, myrsine, and other appropriate plantings. Ground cover may be scarce in dense midstory areas.

*Forested and prairie habitats*

After 2 years, all preserve areas will contain a minimum of 50% coverage by appropriate native vegetation in all three strata combined. After 3 years, all preserve areas will contain a minimum of 75% coverage by appropriate native vegetation in all three strata combined. After 5 years time, preserves will contain a minimum of 80% coverage by appropriate vegetation in all three strata combined. Any areas not meeting the minimum appropriate native vegetative coverage will be subject to supplemental planting plans as outlined above.

*Created marsh habitats*

As outlined above, the created marsh areas will be subject to a slightly different review with regards to target criteria. After 2 years, all created marsh will contain a minimum of 50% ground cover coverage by appropriate native wetland vegetation. Since the main component of these areas is foraging improvement, dense vegetative coverage is not desired. Shallow open water areas and sparse emergent vegetation will be the desired condition during the wet season. More vegetation may volunteer into the depressions areas during the dry season should die off or substantially thin out as water levels rise. Vegetative coverage of 50% will be considered successful in these foraging improvement areas.

***Financial Assurances***

Because of the size, different components, and nature of the proposed mitigation activities, the mitigation program for the Main Preserve was broken up into the following 4 different areas.

- 1 – Wood Stork Foraging Improvements
- 3 – Western Preserve
- 4 – Northern Preserve
- 5 – Section 11

\*\* Area 2 is the Internal Preserves which are covered under a separate Plan.

Financial assurances were broken down to cover each of these areas rather than one document to cover the entire Main Preserve. This allows the USACE and SFWMD compliance staff to review and act on the separate areas independently. If there is an issue with one of the preserve areas, the remainder of the areas can still achieve success criteria and obtain sign-offs from the agencies.

Assurances that the project has the financial capability to undertake the work were provided in the form of performance bonds. Once the activities have been completed for an area as outlined in this document and the permit special conditions, and the USACE and SFWMD compliance staff have signed off on the success criteria being met, the SFWMD can then release the surety back to the project.

### ***Success Criteria***

The creation, enhancement, and preservation activities proposed for the preserve will generate mitigation credit that is being applied towards the project's impacts. In order to adequately gauge the appropriateness and eventual success of the mitigation, certain benchmarks must be set to compare against over time. A set of surety documents (letters of credit, bond, etc.) were put in place in order to insure success of the enhancement, creation, and wood stork foraging improvement areas. The bonds will remain until the areas meet the success criteria regarding exotic removal, re-vegetation and plant coverage.

### **Vegetation**

The base planting and vegetation restoration efforts shall be deemed, in part, successful when the area contains a minimum of 80% coverage of native vegetation, with less than 4% exotic and nuisance vegetation for a period of 3 consecutive years. The preserve areas will be maintained in this exotic-free state in perpetuity.

Ground cover diversity has been limited by the altered hydrology and exotic infestation throughout the site. It is expected that species diversity will increase as the exotic vegetation is removed. The restoration of a prescribed burning regimen will also help to restore a more diverse, natural native habitat. Monitoring of the preserves will include species composition and diversity monitoring of identified plots to document this increase.

## **IV. MONITORING / MAINTENANCE / MANAGEMENT:**

The goals and objectives of this monitoring plan will be to provide for ongoing progress and ultimate success of preserved and enhanced areas in a series of scheduled monitoring reports. The reports will quantify and describe conditions within the managed areas, comparing observations with the proposed standards and offering advice for corrective actions if needed.

Visual inspection for exotic plant invasion will be made on quarterly, bi-annual, or annual basis depending on the state and status of the exotic eradication efforts. All exotic vegetation found will be flagged, mapped, and reported for treatment. Removal of observed exotic vegetation will occur within 30 days of the observations. Meandering transects will be followed in the preserve areas for vegetative inventory and observation of wildlife during regular monitoring. Photo points will be established along with plot sampling stations to determine percent survival and percent coverage of planted and recruited plant species. Transect locations have been provided on the included exhibit (Exhibit 4). Plot sampling station locations will be determined at time zero, after exotic

eradication and plantings are installed. The mitigation efforts shall be deemed successful when the area contains a minimum of 80% coverage of appropriate native vegetation, with less than 4% exotic and nuisance vegetation for a continuous period of 3 years. The preserve areas will be maintained in this exotic-free state in perpetuity.

### **Water Levels and Rainfall**

In order to document that hydrological impacts do not occur as a result of the project, four water level data loggers and one logging type rain gauges have been placed within the Main Preserve boundaries. The water level loggers are placed inside of two (2) inch PVC pipe wells and sunk to a depth of approximately eight (8) feet below ground level. This places the loggers below the water table and will allow for continuous monitoring of the water levels, above and below ground, experienced on the site. The rain gauge will be set to collect and record rainfall events on a daily basis so that comparisons can be made with the on-site rainfall and water levels experienced. Approximate locations for the loggers, both rainfall and water level, are shown on the monitoring exhibit (Exhibit 4).

The surface water level and rainfall data will be included in a report that will be given to the USACE and to the SFWMD on an annual basis. This monitoring will be done in conjunction with the vegetative and exotic removal monitoring conducted within the forested preserves for the project. The reports will be produced annually for five years after the completion of the initial exotic removal. Annual updates will be created in perpetuity for the FWCDD and kept on file as required for public records.

### **Wood Stork Activity**

The National Audubon Society Corkscrew Sanctuary staff currently monitors the productivity of the Corkscrew wood stork colony in the form of the number of nests constructed as well as the number of young fledged.

The project will also document the utilization of the preserve areas by wood storks. This information will be useful in conjunction with the available productivity and hydrological data to determine if the project design serves to increase or decrease foraging opportunities. Since the FWS reviewed potential incidental take based on forage production the project will implement a monitoring program to estimate the forage fish production on the project site.

### **Forage Fish Monitoring**

Sampling sites will be established along transects that will incorporate the different wetland communities on the site. The four main habitats to be sampled are hydric pine flatwoods, pine/cypress flatwoods, hypericum prairie, and cypress. The sampling devices will consist of, 1m<sup>2</sup> throw traps, seines, and acrylic Breder traps. All fish caught will be identified and counted. Results will be presented in the annual report to the agencies.

## Reports

A Baseline Monitoring Report describing the preexisting conditions of the conservation areas prior to exotic eradication and supplemental planting was completed and submitted to USACE and SFWMD reviewers. The Time Zero Monitoring Report describing the aerial extent of exotic removal and other mitigation work, i.e. revegetation, photographs from referenced locations, qualitative observations of wildlife usage and other information such as climatic and hydrological conditions and health of existing vegetation has also been submitted following the completion of the initial exotic removal work. Annual Monitoring reports shall document changes from the baseline conditions the success of exotic eradication and identify ways to maintain or improve these conditions.

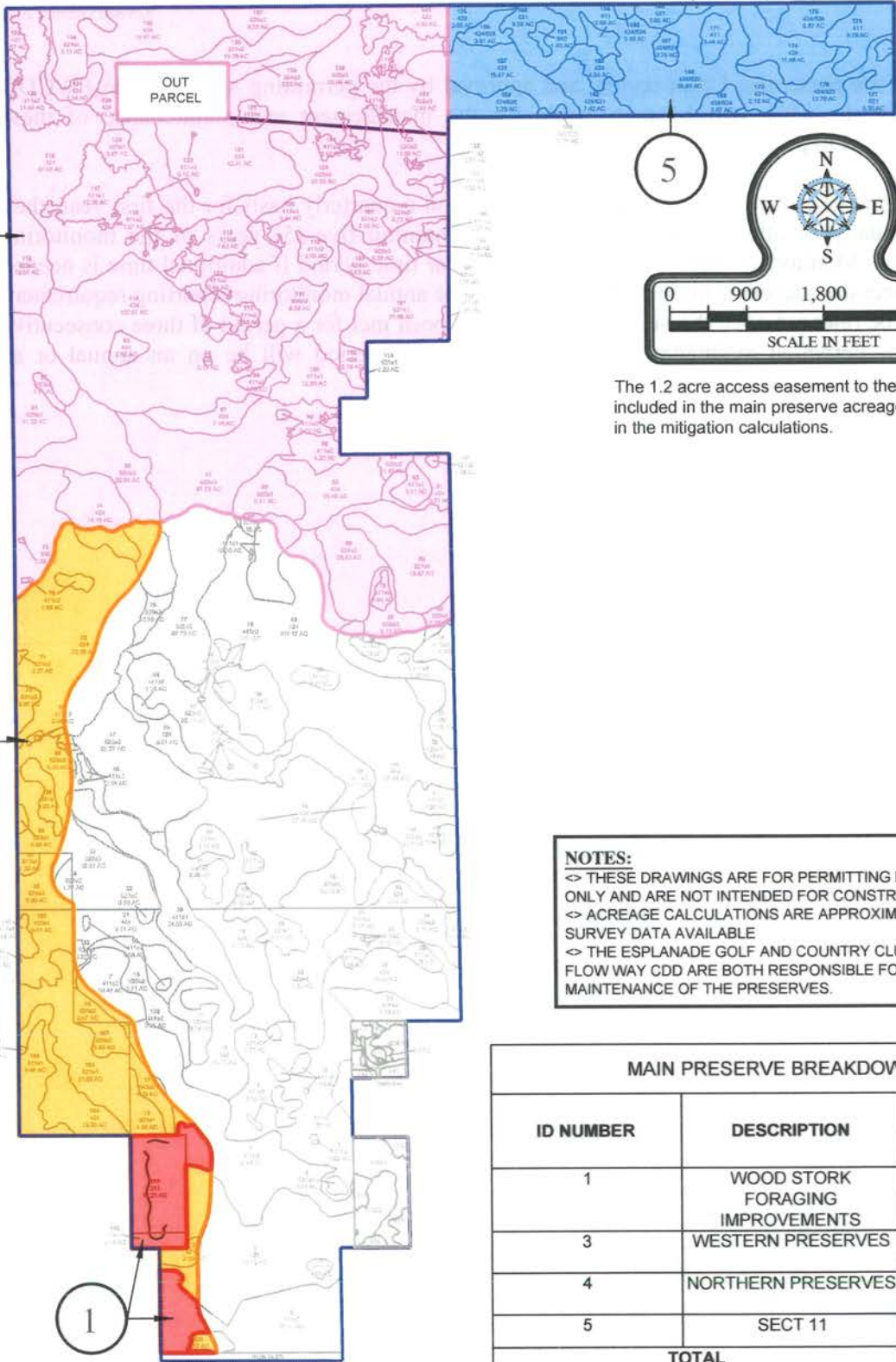
### Baseline, Time Zero and Annual Reports include the following:

- Quantification of any re-growth of exotic species and recommendations for remedial actions.
- Quantification of restoration of cleared areas by native species including dominant species and % cover by species.
- Percent coverage, open space and diversity as appropriate of restored vegetation.
- Direct and indirect wildlife observations.
- Photographs from a referenced location and panoramic photographs. A photo point station will be identified with a PVC labeled stake.
- The current status of the construction of the project as well as any construction phases or milestones that have been completed.
- A summary of the rainfall data collected on-site as well as data from the other agency rainfall monitoring stations identified in the report.
- A summary of the on-site water level data as well as the off-site data available from the other agency monitoring stations.
- Current status of the plantings and exotic removal as well as regeneration of the native vegetation throughout the preserve area.
- Ongoing results of the forage fish sampling including species diversity and densities broken down by habitat types and water depths.
- Any observed on-site foraging by wood storks. Included in this information will be, number of storks observed, habitat or general area observed, number of days or duration of observation, and estimated foraging efficiency.

The maintenance and management of the Main Preserve will be the responsibility of the long-term maintenance entity in perpetuity. The responsibility for the preserve maintenance was transferred to the FWCDD once the initial exotic removal activities were completed. Fee title to the Main Preserve was transferred to the FWCDD in September 2018. Both the FWCDD and the Club are aware of the restoration and enhancement activities as well as the long term maintenance responsibilities associated

with the preserves. Upon review and approval by the permitting agencies, the FWCDD and/or the Club will be responsible for the management and maintenance of these preserves in perpetuity.

The maintenance activities will be performed on a quarterly basis for the first year, then biannually or annually as needed for the remaining five (5) years of the monitoring period. Monitoring may continue past the 5 year time period if additional time is needed to meet the success criteria for the preserve. The annual monitoring reporting requirement will be released once the success criteria have been met for a period of three consecutive years. Perpetual maintenance after the monitoring period will be on an annual or as needed basis.



The 1.2 acre access easement to the 20 acre outparcel is included in the main preserve acreage but is not included in the mitigation calculations.

**NOTES:**  
 <> THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.  
 <> ACREAGE CALCULATIONS ARE APPROXIMATE. NO SURVEY DATA AVAILABLE  
 <> THE ESPLANADE GOLF AND COUNTRY CLUB AND THE FLOW WAY CDD ARE BOTH RESPONSIBLE FOR MAINTENANCE OF THE PRESERVES.

MAIN PRESERVE BREAKDOWN		
ID NUMBER	DESCRIPTION	AREA (AC.)
1	WOOD STORK FORAGING IMPROVEMENTS	31.86
3	WESTERN PRESERVES	166.63
4	NORTHERN PRESERVES	728.76
5	SECT 11	159.79
<b>TOTAL</b>		<b>1087.04</b>

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**ESPLANADE GOLF & COUNTRY CLUB**  
**MAIN PRESERVES BREAKDOWN**

DESIGNED: TH	REVISION:	TAB NAME: Conservation Breakdown
DRAWN BY: RMJ	N/A	SHEET:
CREATED: 10-12-20	N/A	SCALE: 1"=1,800'
JOB NO.: 9418	N/A	
SECTION- TOWNSHIP-48 S RANGE-26 E		



Environmental Resource Permit History

Permit Number : 11-02031-P

<u>Application No.</u>	<u>Project Name</u>	<u>Permit Issue Date</u>
000518-10	Mirasol	14-Feb-2002
030424-16	Mirasol	30-Apr-2003
060524-2	Mirasol	13-Sep-2007
110624-10	Mirasol	9-Aug-2011
120425-8	Esplanade Fka Mirasol	5-Nov-2012
130205-6	Esplanade Golf And Country Club Of Naples	21-Feb-2013
150702-16	Esplanade Golf And Country Club Of Naples	30-Sep-2015
130503-15	Mirasol	28-May-2013
140425-12	Esplanade Golf And Country Club Of Naples	15-Sep-2014
130627-2	Esplanade ( F K A Mirasol)	16-Jul-2013
170210-6	Esplanade Golf And Country Club (F K A Mirasol) Mod	6-Apr-2017
171121-4	Esplanade Golf And Country Club Of Naples	15-Dec-2017
161215-9	Esplanade Development (Fka Mirasol)	5-Jan-2017
170824-18	Esplanade Golf And Country Club Of Naples	30-Aug-2017
180809-11	Esplanade Golf And Country Club	17-Aug-2018
180213-4	Esplanade Golf And Country Club Of Naples	22-Feb-2018
190726-11	Esplanade Golf And Country Club Of Naples	26-Dec-2019
200522-3512	Esplanade Golf And Country Club Of Naples	05-Nov-2020

