



# Plantation Acres Improvement District Broward County Florida

## AGENDA February 25, 2021

Call to Order

Pledge of Allegiance

Invocation

Roll Call

Approval of Attendance of Commissioners by Social Media or Telephone

Approval of Minutes

Public Comment

Staff Reports

I. Administrator's Report

II. Attorney's Report

A. P.A.I.D. Policies and Procedures . . . . . Discussion

III. Engineer's Report

A. CONSENT ITEMS

None

B. QUASI-JUDICIAL ITEMS

The items in this section are quasi-judicial in nature. If you wish to object or comment upon any of these items, you must be sworn before addressing the Board of Commissioners, and if you wish to address the Board, you may be subject to cross-examination. If you refuse to submit to cross-examination, the Board of Commissioners will not consider what you have said in its final deliberations.

None

C. BOARD ACTION ITEMS

None

D. DISCUSSION ITEMS

D1. Pump Stations Improvements (D1707.01) . . . . . Update

D2. Engineer's Annual Report 2020 (D2101.02) . . . . . Summary

D3. Permit Activity (D9408.02 & D9408.03) . . . . . Summary

IV. District Manager's Agenda

Old Business

New Business

Adjournment

Notice is hereby given to all interested parties that if any person should decide to appeal any decision made at the forthcoming meeting of the Board of Commissioners, such person will need a record of the proceedings conducted at such meeting, and for such purpose he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which any appeal may be based.



## MEMORANDUM

To: Chairman and Members of the Board Commissioners  
Plantation Acres Improvement District

From: Paul R. Gougelman, General Counsel

Date: January 18, 2021

Re: Amendments to the P.A.I.D. Policies and Procedures Manual

At the end of the December 8, 2020 meeting of the Board of Commissioners, Commissioner Flanigan requested revisions to the Policies and Procedures Manual providing a cap of five minutes for presentations under public comments relating items not on the Board agenda for consideration. In the attached resolution, a draft of the proposal is amendment number three (being made to Section 2.2.10(d) of the Policies and Procedures Manual). You will need to review the language to see if the proposal is acceptable or needs further revision.

In addition to this proposed amendment, I am recommending two additional house-keeping amendments. The first amendment revises Section 1.1.1 is to make minor revisions to cite all of the enacting legislation creating the P.A.I.D. The second amendment creates Section 1.3 providing language to describe how the Policies and Procedures Manual may be amended.

PRG/mb

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RESOLUTION NO. 2021-\_\_\_\_

**A RESOLUTION OF THE PLANTATION ACRES IMPROVEMENT DISTRICT, A FLORIDA PUBLIC CORPORATION, RELATING TO REVISION AND AMENDMENT OF THE POLICIES AND PROCEDURES MANUAL; MAKING FINDINGS; AMENDING SECTION 1.1.1 AUTHORITY, RELATING TO ADOPTING LAWS OF FLORIDA; CREATING SECTION 1.3 PROVIDING A PROCESS FOR POLICIES AND PROCEDURES AMENDMENT; AMENDING SECTION 2.2.10(d) RELATING TO THE PUBLIC COMMENT PORTION OF THE AGENDA; PROVIDING A SEVERABILITY/INTERPRETATION CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.**

WHEREAS, the Board of Commissioners desires to make revisions to the Plantation Acres Improvement District (P.A.I.D.) Policies and Procedures Manual; and

WHEREAS, the first amendment to Section 1.1.1 is to make minor revisions to cite all of the enacting legislation creating the P.A.I.D.; and

WHEREAS, the second amendment creates Section 1.3 providing language to describe how the Policies and Procedures Manual may be amended; and

WHEREAS, the third amendment amends Section 2.2.10 relating to placing time limits on the public comments part of the agenda for items not pending on the agenda; and

WHEREAS, this Resolution is adopted pursuant to the powers of the P.A.I.D. See §9, Chap. 2002-367, Laws of Fla.; §298.22(8), Florida Statutes; and

WHEREAS, the Board of Commissioners finds that this Resolution is in promotion of the public health, safety, welfare, and aesthetics of the P.A.I.D.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE PLANTATION ACRES IMPROVEMENT DISTRICT, A FLORIDA PUBLIC CORPORATION:

39 SECTION 1. *Recitals.* Each and all of the recitals (“WHEREAS” clauses) are  
40 hereby incorporated herein.

41  
42 SECTION 2. *Amendment of Section 1.1.1 of the Plantation Acres Improvement*  
43 *District Policies and Procedures Manual.* Section 1.1.1 of the Policies and Procedures  
44 Manual is hereby amended as follows:

45  
46 1.1.1 Authority

47  
48 The Plantation Acres Improvement District was created as a Special District by the  
49 Florida Legislature by a Special Act pursuant to Chapter 82-274, Laws of Florida, as  
50 amended by Chapter 2009-251, Laws of Florida (herein: the “Special Act”), to assume  
51 the powers, responsibilities, obligations of the Dixie Drainage District, which was  
52 abolished by the Special Act. Plantation Acres Improvement District is subject to those  
53 provisions of Chapters 189 and Chapter 298, F.S. as set forth in the Special Act.

54  
55 SECTION 3. *Creation of Section 1.3 of the Plantation Acres Improvement*  
56 *District Policies and Procedures Manual.* Section 1.3 of the Policies and Procedures  
57 Manual is hereby amended as follows:

58  
59 1.2 Amendment of Policies and Procedures.

60  
61 The individual policies and procedures in this Manual may be amended, re-adopted, or  
62 repealed by resolution of the Board of Commissioners by a majority vote of the total  
63 number of members of the Board of Commissioners, then serving in office at the time of  
64 adoption of the amendment.

65  
66 SECTION 4. Amendment Creating Section 2.2.10(d) of the Plantation Acres  
67 Improvement District Policies and Procedures Manual. Section 2.2.10 of the Policies  
68 and Procedures Manual is hereby amended as follows:

69  
70 2.2.10 Addressing the Board

71 \* \* \*

72 (d) Public Input on Agenda Items.

73 (1) The public shall be given the opportunity to speak on all agenda  
74 items which require a Board vote with the exception of ministerial matters and matters  
75 excepted from the Sunshine Law by statute. For consent agenda matters, the Chair  
76 shall announce prior to a vote, that the public may speak on any consent agenda item  
77 and any member of the public who seeks to be recognized for the right to speak may  
78 speak on the consent agenda item at that time for three (3) minutes with the discretion  
79 of the Chair to extend the time by one (1) minute. For other agenda items, the public  
80 shall be offered the opportunity to speak prior to the Board taking any action, except

81 that there shall be no such right to speak on matters which are tabled or continued to  
82 another meeting. Any member of the public recognized to speak may speak on the item  
83 for up to three (3) minutes with the discretion of the Chair to extend the time by one (1)  
84 minute. Prior to addressing the Board, each speaker shall sign in with their name and  
85 address on the sign-in page provided. Members of the public will be called upon to  
86 address the Board in the order set forth on the sign-in page.

87  
88 (2) Each regular meeting agenda shall designate a time period for  
89 public comment relating to items not on the agenda. Members of the public may speak  
90 under public comments for not more than five (5) minutes each, and at the discretion of  
91 the Chair for good cause shown to extend that time by one (1) minute. Any  
92 presentation taking more than five (5) minutes, as extended, shall at the request of any  
93 commissioner be re-scheduled for a future meeting as a regular agenda item for  
94 discussion.

95  
96 SECTION 5. Severability Clause/Interpretation.

97  
98 (a) In the event that any term, provision, clause, sentence or section of  
99 this Resolution shall be held by a court of competent jurisdiction to be partially or wholly  
100 unenforceable or invalid for any reason whatsoever, any such invalidity, illegality, or  
101 unenforceability shall not affect any of the other or remaining terms, provisions, clauses,  
102 sentences, or sections of this Resolution, and this Resolution shall be read and/or  
103 applied as if the invalid, illegal, or unenforceable term, provision, clause, sentence, or  
104 section did not exist.

105  
106 (b) That in interpreting this Resolution, underlined words indicate  
107 additions to existing text, and ~~stricken through~~ words include deletions from existing  
108 text. Asterisks (\* \* \* \*) indicate a deletion from the Resolution of text, which exists in the  
109 Policies and Procedures Manual. It is intended that the text in the Policies and  
110 Procedures Manual denoted by the asterisks and not set forth in this Resolution shall  
111 remain unchanged from the language existing prior to adoption of this Resolution.

112  
113 SECTION 6. Effective Date. This Resolution shall become effective upon  
114 adoption.

115  
116 ADOPTED by the Board of Commissioners of the Plantation Acres Improvement  
117 District on the \_\_\_ day of \_\_\_\_\_, 2021.

118  
119 PLANTATION ACRES IMPROVEMENT  
120 DISTRICT, A Florida Public Corporation

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122  
123  
124  
125  
126

ATTEST: \_\_\_\_\_  
Angel Alvarez, District Manager

\_\_\_\_\_  
Stephen M. Nieset, Chairman

**ENGINEER'S STAFF REPORT**  
FOR February 25, 2021 MEETING  
**AGENDA ITEM No.: D1**

**Action Required:** Discussion

**Item Description:** Pump Station Improvements & Cast in Place (CIP) Pipe Lining  
Status

**P.A.I.D. Number:** D1707.01

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**Attachments:** NONE

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**Summary:**

PIPE LINING: The Notice to Proceed (NTP) was sent to the pipe lining contractor (Shenandoah) on January 19, 2021. We spoke with them on February 12<sup>th</sup> regarding their construction commencement and revised schedule. They stated that their vactor truck was not operational with hopes to get it repaired by mid-March. They promised that once they were operational, this project is first on their list. They further mentioned that they will have two crews dedicated to the project in order to expedite their construction schedule. Their expectation, with the extra crew, is to have all six stations complete in one week's time (cleaned, TV'ed, lined & inspected). We will stay on top of this project, with hopes that it will be complete prior to the March Board meeting.

PUMP STATIONS: As mentioned last month, we finally received the A.C.O.E. permit late January. The construction plans for Pump Station No. 3 are in the final stage of revision and they will be ready for the March meeting. We have been in contact with Paul regarding some minor legal information to be included within the bid documents. We also expect to have the final bid documents ready by the March meeting as well, so this project can go back out to bid shortly thereafter.

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Prepared by: WTV Date: 02/16/2021

**ENGINEER'S STAFF REPORT**  
FOR February 25, 2021 MEETING  
**AGENDA ITEM No.: D2**

**Action Required:** Discussion

**Item Description:** Engineer's Annual Report for 2020  
Report

**P.A.I.D. Number:** D2101.02

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**Attachments:** 2020 Annual Report

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**Summary:** See attached.

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Prepared by: CJF Date: 2/18/2021

2021-02-18 Staff Report.D2101.02.wpd





**ENGINEER'S ANNUAL REPORT FOR 2020**

**PLANTATION ACRES IMPROVEMENT DISTRICT**

City of Plantation, Broward County, Florida

FOR  
**PLANTATION ACRES IMPROVEMENT DISTRICT**  
1701 NW 112th AVENUE  
PLANTATION, FLORIDA 33323

**W&F** ENGINEERS  
PLANNERS  
SURVEYORS

**WINNINGHAM & FRADLEY, INC.**  
111 N.E. 44th STREET, OAKLAND PARK, FL 33334  
954.771.7440 fax:954.771.0298 www.winnfrad.com

February 25, 2021  
Project Number D2101.02

Published: February 16, 2021 (11:07am)

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# **ENGINEER'S ANNUAL REPORT FOR 2020**

## **PLANTATION ACRES IMPROVEMENT DISTRICT**

### **1 OVERVIEW**

The functions of the District during 2020 were greatly impacted by the COVID-19 pandemic. Meetings were cancelled or held virtually. Communication, in general, was adversely impacted. However, the District's involvement with the residents and development community continued with the review of all building permits, drainage reservation releases, site data records, plats, and development plans.

The District's field staff performed standard maintenance of drainage facilities and canals. They also successfully operated the pumps and kept the drainage passages clear during several significant storms, including Hurricane Eta.

The Pump Stations Improvement Project was advertised for bid. 49 sets of plans and specifications were picked up, but only two bids were received. Both bids significantly exceeded the engineer's estimate and were rejected. The regulatory review by the South Florida Water Management District (SFWMD) was expanded to include a review by the Army Corps of Engineers (ACOE). The complexity of the review and obstacles created by the pandemic delayed approval for the entire year.

The Facilities Manual was completed. District Staff now have the initial inventory, location, and data for all facilities within the District. It is expected that the field staff will add data during their normal maintenance operation.

The District Map and Facilities Map were updated, and work started on a complete graphical and tabular inventory of the drainage elements within the District.

The total rainfall for the year was approximately 104 inches, which was 41 inches more than 2019. The 30-year County average is 60.3 inches per year. The average water elevation for 2020 was 3.95 feet.

### **2 REGULATORY REVIEW**

#### **2.1 Building Permits and Related Items**

The review for building permits included reviewing the building plans, reviewing the final survey for approval of the Certificates of Occupancy, preparing encroachment agreements, and submitting unique building permit requests to the Board. The building permits issued were nearly the same as 2019, averaging 11 per month. Certificates of Occupancy for new homes were down by 26.7% from 2019, averaging one per month.

The monthly summary of building permit review is as follows:

MONTH	BUILDING PERMITS	CERTIFICATE OF OCCUPANCY	ENCROACHMENT AGREEMENTS
January	14	1	0
February	16	0	0
March	12	2	0
April	9	3	0
May	8	1	0
June	13	1	0
July	10	0	0
August	12	1	0
September	8	0	0
October	6	2	0
November	9	0	1
December	16	2	1
<b>TOTAL</b>	<b>133</b>	<b>13</b>	<b>2</b>

**Table 1 - Building Permits**

**2.2 Code Violations**

There were six Notices of Violation issued this year, which were resolved, with the exception of one that was issued a Final Order.

**2.3 Reservation Releases and Easement Vacations**

Reservation Releases are granted when all easements on the subject property have been dedicated. If easements are not dedicated, the request for a release of reservation is denied. This year there were no requests for release of reservations.

**2.4 Site Data Records**

Site Data Records are prepared for single lots less than five acres that have been previously subdivided by deed and sold without being platted. Three were four Site Data Records submitted this year. Three were approved, and one is still pending.

## 2.5 Plats

There were three new plats submitted to the Board this year, as follows:

PLAT NAME	DESCRIPTION	LOCATION	STATUS
SLS Real Estate 4	Replat of one residential lot to five residential lots	1500 NW 118 <sup>th</sup> Ave	Approved
Reflections In The Acres	Replat of 11 residential lots to 42 residential lots	11200 NW 4 <sup>th</sup> Street	Approved
Park Place Homes	Replat of 2 residential lots to 5 residential lots	11790 NW 8 <sup>th</sup> Street	Pending

**Table 2 - Plats**

## 2.6 Paving and Drainage Plans

Permits are issued after Board approval is granted and security requirements are met. Two paving and drainage plans were submitted to the Board this year, for SLS Real Estate 4 and Reflections In The Acres. Both were approved.

## 2.7 Permit Status

A permit for construction is issued after a plan is approved and all conditions and security requirements have been met. The permit generally expires one year from the date it is issued. Board approval expires six months from issuance if a permit has not been granted.

There were no new active permits this year.

## 2.8 Asbuilts

NAME	DESCRIPTION	LOCATION	STATUS
American Heritage School Gymnasium	Installation of paving and drainage system associated with the development of new gymnasium building	12200 W. Broward Boulevard	Approved

**Table 3 - Asbuilts**

### **3 DISTRICT PROJECTS**

#### **3.1 Waterways and Neighborhood Maintenance**

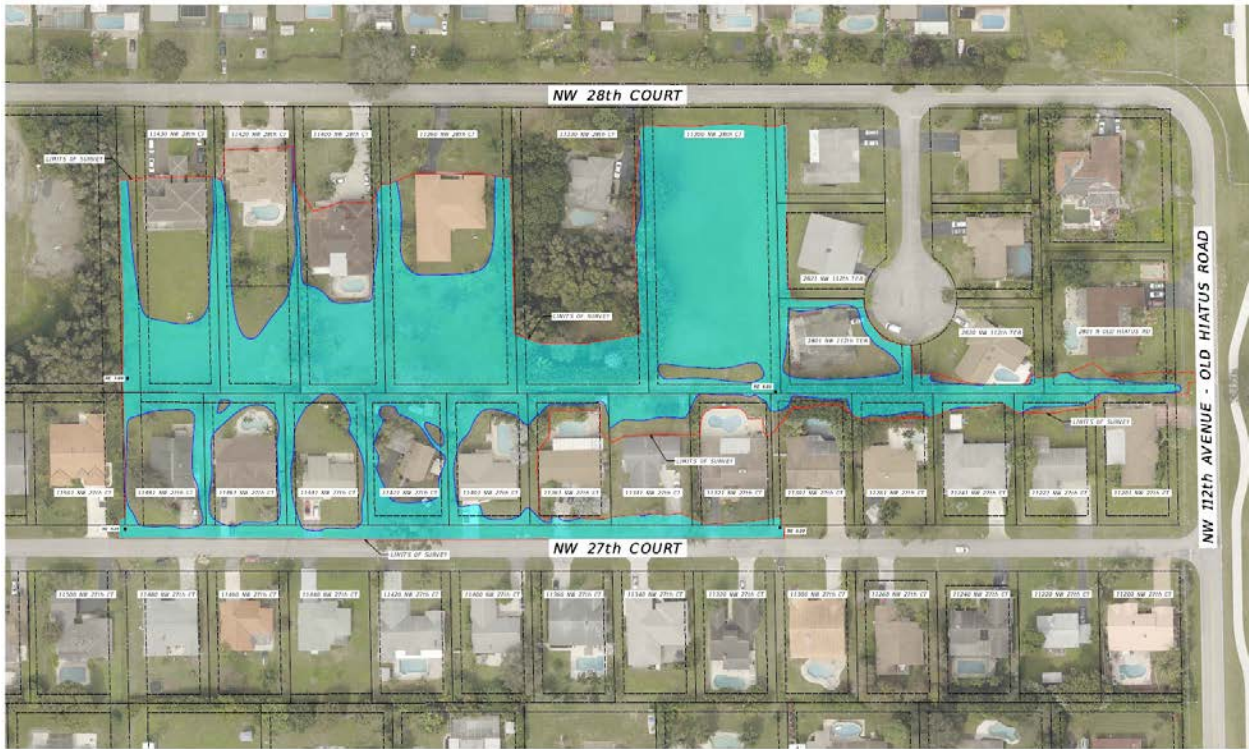
##### **3.1.1 The following projects were completed by District staff:**

1. Routine canal maintenance.
2. Canal bank and access road maintenance.
3. Canal banks restored at SW 3rd Street at B-canal and NW 8th Street at the B-canal (headwall and bank).
4. A canal culvert was replaced at the C-6 canal, NE corner, after being damaged (cause is unknown).
5. Removal of the temporary fence on the District's north property.
6. A fallen tree/ bush was removed from swale along 118th Avenue.
7. Replaced two asphalt aprons with concrete aprons at catch basins on NW 26th Street to avoid constant regrowth of weeds protruding through asphalt apron.

##### **3.1.2 Rear Yard Swales from Old Hiatus Road west to Baptist Church property between NW 27th & 28th Courts:**

In response to residents' concerns, a topographical survey was prepared within the common backyard swale areas as referenced above. Contour maps were prepared illustrating the expected area of inundation for various elevations. An excerpt from the maps for the contour at the 6.0' contour is shown below:





6.0' CONTOUR

**Figure 1 - 6.0' Contour Map**

**3.2 Pump Stations**

**3.2.1 Pump Station Renovation Project**

The Pump Stations Improvement Project was advertised for bid in February. Two bids were received in March:

1.	Hinterland Group, Inc.....	\$3,417,480
2.	Intercounty Engineering, Inc. ....	\$2,381,606
	Engineer's Estimate .....	\$1,073,465

No bidders visited the pumps. Both bidders exceeded the engineer's estimate by an amount too significant to be considered valid. We recommended and the Board voted to reject all bids at the May Board Meeting . We suspect that the diversity of the work involved, the number of stations involved, the prolonged time period required and the general lack of expertise contributed to the low number of bidders and high bids.

The Cast-in-Place pipe (CIPP) portion of the contract was separated and awarded to Shen-Line, LLC as a “piggy-back” to the contract publicly bid and awarded by the City of Lighthouse Point, Florida. The total cost for all stations is \$106,275. This item was bid at \$262,752 by Intercounty Engineering, Inc. The work is expected to commence in the first quarter of 2021.

In May, the engineers met with contractors, including Intercounty, Engineering, Inc., to discuss the scope of the work in detail and to solicit recommendations for value engineering. The focus was for Pump Station 3, only. There were cost saving recommendations applied, including removing the CIPP item and the cost of the pump (PAID would buy direct). Intercounty Engineering, Inc. returned a revised quote for \$421,832. Their original bid for Pump Station 3, including the CIPP and purchase of the pump was \$393,351.

Concurrent with the effort to address the cost of the work, regulatory approval was in progress. An Environmental Resource Permit (ERP) was issued by the SFWMD. The SFWMD Right-of-Way Department reviewed the project (all work was previously approved) and was required to defer to the ACOE. A continuous stream of studies, revisions, correspondence and conversations culminated in a virtual meeting with all involved in November. The approval was expected but not issued before the end of the year.

It is expected that the Project will be rebid as a renovation to Pump Station 3 only, in 2021. The target for construction will be for the end of 2021, beginning of 2022.

### **3.2.2 Other Pump Station Improvements**

Separate from the Pump Station Renovation Project, maintenance and repair work is required to the existing stations for normal operation. This work is done by the District’s Staff with occasional assistance from private contractors. The work performed by staff on the pump stations is as follows:

1. All propane tanks were replaced by Suburban Propane as part of their contract for providing propane.
2. New batteries were installed in Station 5.
3. Three spare belts were ordered.
4. The starter motor was replaced at Pump Station 6.
5. The radiator on Pump Station 5 was repaired.

6. The cylinder head was reconditioned and head gasket replaced at Pump Stations 2 and 4.
7. All pump station motors received normal maintenance.

### **3.3 District Facilities Manual**

The District Facilities Manual was completed. All known District facilities were located and mapped, including:

1. Buildings
2. Drainage Structures
3. Electronic Sensors/Receivers
4. Fuel Tanks
5. Flap Gates (none)
6. Headwalls/Endwalls
7. Motors
8. Canal Segments
9. Pipes
10. Gauges and Recorders
11. Pumps
12. Trash Racks
13. Emergency Generators
14. Waterway/Ponds
15. Dry Culverts (not all)

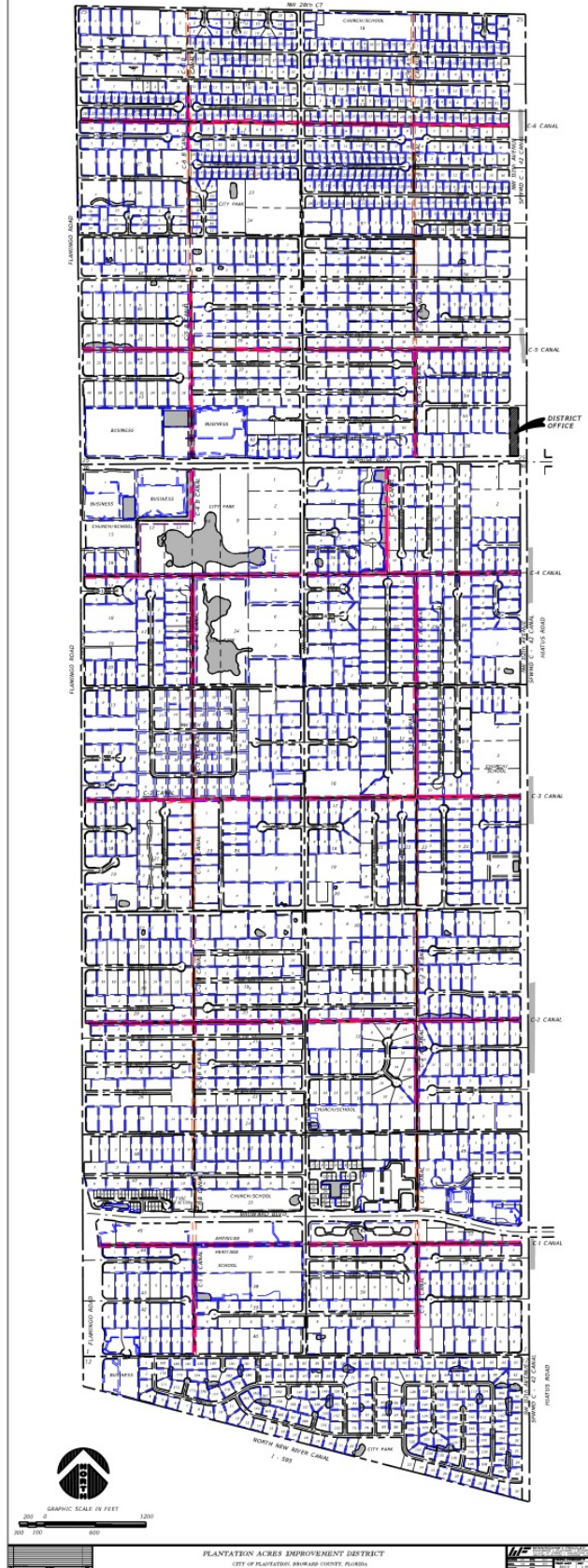
The aerial location, address, owner, material, and condition(if known) are shown in the manual, broken into 26 segments with 65 sheets. It is intended that this Manual is to be updated annually.

### **3.4 District Maps**

The District Map was updated with the lots and easements as dedicated during 2020. The Facilities Map remained unchanged from 2019.

Reduced copies of the maps are included in this report. Full size copies are available.

# PLANTATION ACRES IMPROVEMENT DISTRICT



**Figure 2 - District Map**

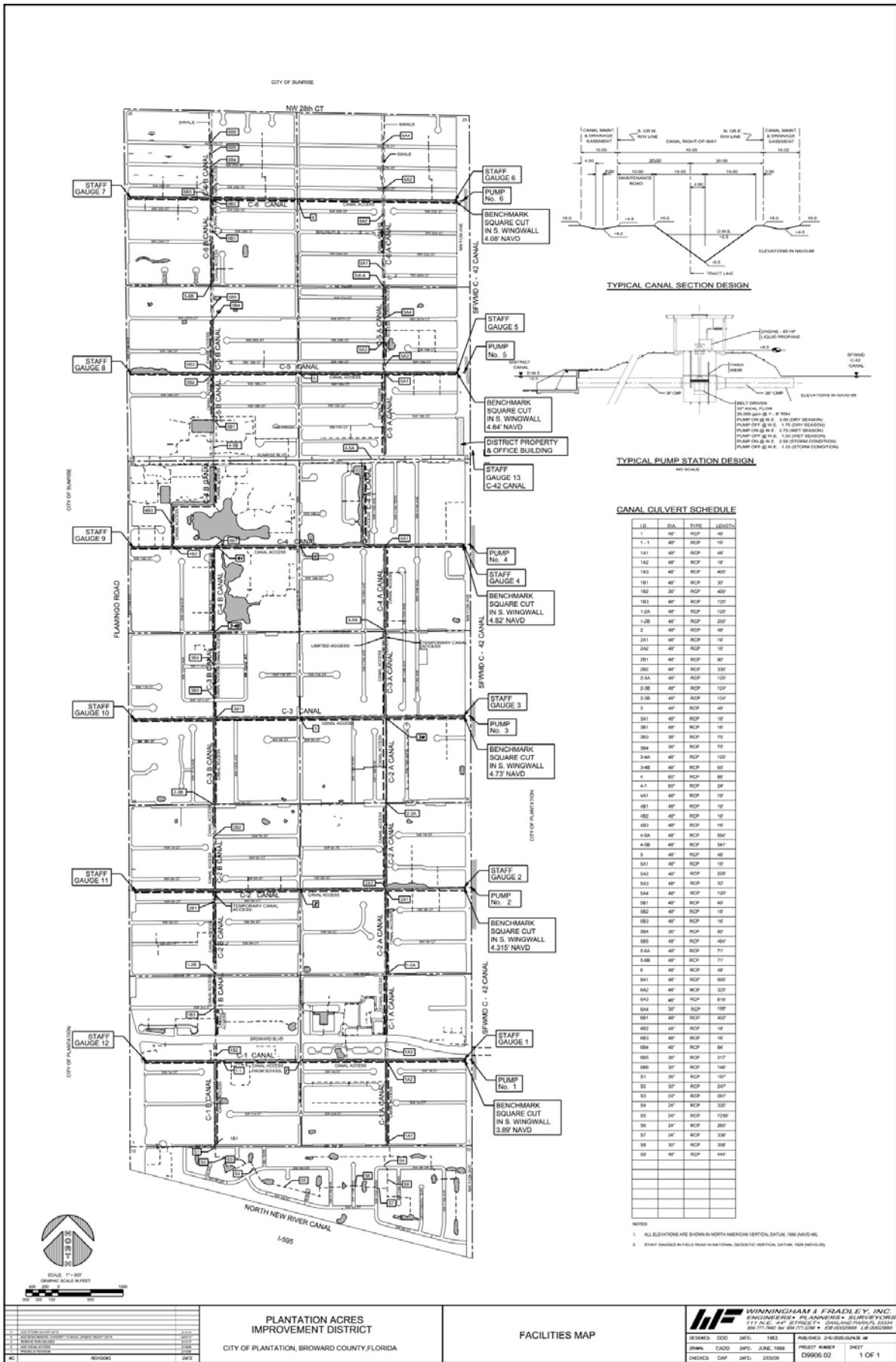


Figure 3 - Facilities Map

#### 4 PUMP DATA

The pump activity recorded by the VTS software between 01/01/20 and 12/31/20 is as follows:

VTS PUMP ACTIVITY REPORT FOR 2020			
PUMP	Starts	Average Run Time (h:mm:ss)	Total Run Time (hhh:mm:ss)
1	10892	0:03:15	591:39:43
2	9312	0:04:06	636:23:21
3	6272	0:05:34	582:13:56
4	4487	0:05:42	427:23:01
5	3485	0:09:56	577:24:04
6	3414	0:09:59	568:31:30

**Table 4 - VTS Pump Activity Report**

The total service hours recorded by staff between 12/31/19 and 12/31/20 are as follows:

APPROXIMATE SERVICE HOURS FROM METER READINGS ON 2020					
Pump 1	Pump 2	Pump 3	Pump 4	Pump 5	Pump 6
297	303	262	288	265	303

**Table 5 - Recorded Service Hours from Meter Readings**

The fuel usage for each pump, their refill dates and general data are as follows:

FUEL REFILL AMOUNTS IN GALLONS						
Date	Pump 1	Pump 2	Pump 3	Pump 4	Pump 5	Pump 6
12/20/19	filled	filled	filled	filled	filled	filled
03/25/20	333.40	211.90	136.70	109.90	170.40	197.90
05/20/20	471.50	388.80	294.90	299.30	291.90	314.10
05/28/20	429.30	421.40	301.70	329.10	301.10	379.50
06/05/20	348.10	325.80	278.50	285.40	234.90	287.40
07/02/20	365.30	331.30	265.00	335.70	276.50	355.10
07/23/20	192.40	259.10	201.70	216.00	200.00	300.50
08/01/20	23.30					
08/22/20	96.00	130.80	63.20	97.50	107.60	169.70
10/23/20	489.80	492.30	463.20	477.20	478.60	554.20
11/07/20	381.90	394.80	335.50	188.70	367.10	466.30
11/11/20	649.50	766.30	585.60	479.00	593.30	728.80
12/01/20	769.20	782.30				
12/02/20			795.90	787.30	770.10	787.90
<b>Totals</b>	<b>4549.70</b>	<b>4504.80</b>	<b>3721.90</b>	<b>3605.10</b>	<b>3791.50</b>	<b>4541.40</b>

**Table 6 - Fuel Refill Amounts in Gallons**

The total amount of fuel used in 2020 was 24,714 gallons, an 82% increase over the fuel use in 2019. A comparison to previous years is shown below.

Year	Fuel (gals)	Rain (in)
2009	13,587	69
2010	8,871	67
2011	5,071	50
2012	11,474	70
2013	5,367	72
2014	5,913	65
2015	4,646	56
2016	2,137	52
2017	11,252	75
2018	8,702	53
2019	13,615	62
<b>2020</b>	<b>24,714</b>	<b>104</b>

**Table 7 - Fuel Use 2009-2020**

## 5 RAINFALL DATA

Rainfall data is generally collected from three sources: the South Florida Water Management District (SFWMD), the Old Plantation Water Control District (OPWCD), and PAID.

The SFWMD data comes from the S-125 Rain Station, located at the north end of the C-42 Canal at the intersection with the C-13 Canal approximately one mile north of the District.

The data from OPWCD is taken from the analog record of rainfall at the OPWCD Headquarters at 8800 North New River Canal Road, Plantation, Florida.

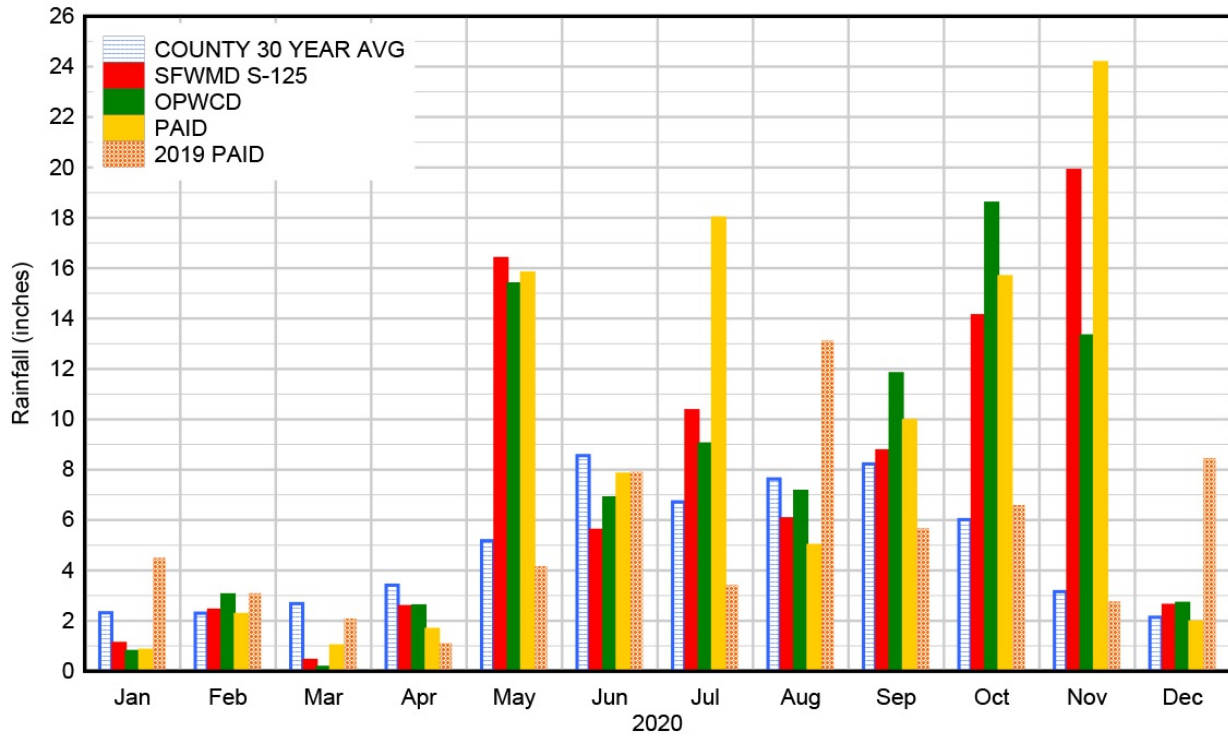
In addition to the annual recorded local rainfall, the published Broward County Average rainfall is provided (<https://www.sfwmd.gov/weather-radar/rainfall-historical/normal>). The monthly totals for rainfall for the active stations and a bar graph of the average monthly rainfall amounts are shown on the following table and graph.

MONTH	2020 RAIN (inches)				PAID 2019
	County 30 Year Avg	OPWCD	S-125	PAID	
Jan	2.51	0.78	1.10	0.83	4.49
Feb	2.28	3.03	2.42	2.25	3.09
Mar	2.60	0.15	0.43	1.00	2.08
Apr	3.35	2.59	2.56	1.66	1.10
May	5.47	15.37	16.38	15.80	4.16
Jun	8.60	6.88	5.59	7.82	7.91
Jul	6.73	9.02	10.34	17.99	3.42
Aug	7.89	7.14	6.05	4.99	13.12
Sep	8.37	11.81	8.75	9.95	5.67
Oct	6.48	18.58	14.11	15.66	6.59
Nov	3.64	13.31	19.88	24.16	2.76
Dec	2.38	2.69	2.61	1.95	8.46
<b>Total</b>	<b>60.30</b>	<b>91.35</b>	<b>90.22</b>	<b>104.06</b>	<b>62.82</b>

**Table 8 - Local Monthly Rainfall**



**Rainfall by Month for 2020**  
**Plantation Acres Improvement District**



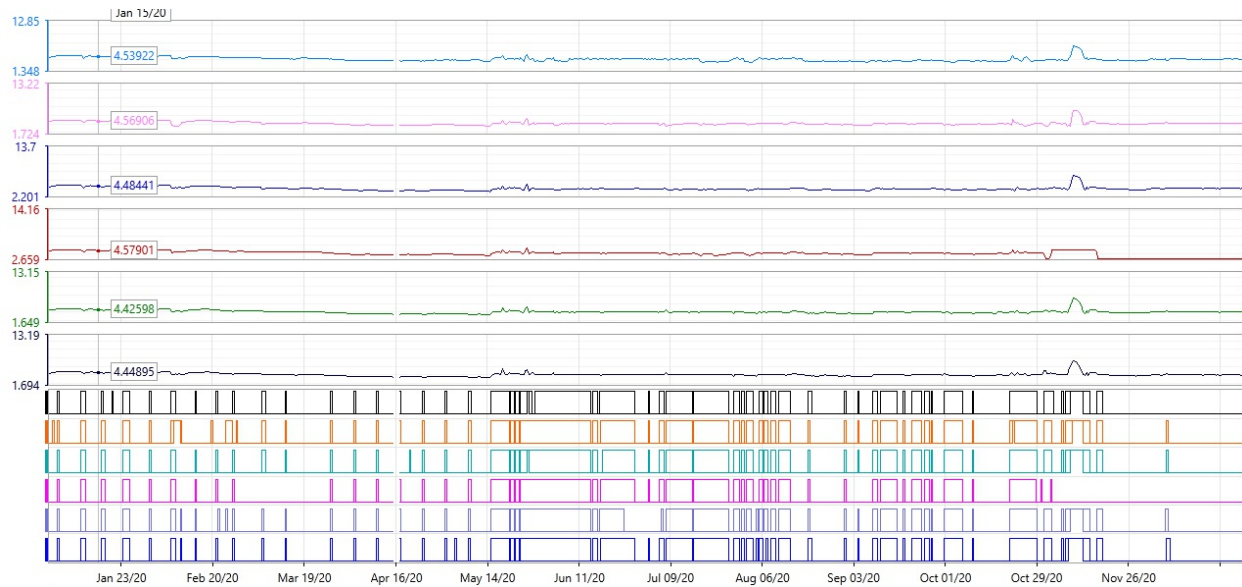
**Figure 4 - Rainfall Comparison Chart**

The total rainfall, 104 inches, is the highest total recorded in the last 32 years and possibly longer (records not available).

## 6 WATER LEVELS

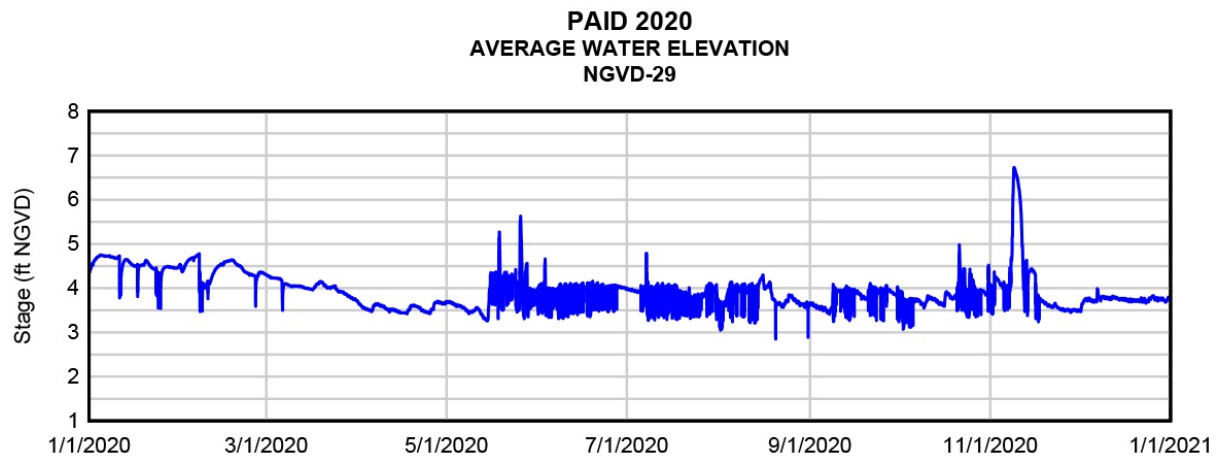
Water levels are recorded continuously at each pump station. The weighted average stage for the District was 3.95 feet. The highest stage of 7.44 feet was registered at Station 6 on November 8 at 10:30 PM. The highest weighted average stage of 4.02 feet was registered at Station 2. The minimum stage of 2.14 feet was recorded at Station 3 on March 6 at 12:30 PM. The lowest average stage was 3.89 feet at Station 4. All elevations are based on National Geodetic Vertical Datum, 1929 (NGVD-29).

The following chart was generated by the District's VTS software.



**Figure 5 - 2020 Water Levels and Pump Status from VTS**

The following plot is based on the tabular data produced by the VTS software:



**Figure 6 - 2020 Average Water Level**

## 7 STORMS

### 7.1 Significant Rainfall Events

There were two significant rainfall events in May, with one associated with Tropical Storm Arthur. Approximately 10.5 inches fell between May 17 and 23, with the highest stage recorded in the C-6 Canal at 6.12 feet (NGVD) at 8:57 PM on May 18. Nearly 6 inches fell between May 26 and 29, with the highest stage recorded in the C-2 Canal at 5.74 feet (NGVD) at 1:14 AM on May 26.

Approximately 6.7 inches fell in consecutive days between July 16 and 28. The stage of all canals were kept below 4.5 feet (NGVD).

In early August, Hurricane Isaias impacted the coastal areas but less than 1.5 inches fell in PAID.

In October, only the 9<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> recorded no rainfall. The total for the month was 15.7 inches.

### 7.2 Hurricane Eta

Hurricane Eta passed southwesterly of Plantation Acres. Wind was not an issue but the storm generated a substantial amount of rainfall. The rainfall began at 3:15 PM on Friday, November 6 and ended at 6:00 PM on Thursday, November 12. An accumulated total of 20.8 inches of rain was recorded in PAID and 11.9" was recorded at the SFWMD S-125 Station. The week of rain involved 6 or more shorter storm events, as is typical with the bands or cells associated with a hurricane.

The wind direction created an additional impact similar to Hurricane Irene in 1999, in that the wind generally came from the East, somewhat in alignment with the North New River Canal (NNR). This, together with the quantity of rain and duration of the rainfall, created a high elevation in the NNR and C-42 canal, which peaked at 8.2 feet (NGVD) at 9 AM on November 9. These factors also contributed to a higher relative stage in the South Acres.

Generally, the South Acres reaches the "lowest" high stage than the rest of PAID, with the North Acres reaching the highest, which was again the case during this storm. This is attributed to the landscape profile of the South Acres being the lowest in PAID, and the North Acres being the highest. What differed during this storm was the similarity of the stages and the rate the water levels receded for the canals in the south half of PAID. It is believed that the duration of the storm gave time for the water to seek a common elevation and the unusually high stage in the NNR created an additional source of water through infiltration, impacting the South Acres the most due to its proximity to the NNR.

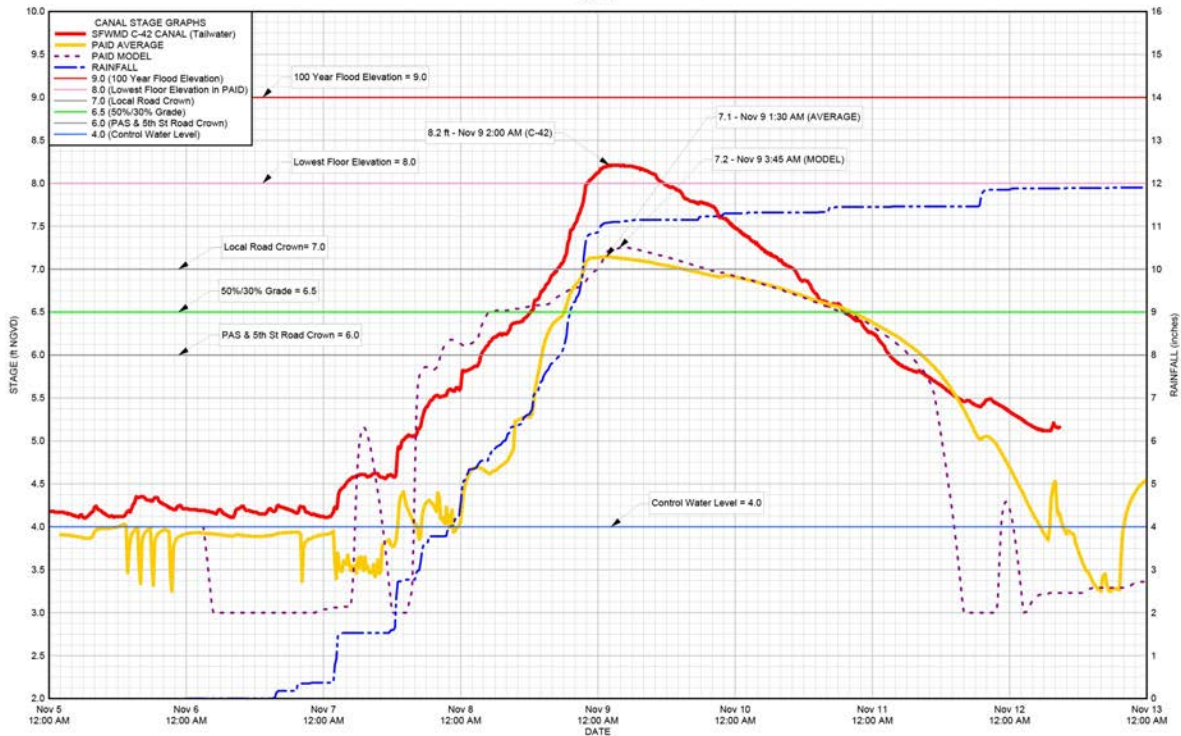
The peak stage of each PAID canal, measured at each pump station is as follows:

PEAK STAGE REACHED DURING HURRICANE ETA NOVEMBER 2020			
CANAL	STAGE	DATE	TIME
C1	7.02	09-Nov-20	02:07:50 AM
C2	7.09	09-Nov-20	01:29:17 AM
C4	7.01	09-Nov-20	01:01:14 AM
C4	NA	NA	NA
C5	7.26	09-Nov-20	01:29:11 AM
C6	7.44	08-Nov-20	10:27:55 PM

Note: The C-4 pump station was operating but not transmitting data.

**Table 9 - Peak Stages During Hurricane Eta**

A graph of the rainfall, canal stage of the SFWMD C-42 Canal, measured at the S-125 Station, the average canal stages within PAID, and a plot of the hydrological model for PAID, with the significant development elevations plotted, is shown below:



**Figure 7 - Stages and Rainfall During Hurricane Eta**

The water levels within the PAID canals returned to normal within three days after Hurricane Eta and all other storms during the year.

Prepared by:  
**WINNINGHAM & FRADLEY, INC.**

David A. Fradley  
 District Engineer  
 Professional Engineer Number 27793  
 Professional Surveyor and Mapper Number 3458  
 State of Florida

February 25, 2021

**ENGINEER'S STAFF REPORT**  
FOR February 25, 2021 MEETING  
**AGENDA ITEM No.: D3**

**Action Required:** Discussion

**Item Description:** Permit Activity Summary

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**P.A.I.D. Number:** D9408.02 & D9408.03

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**Attachments:** None

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**Summary:** Approved Building Permits

<u>No.</u>	<u>Name</u>	<u>Address</u>	<u>PAID No.</u>
1.	Holewinski (Pool)	11301 NW 4 <sup>TH</sup> Court	B0606.04
2.	Invisiones Villa Hiatus LLC (House)	1580 NW 115 <sup>th</sup> Terrace	B2012.02
3.	Invisiones Villa Hiatus LLC (House)	1601 NW 114 <sup>th</sup> Terrace	B2012.03
4.	Arcila (Pool)	11941 NW 24 <sup>th</sup> Street	B8810.08
5.	Piccinona (Pool Deck Replacement)	12300 SW 2 <sup>nd</sup> Street	B9011.03
6.	DSL Construction LLC (Generator & Tank)	1460 NW 116 <sup>th</sup> Avenue	B1911.01
7.	Gierlach (Fence)	11400 NW 21 <sup>st</sup> Court	B8807.07
8.	Capone (Maintenance Fill)	11541 NW 23 <sup>rd</sup> Street	B8905.05
9.	Rodice (Generator)	11751 NW 18 <sup>th</sup> Street	B1010.01
10.	Thelusman (House)	12380 NW 28 <sup>th</sup> Court	B0110.06
11.	Rice (Maintenance Fill/Walkway)	1594 NW 114 <sup>th</sup> Terrace	B8609.01
12.	Asurion Finacial Inc. (Pool)	11911 NW 2 <sup>nd</sup> Street	B1707.01
13.	Ceico (Replace Driveway)	11740 Hermitage Drive	B8909.08
14.	Overmyer (PickleBall Court)	11600 NW 5 <sup>th</sup> Street	B9306.15
15.	Elliott (Driveway)	11370 NW 6 <sup>th</sup> Street	B0304.02
16.	Kuehnel (Fence)	401 SW 114 <sup>th</sup> Terrace	B0405.06
17.	SLS Real Estate 4 LLC (Demo)	1500 NW 118 <sup>th</sup> Avenue	B0206.05
18.	Lpart (Tiki Hut)	11200 NW 5 <sup>th</sup> Street	B8609.02

**Summary:** Approved Certificates of Occupancy

<u>No.</u>	<u>Name</u>	<u>Address</u>	<u>PAID No.</u>
1.	DSL Construction LLC (House)	1460 NW 116 <sup>th</sup> Avenue	B1911.01

Prepared by: HMS Date: 02/17/2021