



# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

DB Hydro Station Name: <b>KPPGW2</b>		DB Hydro Site Name: <b>KPPGW2</b>		Date of Field Work: <b>05-jun-17</b>	
Party Chief: <b>Giammarco</b>		Field Book: <b>MISC 6Z</b>		Page(s) <b>58 &amp; 59</b>	
Site Benchmark: <b>KPPGW2</b>		Benchmark Elevation (NAVD88) <b>68.79</b>		Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) <b>+1.217</b>	
Reference Elevation(s) (NAVD88): <b>72.74</b>		Existing Tag Elevation (Datum): <b>73.98 NGVD29 05-mar-08 Sutron Corp WCW written at the site</b>		Calibration Port Elevation(s) (NAVD88): <b>Not required</b>	
Ground Elevation (NAVD88): <b>NE corner El. 69.0    SE corner El. 69.1</b> <b>SW corner El. 69.2    NW corner EL. 69.0</b>			Pad Elevation (NAVD88): <b>NE corner El. 69.24    SE corner El. 69.29</b> <b>SW corner El. 69.34    NW corner EL. 69.24</b>		
Latitude: <b>27°33'10.953"</b>			Longitude: <b>80°59'35.838"</b> <b>OPUS on the benchmark</b>		

Notes:  
**OPUS** – Online Positioning Users Service (National Geodetic Survey product)  
**NAVD88** – North American Vertical Datum of 1988  
**NGVD29**- National Geodetic Vertical Datum of 1929  
**Corpscon 6.0.1** - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.

## PICTURES

Overall Site Location



Not to Scale (esri product)

Kissimmee State  
Park Entrance

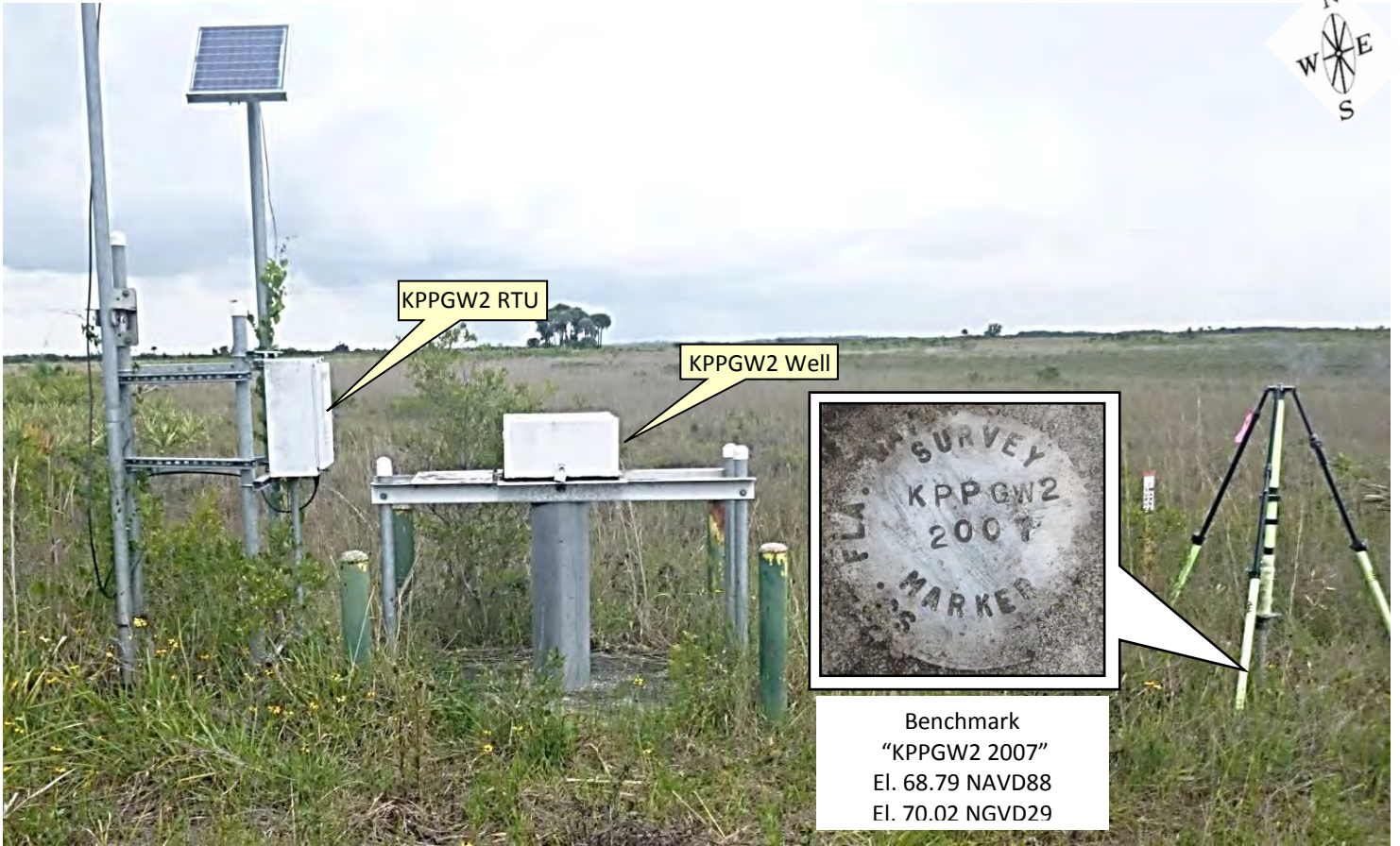




# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

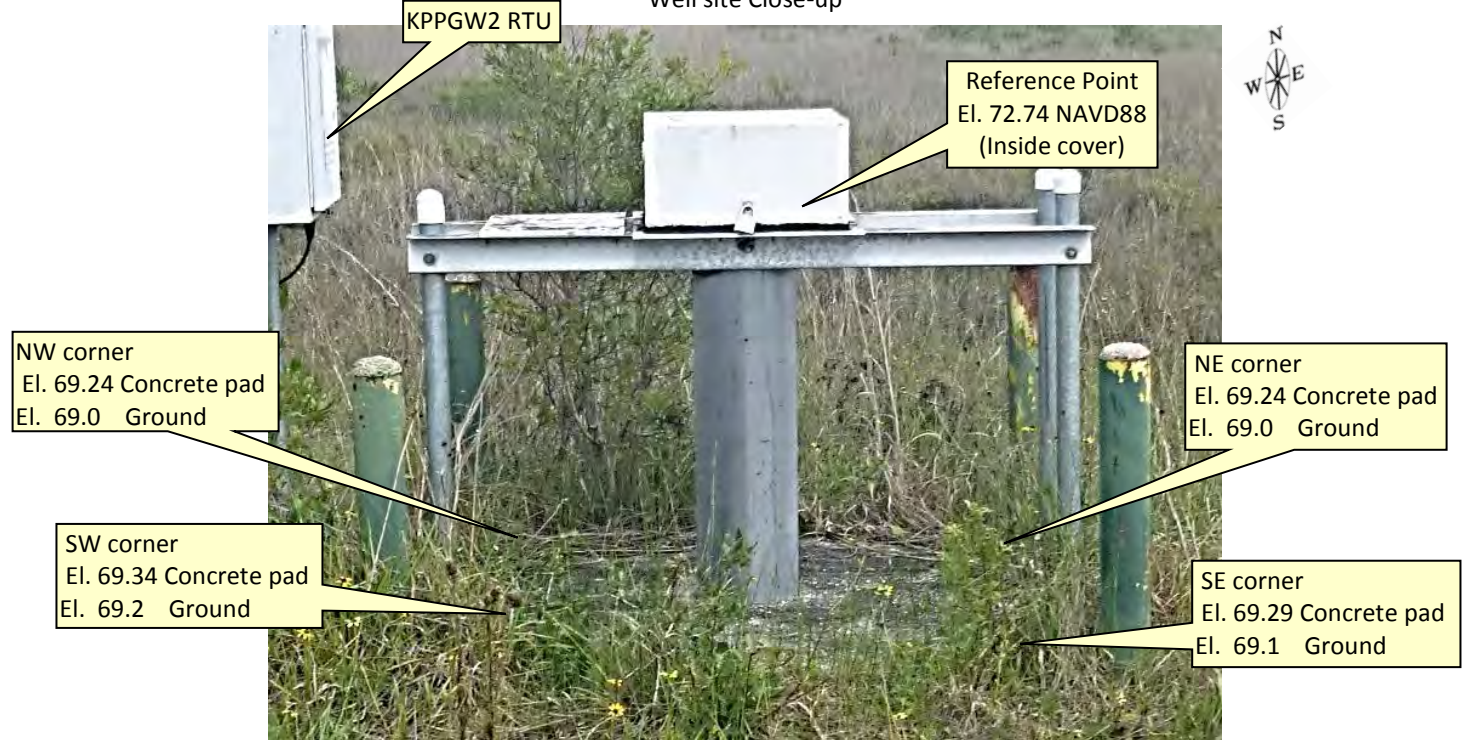
Rev. 1/16

## Overall Site



Looking Northerly (Not to scale) (05-jun-17)

## Well site Close-up



Looking Northerly (Not to scale) (05-jun-17)

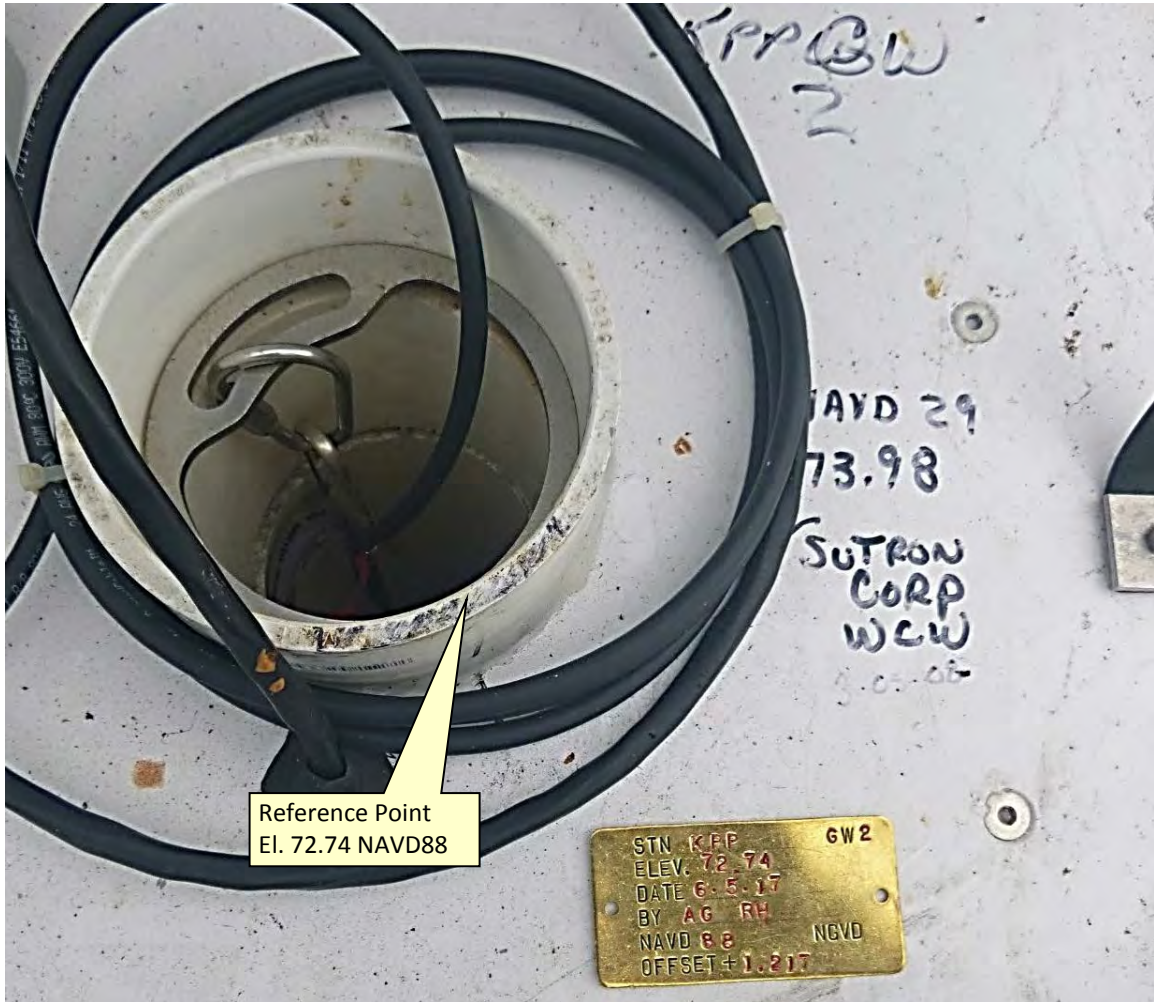




# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

Wellhead and reference point



Looking Northerly (Not to scale) (05-jun-17)

Brass Tag Close Up



Brass Tag and Reference Mark





SEC 22 TWP 51 R1G 40

FILENAME MTAMR

MIRAMAR 1 & MIRAMAR 2 VERIFY VERTICAL ON WELL SITES

REF. S.F.W.M.D BENCH MARK DESCRIPTION SHEETS

BASE @ POINT #1 MIRAMAR 2 FD S.F.W.M.D ALUMN DISK  
1. STAMPED MIRAMAR 2 2004 GPS 5410

ROVER POINT #2 MIRAMAR 1 FD S.F.W.M.D ALUMN DISK  
STAMPED MIRAMAR 1 2004 GPS 5378  
N: 0.014 E: 0.028 V: 0.031

BM	+	HI	-	FL EV	
MIRAMAR 2	4.34	10.26		5.92	5.922
REF. PT.			4.46	5.80	7.22
VERIFICATION PT			3.02		7.24
CONC PAD N.W. COR			4.65		5.61
GROUND @ N.W. COR			4.9		5.36
CONC PAD N.E. COR			4.25		6.01
GROUND N.E. COR			4.2		6.06
CONC PAD S.E. COR			4.20		6.06
GROUND S.E. COR			4.7		5.56
CONC PAD S.W. COR			4.58		5.68
GROUND S.W. COR			4.5		5.76
MIRAMAR 2			4.34		5.92 ✓

MAUD 88  
ZIGSSNI 2  
TOPCON GPS.

A. Giammarco  
R HUDSON

GROUND SHOT AT REF. PT. A PLUS 1.42 TO BE ADDED FOR ACTUAL REF. ELEV.



6/5/17

SEC	2	TWP	34	RNG	33
GROUND WATER WELL KPPGW2 WELL SET REFERENCE ELEVATION					
REF	S.F.W.M.D BENCH MARK DESCRIPTION Sht.				
Equip	ZEISS Ni <sup>2</sup> LEVEL, 25' ROD, WEST PALM TOPCON HyperN G.P.S.				
Bm	+	HI	-	ELEV.	COMMENT
KPPGW2	5.40	74.19		68.79	S.F.W.M.D
			1.45	72.74	REF
			4.95	69.24	NORTH EAST
			5.20	68.99	N. E. GROUND
			4.90	69.29	SOUTH EAST
			5.1	69.09	S. E. GROUND
			4.85	69.34	SOUTH WEST
			5.0	69.19	S.W. GROUND
			4.95	69.24	NORTH WEST
			5.2	68.99	N.W. GROUND
			5.40	68.79	KPPGW2

## G.P.S UNIT SAID

START TIME 11.01 AM  
END TIME 1.53  
HEIGHT 1.5 MT

## PICTURES

PIC 1 SITE I.D  
PIC 2 SOUTH LOOKING NORTH  
PIC 3 CLOSE UP ON TAG  
PIC 4 WEST SIDE LOOKING EAST  
PIC 5 EAST SIDE LOOKING WEST  
PIC 6 BENCH MARK

615111

NAVD 88

A. GIAMMARCO  
R. HUDSON

ALUMIN. DISK SET IN CONC STAMPEL KPPGW2 2007

CORNER CONC.  
GRADE  
CORNER CONC.  
GRADE  
CORNER CONC.  
GRADE  
CORNER CONC.  
GRADE  
BENCH



SEC 2,3 TWP 34 RNG 33

GROUND WATER WELL KPP1  
SET REFERENCE ELEVATION

REFERENCE: S.F.WMD BENCH MARK DESCRIPTION SHT.  
EQUIPT. ZEISS Ni<sup>2</sup> LEVEL, 25' ROD, W. RBCH. TOPCON HYPERVGL P.S.

BM	+	HI	-	ELEV.	
KPPGW1	5.05	73.31		68.26	S.F.W.M. 10
			1.09	72.22	REF
			4.63	68.68	NORTH
			4.9	68.4	NE
			4.64	68.67	SOUTH EAST
			4.9	68.4	S.E
			4.70	68.61	SOUTH WEST
			4.8	68.51	S.W
			4.65	68.66	NORTH WEST
			4.9	68.4	N.W
			5.05	68.26	KPPGW2

RAPID STATIC

GPS UNIT 6744  
BEGIN TIME: 11:55 AM  
END TIME: 1.46  
HEIGHT: 4.5 FT

- PICTURES
- PIC 1 SITE I.D
  - PIC 2 SOUTH LOOKING NORTH
  - PIC 3 CLOSEUP OF TAG
  - PIC 4 WEST SIDE LOOKING EAST
  - PIC 5 BENCH MARK
  - PIC 6 EAST SIDE LOOKING WEST

A GIAMMARIO  
R HUDSON

ALUMN. DISK SET IN CONC. STAMPED KPPGW1 2007

- EAST CORNER CONC. PAD
- GROUND
- CORNER CONC. PAD
- GROUND
- CORNER CONC. PAD
- GROUND
- CORNER CONC. PAD
- GROUND
- BENCH





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY OKEECHOBEE	PROJECT KISSIMMEE RIVER RESTORATION PROJECT	DESIGNATION KPPGW2
SECTION 35	TOWNSHIP 33 SOUTH	RANGE 33 EAST
GEOGRAPHIC INDEX OF QUAD		
Established by <u>Nick Miller Inc.</u> Recovered by	NAME OF QUADRANGLE FORT DRUM SW	
SURVEYOR <u>Stephen M. Gordon</u> DATE <u>7/03/2007</u>	FIELD BOOK _____ 18 _____ PAGE <u>64</u>	
HORIZONTAL DATUM: 1927 <u>1983</u> Other _____ (circle one) ZONE <u>E</u> or W		
STATE PLANE COORDINATES	E 658,341.3 ft	N 1,170,214.0 ft
LATITUDE: N 27.55303°	LONGITUDE: W 80.99328°	
VERTICAL DATUM: MSL 1929 <u>1988</u> Other _____ (circle one)	EL. 68.79 ft	
VERTICAL DATUM: MSL <u>1929</u> 1988 Other _____ (circle one)	EL. 70.02 ft	
CONTROL ACCURACY: HORIZONTAL 1 2 3 <u>SUB-METER</u> (circle one) VERTICAL 1 2 <u>3</u>		
<b>DESCRIPTION</b>		
<p>To Reach:</p> <p>FROM THE INTERSECTION OF US 98 AND CR 700A. HEAD NORTH ON CR 700A FOR 5.7 MILES TO INTERSECTION OF CR 700A AND CR 724. MAKE LEFT ON CR 724 AND HEAD WEST FOR 1.0 MILE TO PEAVINE TRAIL (NW 192<sup>ND</sup> AVENUE). MAKE RIGHT AND HEAD NORTH ON NW 192<sup>ND</sup> AVENUE FOR 5.1 MILES TO KISSIMEE PRAIRIE PRESERVE ENTRANCE. CONTINUE NORTH ON GRADE ROAD FOR 0.7 MILE TO DIRT ROAD ON RIGHT. MAKE RIGHT AND HEAD EAST ON DIRT ROAD FOR 1.8 MILES TO MARK ON LEFT, SET IN TOP OF A ROUND CONCRETE MONUMENT RECESSED 0.3 FOOT BELOW GROUND LEVEL. LOCATED 26.1 FEET NORTH OF CENTERLINE OF DIRT ROAD, 14.5 FEET NORTH FROM KPPGW2 MONITORING WELL SITE, 85.1 FEET SOUTHEAST OF PK NAIL AND DISK LB 4318 ON SOUTH SIDE OF 1.2 FOOT DIAMETER PALM TREE AND 3.0 FEET SOUTH OF A CARSONITE WITNESS POST. MAGNET SET 1 FOOT NORTH OF BENCHMARK.</p> <p>Benchmarks Used: P 617, R 617</p> <p>Notable Land marks:</p>		



# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

## SKETCH

1078.028      KPPGW2      SFWMID:  
MONITORING WELL

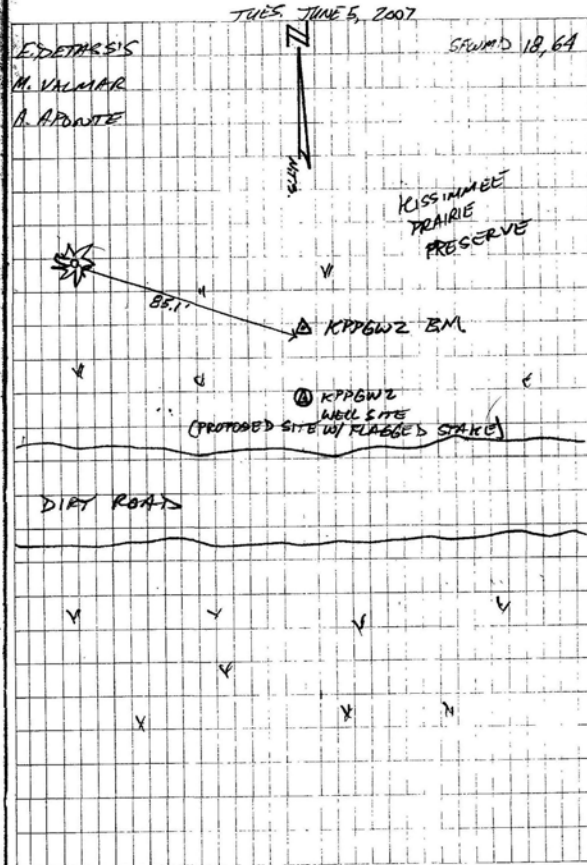
- SET TOWERED-IN-PLACE CONCRETE MONUMENT
  - W/ ALUM. DISK STAMPED: KPPGW2 /
  - SET MAGNET 1' NORTH OF BENCHMARK
  - SET CARBONITE WITNESS POST 3' NORTH OF BM
- COORDINATES ON MONITORING WELL SITE  
N.  $27^{\circ}33'11''$   
W.  $80^{\circ}59'36''$

COORDINATES ON BENCHMARK  
N.  $27^{\circ}33'10.9''$       N. 1170214.02  
W.  $80^{\circ}59'35.8''$       E. 658341.30A  
TABS 84      STATE PLANE 83

### TIES

- SET MONUMENT 14.5' NORTH OF WELL SITE
- " " 85.1' SE OF PR NAIL AND DISK
- ON SOUTH SIDE OF 1.2' DIA. PALM TREE
- " " 26.1' NORTH OF @ DIRT ROAD.

DATA COLLECTOR # 1  
FILE: 1078-0605-EP      STATIC SESSION  
JOINT NAME: KPPGW2      2:25 pm - 3:00 pm

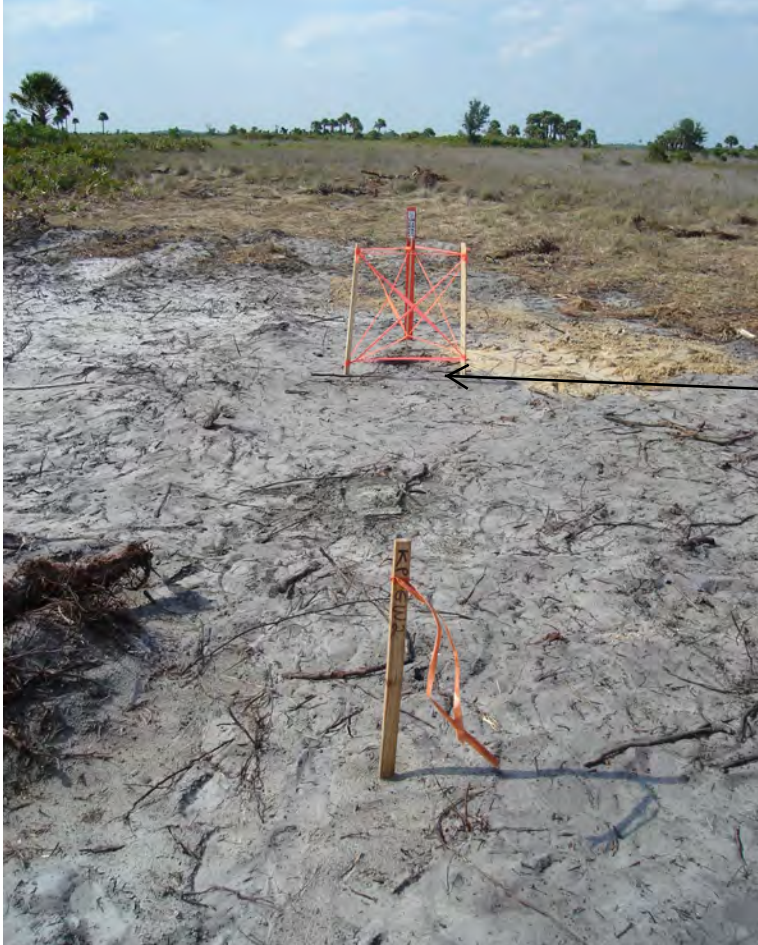






SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01





From: opus  
To: Ehmke, Howard  
Subject: OPUS solution : KPP2.tps OP1496857377218  
Date: Wednesday, June 07, 2017 1:44:08 PM

FILE: KPP2.tps OP1496857377218

1009 WARNING! No antenna type was selected. No antenna offsets or  
1009 pattern will be applied. Coordinates with reduced accuracy  
1009 will be returned for the antenna phase center.  
1009

NGS OPUS SOLUTION REPORT  
=====

All computed coordinate accuracies are listed as peak-to-peak values.  
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: hehmke@sfwmd.gov                      DATE: June 07, 2017  
RINEX FILE: kpp2156p.17o                      TIME: 17:43:45 UTC

SOFTWARE: page5 1603.24 master55.pl 160321    START: 2017/06/05 15:01:00  
EPHEMERIS: igr19521.eph [rapid]                STOP: 2017/06/05 17:53:00  
NAV FILE: brdc1560.17n                      OBS USED: 7242 / 7674 : 94%  
ANT NAME: NONE                      NONE                      # FIXED AMB: 36 / 43 : 84%  
ARP HEIGHT: 1.5                              OVERALL RMS: 0.021(m)

REF FRAME: NAD\_83(2011)(EPOCH:2010.0000)                      IGS08 (EPOCH:2017.4265)

X: 885885.636(m) 0.018(m)                      885884.836(m) 0.018(m)  
Y: -5589024.385(m) 0.030(m)                      -5589022.811(m) 0.030(m)  
Z: 2932680.189(m) 0.009(m)                      2932680.023(m) 0.009(m)

LAT: 27 33 10.95282    0.015(m)                      27 33 10.97327    0.015(m)  
E LON: 279 0 24.16194    0.018(m)                      279 0 24.14214    0.018(m)  
W LON: 80 59 35.83806    0.018(m)                      80 59 35.85786    0.018(m)  
EL HGT:                      -5.308(m) 0.026(m)                      -6.874(m) 0.026(m)  
ORTHO HGT:                      21.009(m) 0.047(m) [NAVD88 (Computed using GEOID12B)]

**68.927 68.773**

UTM COORDINATES    STATE PLANE COORDINATES

UTM (Zone 17)                      SPC (0901 FL E)  
Northing (Y) [meters]    3047692.215                      356681.932  
Easting (X) [meters]    500662.609                      200662.835  
Convergence [degrees]    0.00310461                      0.00310461  
Point Scale                      0.99960001                      0.99994118  
Combined Factor                      0.99960084                      0.99994201

**Y= 1170246.780236667**  
**X= 658341.31782916667**

US NATIONAL GRID DESIGNATOR: 17RNL0066247692(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG4691	FMYR FORT MYERS CORS ARP	N263527.507	W0815150.972	137203.5
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	34606.4



DH3757 WACH WAUCHULA CORS ARP      N273051.042 W0815256.615 87932.3

NEAREST NGS PUBLISHED CONTROL POINT

DH8876    P 617                      N273306.    W0810121.    2889.1

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.



# Office

## Project

1 June 2017

### INPUT

State Plane, flhp gn - Florida HPGN  
0901 - Florida East, U.S. Feet  
Vertical - NAVD88, U.S. Feet

### OUTPUT

Geographic, flhp gn - Florida HPGN  
Vertical - NGVD29 (Custom), U.S. Feet

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## KPPGW2

1/1

**Northing/Y:** 1170214.0

**Easting/X:** 658341.3

**Elevation/Z:** 0

**Convergence:** 0 00 11.17648

**Scale Factor:** 0.999941182

**Combined Factor:** 0.999945312

**Latitude:** 27 33 10.95309

**Longitude:** 80 59 35.83827

**Elevation/Z:** 1.217

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Remark:

Corpscon v6.0.1, U.S. Army Corps of Engineers



# DBHYDRO | by station

## STATION INFORMATION

Station	KPPGW2
Site	KPPGW2
Type	WELL
Latitude (ddmmss.sss)	273311
Longitude (ddmmss.sss)	805935.971
X Coord (ft) NAD83	658329.287
Y Coord (ft) NAD83	1170218.617
County	Okeechobee
Basin	S-65D
Section	35
Township	33
Range	33
Show Map	<a href="#">Google Map</a>
Well Info	<a href="#">Info</a>
Description	KISSIMMEE PRAIRIE STATE PRESERVE, GROUNDWATER WELL 2
Notes	
Nearby Stations	<a href="#">Nearby Stations</a>
Attachments	<a href="#">Show Attachments</a>

Query returned 1 station record(s).

[Get Time Series Data](#)



