



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

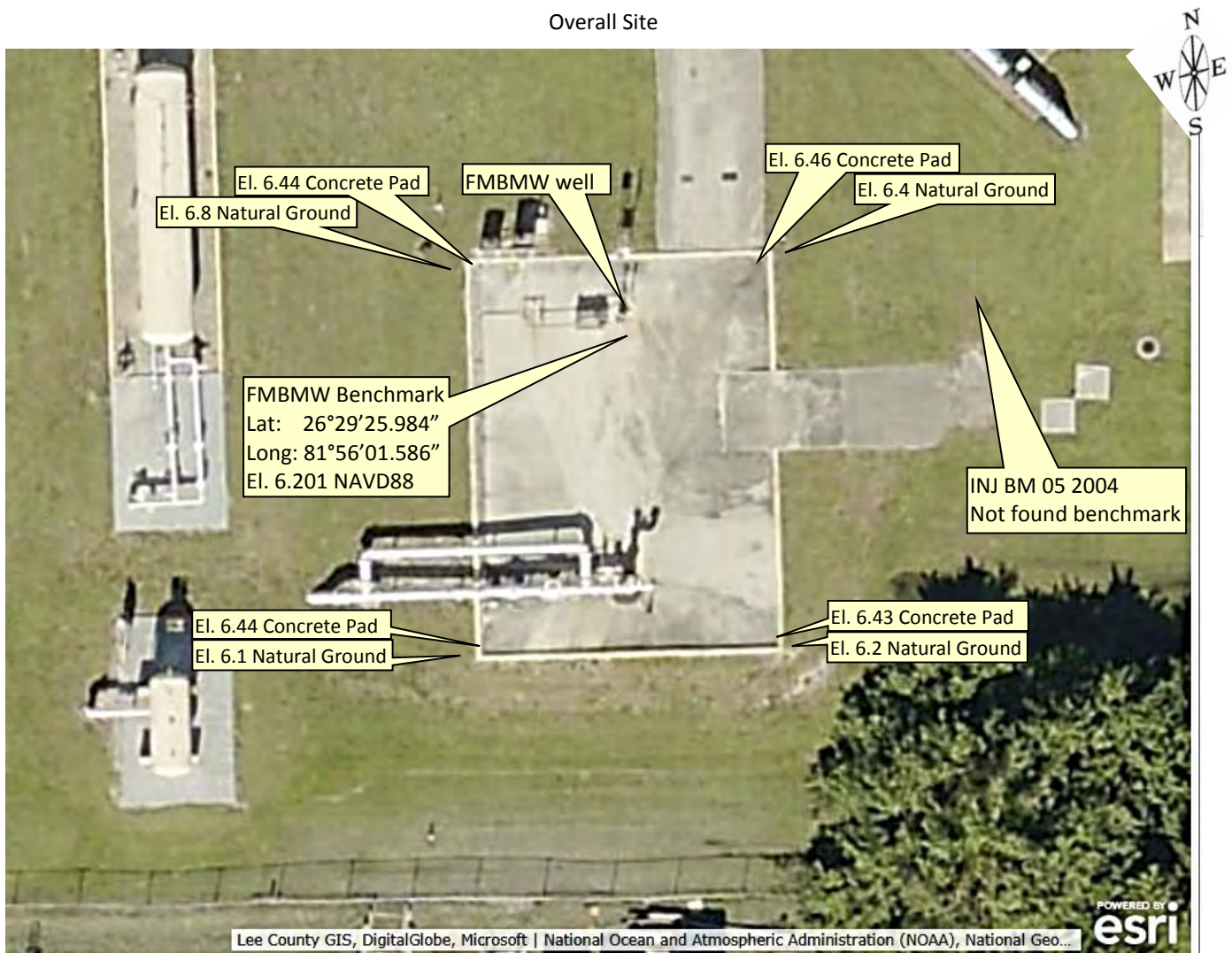
Rev. 1/16

DB Hydro Station Name: FMB-MZU FMB-MZL	DB Hydro Site Name: FMBMW	Last Date of Field Work: 18-may-17 Equipment: Wild NA2 Level and a 25' rod
Party Chief: Hudson	Field Book: MISC 7C	Pages 35 & 36
Site Benchmark: FMBMW	Benchmark Elevation (NAVD88) 6.201	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.175
Reference Elevation(s) (NAVD88): GW 1- Upper Zone El. 8.30 East Nut El. 8.28 West Nut GW 2 -Lower Zone El. 9.82 East Nut El. 9.81 West Nut	Existing Tag Elevation (Datum): NONE	Calibration Port Elevation(s) (NAVD88): Not Applicable
Ground Elevation (NAVD88): NE corner El. 6.4 SE corner El. 6.2 SW corner El. 6.1 NW corner EL. 6.8	Pad Elevation (NAVD88): NE corner El. 6.46 SE corner El. 6.43 SW corner El. 6.44 NW corner El. 6.44	
Latitude: 26°29'26"	Longitude: 81°56'0"	

Notes: All elevations are NAVD88 unless otherwise stated.
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



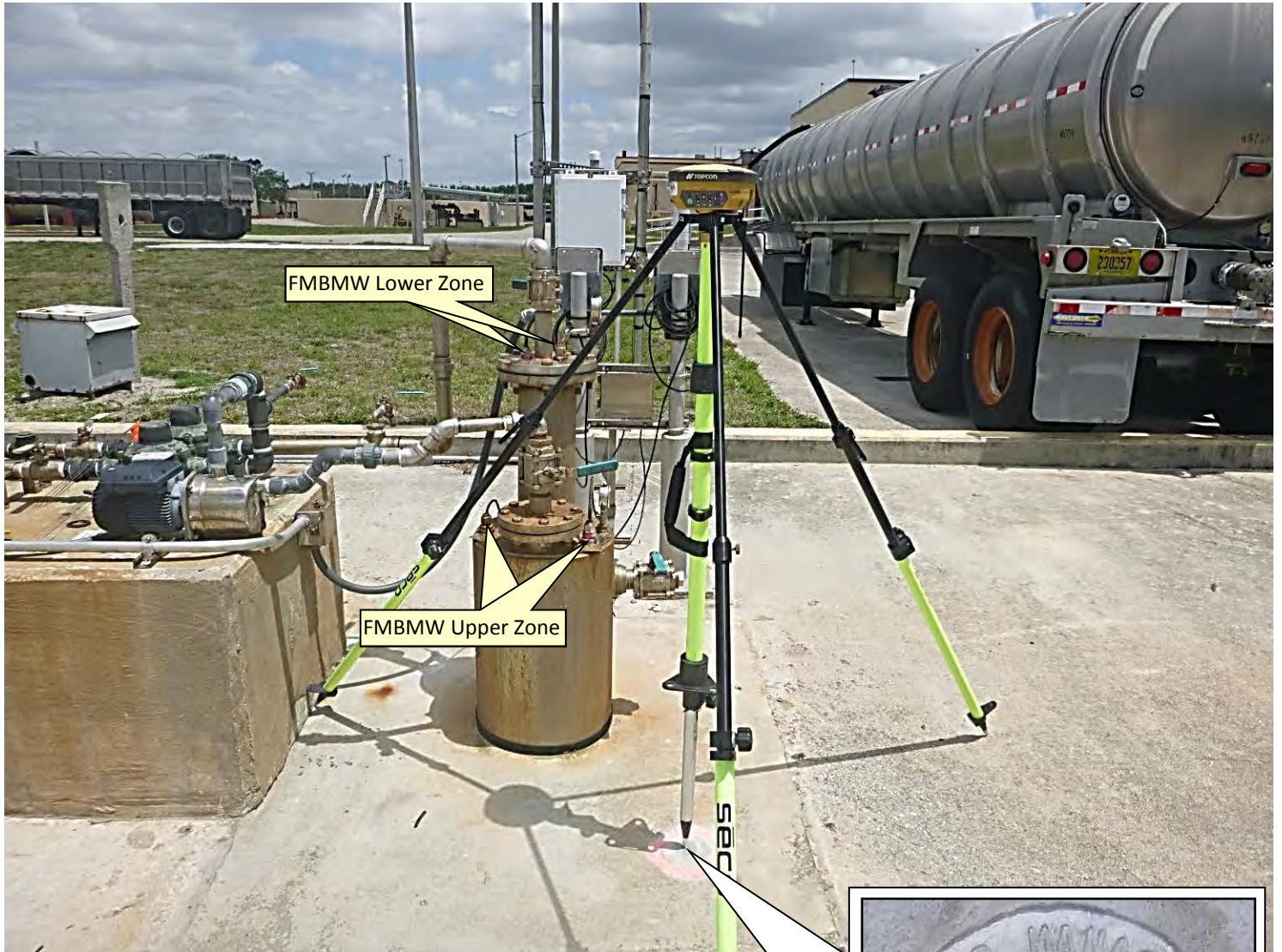
Not to scale (taken from esri product)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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Benchmark Location



Looking Northerly (18-may-17) (Not to Scale)



Benchmark "FMBNW 2017"
Latitude: 26°29'25.984"
Longitude: 81°56'04.586"
El. 6.201 NAVD88
El. 7.376 NGVD29 (Corpscon)

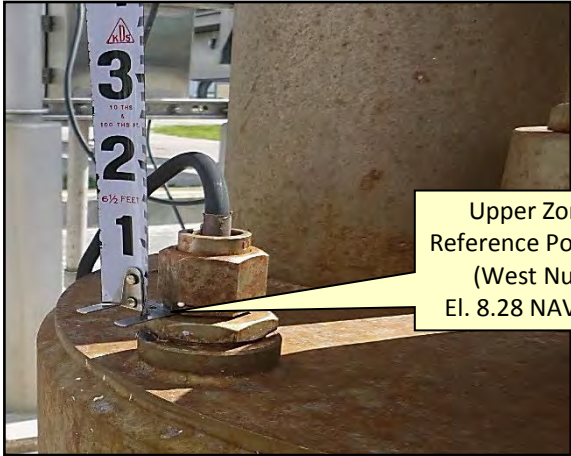


SOUTH FLORIDA WATER MANAGEMENT DISTRICT

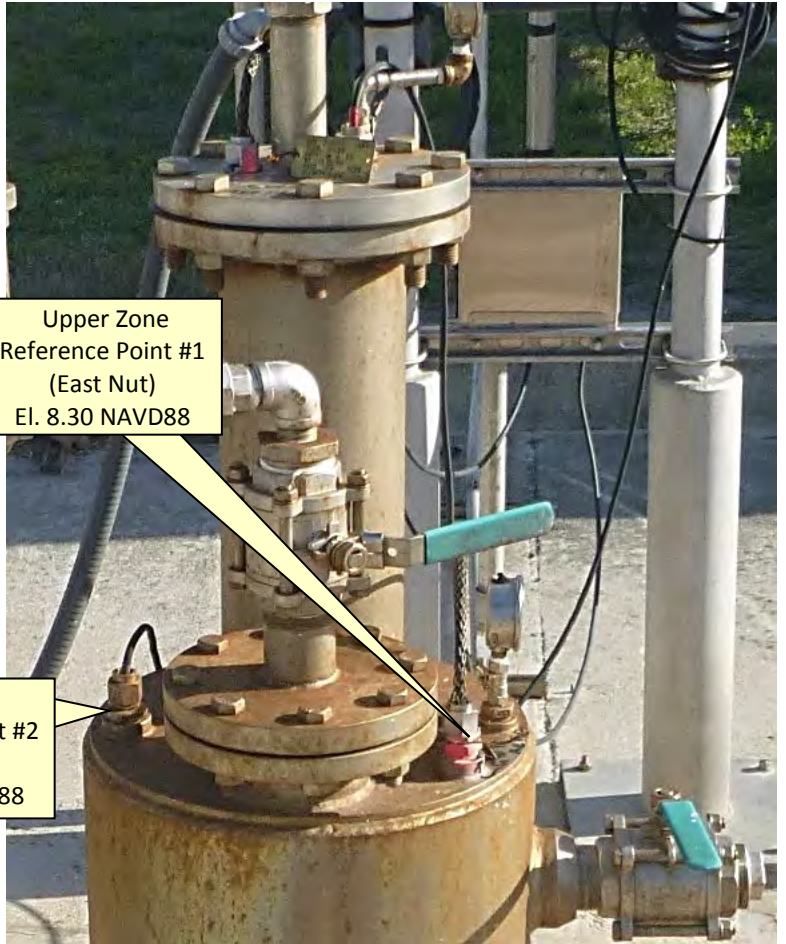
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Upper Zone Reference Point #1 (East Nut) El. 8.30 NAVD88



Upper Zone Reference Point #2 (West Nut) El. 8.28 NAVD88



Upper Zone (GW 1) Looking Northerly (18-may-17) Not to Scale

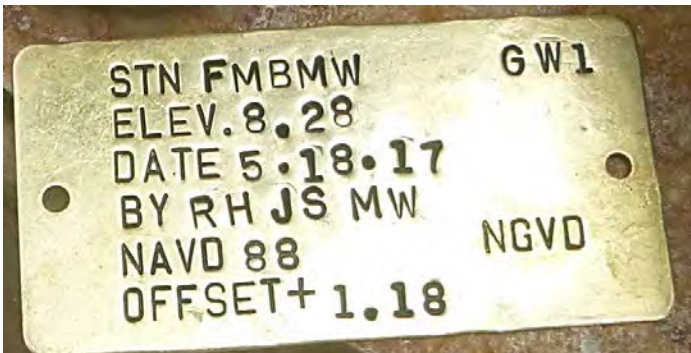
Upper Zone (GW 1) Reference Point #1 Brass Tag Close Up



Upper Zone (GW 1) Reference Point #1 Brass Tag and Reference Mark



Upper Zone (GW 1) Reference Point #2 Brass Tag Close Up

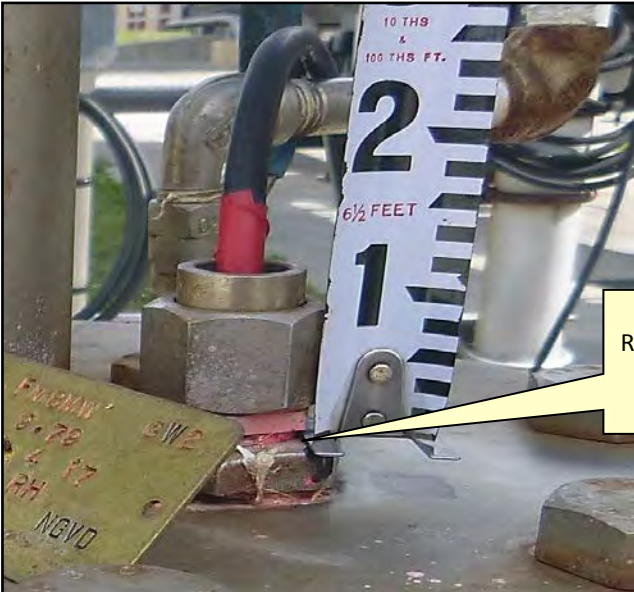


Upper Zone (GW 1) Reference Point #2 Brass Tag and Reference Mark

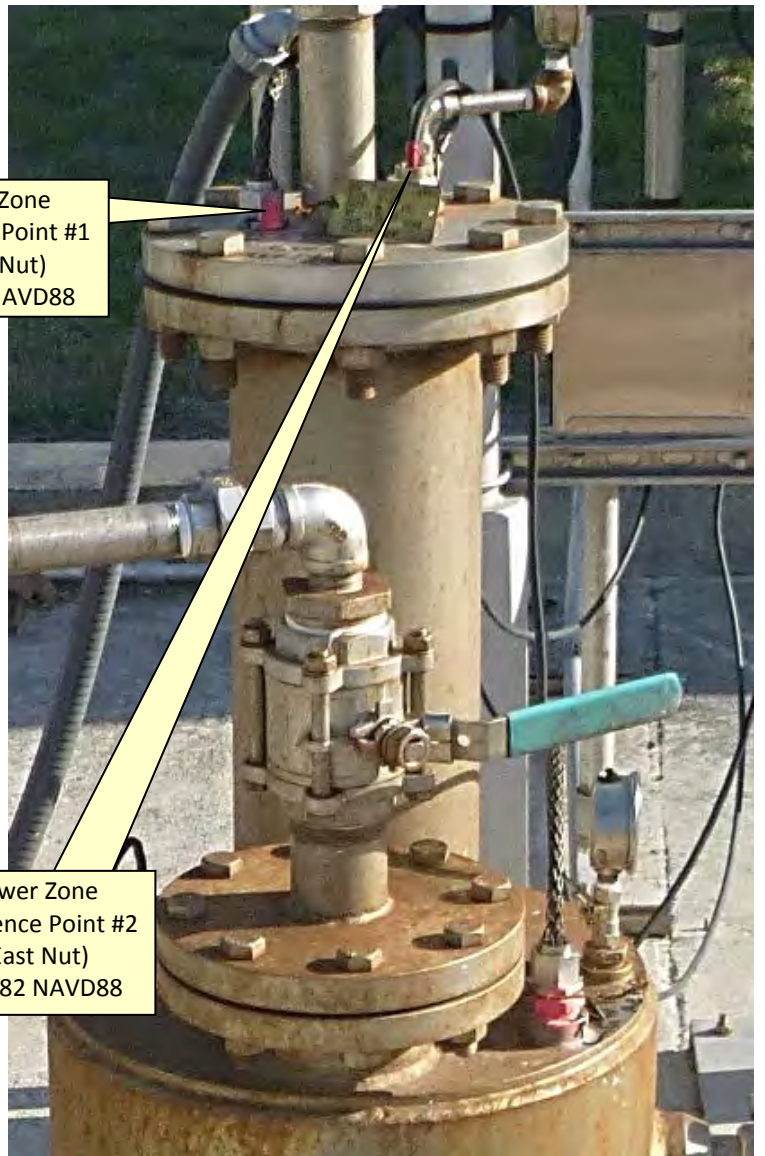




Lower Zone
Reference Point #1
(West Nut)
El. 9.81 NAVD88



Lower Zone
Reference Point #2
(East Nut)
El. 9.82 NAVD88



Lower Zone Looking Northerly (18-may-17) Not to Scale

Lower Zone (GW 2) Reference Point #1 Brass Tag Close Up



Lower Zone (GW 2) Reference Point #1 Brass Tag and Reference Mark





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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Lower Zone (GW 2) Reference Point #2 Brass Tag Close Up



Lower Zone (GW 2) Reference Point #2 Brass Tag and Reference Mark



Field Notes FB MISC 7c page 35

MISC FB 7-C 5/18/17

Cont'd FB Pg. 35

STA	+	HT	-	Elev	Bm
Bm					6.20
	5.36	11.56			
Lower Zone					
EAST NUT			1.74	9.82	
WEST NUT			1.75	9.81	
UPPER ZONE					
EAST NUT			3.26	8.30	
WEST NUT			3.28	8.28	
Bm			5.36	6.20	6.20

GPS STATION SELECTION @ Bm FMBMW

ORIG GPS UNIT #	START	END	AIR HT
	10:09	12:20	1.5 M

END Survey

MISC FB 7-C 5/18/17

AD HUDSON
X WISE
STEWLAND

COMMENTS

FMBMW (Pg. 35)

Pic # 12 E-W TOP OF THE LOWER NUT ON E. NUT OF LOWER ZONE
Pic # 13 SW " " " " " " W. " " " "

Pic # 14 E-W TOP OF THE LOWER NUT ON E. NUT OF UPPER ZONE
Pic # 15 NW " " " " " " W. " " " "

Bm ABOVE

REMARKS Pic 16 = 21 TAGS
22 = 28 OVERALL = 2 10'
24 = 28 ATTACHED TAGS Pic 20 Bm ABOVE Pinned MK.

2.5' x 2.5' CONE
THAT APPEARS TO
REPLACE TAG
REMOVED BY CORSE
OF WORK.



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

DESIGNATION: FMBMW	PROJECT: FMBMW Well Site
ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT	SURVEYOR: Hudson
RECOVERED BY:	DATE: 04-apr-17

GEOGRAPHIC POSITION

SECTION 8	TOWNSHIP 46 SOUTH	RANGE 24 EAST
COUNTY: Lee	NAME OF QUADRANGLE: Fort Myers Beach GEOGRAPHIC INDEX OF QUAD: 2016	
HORIZONTAL DATUM: 1927 (1983) Other ___ (circle one) ZONE (E) or W		
VERTICAL DATUM: MSL 1929 (1988) Other ___ (circle one)		
VERTICAL ACCURACY: 1 2 (3)		
STATE PLANE COORDINATE	(N) Y= 785100.369	(E) X= 350747.068
		NAVD 88 EL. 6.201 NGVD 29 EL.
CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): +1.175		
LATITUDE: 26°29'25.984"		LONGITUDE: 81°56'01.586"

RECOVERY DATA

Stamping: **BM FMBMW 2017**

To Reach: From the intersection of Summerlin Road and Pine Ridge Road in Fort Myers Beach, go south on Pine Ridge Road for 0.2 of a mile to an entrance to the Fort Myers Beach Utilities Facilities on the left; turn left and go east 380 feet more or less to a road to the south; turn right and go south 120 feet to the FMBMW well site and station location.

Station is a South Florida Water Management District aluminum disk grouted into the floor of the well deck approximately 2.2 feet southeast of the center of the wells.

NGS SOURCE BENCHMARK: **M651 (DM4592)** El. 4.669 NAVD88

FIELD BOOKS: **SCADA12 PAGE 47** and **MISC 7C PAGE 35**

PICTURES

Overall Site



Aluminum cap stamped
"FMBMW 2017"
El. 6.201 NAVD88
El. 7.376 NGVD29 (Corpscon)

Looking Westerly Not to scale (21-mar-17)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

Field Notes

FB SCADA 12 page 47

47 SCADA FA 12 4/4/17
 Sec. 8 TOP 46 South Run 24 East
 ESTABLISH ELEV & WELL FMSMN. Bound
 Labels For MUSEI South To DEMO SITE

FILE: Endw
 LINE # 1

TP	EL	Comments			
1		NEAR MUSEI REF EL			
5	6.199	Bm A Well ADJ = 6.20			
9	4.667	MUSEI; ELEV 0.000'			
		END LEVEL LOOP			
		ESTAB Well Ref P. Elev			
STA	+	HT	-	Elev	Bm
S.13		11.33		6.20	
FMSMN W/L		3.09		8.24	
Endw Elev		1.54		9.79	
Bm		S.13		6.20	
Well PWD		5.19		6.14	
SD STAT		5.2		6.11	
END		LEVELS			
		END		FMSMN	

SCADA FA 12 4/4/17 (47)
 Note: THE LEVEL LOOP FROM JCS Bm MUSEI TO THE
 WELL SITE FOR WAT DEMO AT DEMO LABEL/ROD
 4/6/17 ESTAB LEVEL/ROD MARK USED FOR REF EL.

RW HUDSON
 & BRADLEY

Labels to Well

Bm "FMSMN 2017" A SECOND RUN CAP SET IN CONC
 NEAR THE 3.5' BASE OF WELL

ESTAB. REF EL

Comments

A MARK on SW TOP OF FRAME WELDED TO WELL HEAD
 A MARK on NW TOP of WELL HEAD ADJACENT TO SENSOR.
 Bm A Bm; ELEV 0.000'

FB MISC 7C page 35

130 MISC FA 7-C 5/12/17
 Cont'd FA. P. 35

DETAILED ADDITIONAL REF ELEV'S

STA	+	HT	-	Elev	Bm
Bm					6.20
S.36		11.56			

LOWER ZONE

EAST NUT	1.74	9.32
WEST NUT	1.75	9.31

UPPER ZONE

EAST NUT	3.26	8.30	
WEST NUT	3.28	8.28	
Bm	5.36	6.20	6.20

GPS BENCH SECTIONS @ Bm FMSMN

DATE GPS DATA	
START	10.09
END	10.20
AIR HT	1.5 M

END Survey

MISC FA 7-C 5/12/17 (36)
 RW HUDSON
 X WISE
 & STRICKLAND

Comments
 FMSMN (P. 35)

Fig # 12 SW TOP OF THE LOWER NUT OF E. NUT OF LOWER ZONE
 Fig # 13 SW " " " " " W. " " " "

Fig # 14 SW TOP OF THE LOWER NUT OF E. NUT OF UPPER ZONE
 Fig # 15 SW " " " " " W. " " " "

Bm ABOVE

Remaining Pts 16-21 THIS
 22-23 OVERALL ± 0'
 24-28 ADJACENT TRIS P. 20 Bm ABOVE POINT MK.

5' x 5' zone
 THAT APPEARS TO
 REPLACE THAT
 ESTABLISHED BY CENTER
 OF WELLS



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

From: [Hudson, Ronnie](#)
To: [Ehmke, Howard](#)
Subject: FW: OPUS solution : FMBMW2017.tps OP1495451500764
Date: Monday, May 22, 2017 7:38:42 AM

FYI

-----Original Message-----

From: Strickland, James
Sent: Monday, May 22, 2017 7:18 AM
To: Hudson, Ronnie <rhudson@sfwmd.gov>
Subject: FW: OPUS solution : FMBMW2017.tps OP1495451500764

-----Original Message-----

From: opus [<mailto:opus@ngs.noaa.gov>]
Sent: Monday, May 22, 2017 7:12 AM
To: Strickland, James <jstrickl@sfwmd.gov>
Subject: OPUS solution : FMBMW2017.tps OP1495451500764

FILE: FMBMW2017.tps OP1495451500764

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: jstrickl@sfwmd.gov DATE: May 22, 2017
RINEX FILE: fmbm138o.17o TIME: 11:12:08 UTC

SOFTWARE: page5 1209.04 master95.pl 160321 START: 2017/05/18 14:09:00
EPHEMERIS: igr19494.eph [rapid] STOP: 2017/05/18 16:21:00
NAV FILE: brdc1380.17n OBS USED: 5946 / 6435 : 92%
ANT NAME: TPSHIPER_V NONE # FIXED AMB: 38 / 40 : 95%
ARP HEIGHT: 1.5 OVERALL RMS: 0.017(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.3771)

X:	801532.552(m)	0.006(m)	801531.761(m)	0.006(m)
Y:	-5655754.770(m)	0.022(m)	-5655753.186(m)	0.022(m)
Z:	2827798.135(m)	0.003(m)	2827797.958(m)	0.003(m)
LAT:	26 29 25.98445	0.008(m)	26 29 26.00364	0.008(m)
E LON:	278 3 58.43422	0.002(m)	278 3 58.41396	0.002(m)
W LON:	81 56 1.56578	0.002(m)	81 56 1.58604	0.002(m)
EL HGT:	-22.002(m)	0.021(m)	-23.584(m)	0.021(m)
ORTHO HGT:	1.911(m)	0.039(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 17) SPC (0901 FL E)
Northing (Y) [meters] 2930349.405 239299.071

Easting (X) [meters]	406939.682	106907.920
Convergence [degrees]	-0.41653757	-0.41653757
Point Scale	0.99970692	1.00004813
Combined Factor	0.99971038	1.00005159

N= 785100.369
E= 350747.068

US NATIONAL GRID DESIGNATOR: 17RMK0693930349(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG4691	FMYR FORT MYERS CORS ARP	N263527.507	W0815150.972	13111.8
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	137346.6
DF7050	MTNT MIAMI TNT CORS ARP	N255156.760	W0805425.186	123798.7

NEAREST NGS PUBLISHED CONTROL POINT

DM4593	G 651	N262913.1	W0815605.5	411.2
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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.

The NGS Data Sheet

See file [dsdata.pdf](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.12.1
1      National Geodetic Survey,  Retrieval Date = APRIL 24, 2017
DM4592 *****
DM4592 DESIGNATION - M 651
DM4592 PID - DM4592
DM4592 STATE/COUNTY- FL/LEE
DM4592 COUNTRY - US
DM4592 USGS QUAD - FORT MYERS BEACH (1987)
DM4592
DM4592 *CURRENT SURVEY CONTROL
DM4592
DM4592* NAD 83(1986) POSITION- 26 29 39.9 (N) 081 56 07.2 (W) HD HELD2
DM4592* NAVD 88 ORTHO HEIGHT - 1.423 (meters) 4.67 (feet) ADJUSTED
DM4592
DM4592 GEOID HEIGHT - -23.913 (meters) GEOID12B
DM4592 DYNAMIC HEIGHT - 1.421 (meters) 4.66 (feet) COMP
DM4592 MODELED GRAVITY - 979,067.3 (mgal) NAVD 88
DM4592
DM4592 VERT ORDER - SECOND CLASS I
DM4592
DM4592.The horizontal coordinates were established by autonomous hand held GPS
DM4592.observations and have an estimated accuracy of +/- 10 meters.
DM4592.
DM4592.The orthometric height was determined by differential leveling and
DM4592.adjusted by the NATIONAL GEODETIC SURVEY
DM4592.in March 2011.
DM4592
DM4592.No vertical observational check was made to the station.
DM4592
DM4592.Significant digits in the geoid height do not necessarily reflect accuracy.
DM4592.GEOID12B height accuracy estimate available here.
DM4592
DM4592.Photographs are available for this station.
DM4592
DM4592.The dynamic height is computed by dividing the NAVD 88
DM4592.geopotential number by the normal gravity value computed on the
DM4592.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DM4592.degrees latitude (g = 980.6199 gals.).
DM4592
DM4592.The modeled gravity was interpolated from observed gravity values.
DM4592
DM4592; North East Units Estimated Accuracy
DM4592;SPC FL W - 239,391. 206,447. MT (+/- 10 meters HH2 GPS)
DM4592
DM4592_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK0678630778 (NAD 83)
DM4592
DM4592 SUPERSEDED SURVEY CONTROL
DM4592
DM4592.No superseded survey control is available for this station.
DM4592
DM4592_MARKER: F = FLANGE-ENCASED ROD

```

DM4592_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 DM4592_STAMPING: M 651 2006
 DM4592_MARK LOGO: NGS
 DM4592_PROJECTION: FLUSH
 DM4592_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
 DM4592_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 DM4592_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DM4592+SATELLITE: SATELLITE OBSERVATIONS - January 15, 2016
 DM4592_ROD/PIPE-DEPTH: 14.2 meters

DM4592	HISTORY	- Date	Condition	Report By
DM4592	HISTORY	- 20060411	MONUMENTED	FLDEP
DM4592	HISTORY	- 20160115	GOOD	GEOCAC

DM4592

DM4592 STATION DESCRIPTION

DM4592

DM4592'DESCRIBED BY FL DEPT OF ENV PRO 2006 (BPJ)
 DM4592'THE STATION IS LOCATED ABOUT 8.9 MI (14.3 KM) WEST-NORTHWEST OF
 DM4592'ESTERO, 6.3 MI (10.1 KM) EAST-NORTHEAST OF SANIBEL AND 3.1 MI (5.0 KM)
 DM4592'NORTH-NORTHEAST OF FORT MYERS BEACH IN SECTION 6, TOWNSHIP 46 SOUTH,
 DM4592'RANGE 24 EAST.

DM4592'

DM4592'TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 865 (SAN CARLOS
 DM4592'BOULEVARD) AND STATE ROAD 869 (SUMMERLIN ROAD) ABOUT 2.6 MI (4.2 KM)
 DM4592'NORTH OF FORT MYERS BEACH, GO EAST ON STATE ROAD 869 (SUMMERLIN ROAD)
 DM4592'FOR 0.5 MI (0.8 KM) TO THE INTERSECTION OF PINE RIDGE ROAD AND THE
 DM4592'MARK ON THE LEFT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH
 DM4592'OF 46.7 FT (14.2 M) WITH AN NATIONAL GEODETIC SURVEY LOGO CAP FLUSH
 DM4592'WITH THE GROUND AND ABOUT 1.0 FT (0.3 M) BELOW THE LEVEL OF PINE RIDGE
 DM4592'ROAD, THE DATUM POINT IS RECESSED 0.3 FT (0.1 M) BELOW THE LEVEL OF
 DM4592'THE NATIONAL GEODETIC SURVEY LOGO CAP.

DM4592'

DM4592'THE MARK IS LOCATED 76.8 FT (23.4 M) WEST OF THE APPROXIMATE
 DM4592'CENTERLINE OF PINE RIDGE ROAD, 70.5 FT (21.5 M) NORTH OF THE
 DM4592'APPROXIMATE CENTERLINE OF STATE ROAD 869 (SUMMERLIN ROAD), 47.3 FT
 DM4592'(14.4 M) WEST OF A CONCRETE LIGHT POLE WITH 2 LIGHTS ATTACHED, 43.1 FT
 DM4592'(13.1 M) SOUTH OF THE SOUTHWEST CORNER OF A CVS PHARMACY SIGN, 11.3 FT
 DM4592'(3.4 M) NORTH OF THE APPROXIMATE CENTER OF 2 DRAIN PIPES AND 1.7 FT
 DM4592'(0.5 M) EAST OF A CARSONITE WITNESS POST.

DM4592'

DM4592'NOTE A MAGNET WAS PLACED INSIDE OF THE NATIONAL GEODETIC SURVEY LOGO
 DM4592'CAP.

DM4592'

DM4592'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH (13 CM)
 DM4592'NATIONAL GEODETIC SURVEY LOGO CAP.

DM4592

DM4592 STATION RECOVERY (2016)

DM4592

DM4592'RECOVERY NOTE BY GEOCACHING 2016 (RLM)
 DM4592'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:02

Project Information		Coordinate System	
Name:		Name:	Default
Size:		Datum:	WGS 1984
Modified:	2/15/2012 8:48:57 AM (UTC:-7)	Zone:	Default
Time zone:	Mountain Standard Time	Geoid:	
Reference number:		Vertical datum:	
Description:			

Level Report

Imported file: [FMBW.DAT](#)
Instrument: DiNi
Standard error per kilometer of double leveling: 0.00230 ft
Standard error per turn/station setup: 0.00000 ft
Creation option: Delta elevations
Description usage: Feature codes

Run - 1 Raw Observations

Raw Misclosure: -0.00300 ft
 Σ BS Distances: 1693.300 ft
 Σ FS Distances: 1692.450 ft
Run Length: 3385.750 ft
Reduction: Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Type	Distance	Description
<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/> 6.65800 ft			0.00000 ft	4.670 ft	0.00000 ft	4.670 ft ▲	Benchmark	198.290 ft	M651 3
<input type="checkbox"/>	2			<input checked="" type="checkbox"/> 6.25200 ft	0.40600 ft	5.076 ft	0.00038 ft	5.076 ft	Computed	259.280 ft	3
	2	<input checked="" type="checkbox"/> 4.49900 ft								260.860 ft	3
<input type="checkbox"/>	3			<input checked="" type="checkbox"/> 5.22400 ft	-0.72500 ft	4.351 ft	0.00088 ft	4.352 ft	Computed	264.730 ft	3
	3	<input checked="" type="checkbox"/> 5.26600 ft								287.860 ft	3
<input type="checkbox"/>	4			<input checked="" type="checkbox"/> 1.56700 ft	3.69900 ft	8.050 ft	0.00146 ft	8.051 ft	Computed	279.720 ft	3
	4	<input checked="" type="checkbox"/> 3.79000 ft								73.290 ft	3
<input type="checkbox"/>	5			<input checked="" type="checkbox"/> 5.64100 ft	-1.85100 ft	6.199 ft	0.00150 ft	6.201 ft	Computed	69.390 ft	BM 3
	5	<input checked="" type="checkbox"/> 5.69200 ft								69.420 ft	3
<input type="checkbox"/>	6			<input checked="" type="checkbox"/> 3.84100 ft	1.85100 ft	8.050 ft	0.00154 ft	8.052 ft	Computed	73.230 ft	3
		<input checked="" type="checkbox"/> 1.77000 ft								279.430 ft	

	6	ft								ft	3
<input type="checkbox"/>	7		✓ 5.50000 ft	-3.73000 ft	4.320 ft	0.00212 ft	4.322 ft	Computed	286.650 ft	3	
	7	✓ 4.76800 ft							265.160 ft	3	
<input type="checkbox"/>	8		✓ 4.00400 ft	0.76400 ft	5.084 ft	0.00262 ft	5.087 ft	Computed	260.960 ft	3	
	8	✓ 6.42500 ft							258.990 ft	3	
	1		✓ 6.84200 ft	-0.41700 ft	4.667 ft	0.00300 ft	4.670 ft ▲	Benchmark	198.490 ft		BM 3

Run - 1 (N1) Reduced Observations

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
1-1 (E1)	Enabled	-0.00300 ft	0.00300 ft	0.00000 ft	8	3385.750 ft	38.86800 ft	38.87100 ft	0.03356 ft

Run - 1 (N1) Reduced Coordinates

Point ID	Status	Elevation
1	Enabled	4.67000 ft

Date: 4/6/2017 7:30:53 AM	Project:	Trimble Business Center
---------------------------	----------	-------------------------

SEC 8

TOP 46 South

Line 24 East

ESTABLISH ELV @ B. WELL FMBMW. Bound
LEVELS FROM MUSI SOUTH TO WELL SITE.

FILE: fmbw

LINE # 1

PT	EL	B	Comments		
1		1.18 4.67	MUSI P/B EL		
		[88]			
2	6.199		Bun & Well ADJ = 6.20		
	2.711				
9		1.178 4.67	MUSI; ERROR 0.002'		
	4.667		END LEVEL LOOP		
			ESTAB WELL REF Pt. ELV'S		
STA	+	HI	-	ELV	B
					2.711 6.20
	5.13	2.84 11.33			
FMBMW 1		3.09	4.75 8.24		
FMBMW 2		1.54	10.30 9.79		
B		5.13	2.71 6.20 2.71		
Well P/B		5.19	2.65 6.14		
GD Shot		5.2	2.6 6.11		
		END	LEVELS		
		END	FMBMW		

Note: THE LEVEL LOOP FROM NGS BUN MUSI TO THE
WELL SITE BUN WAS DONE W/ DINI LEVEL/ROD
4/6/17 EBANKS LEVEL/ROD WERE USED FOR REF ELV.

TIM HUDSON
EBANKS

LEVELS TO WELL

BUN "FMBMW 2017" A SENSOR ALUM CAP GET IN CONC
NEAR THE S.E.W. BASE OF WELL

ESTAB. REF EL

Comments

A MARK ON S.E. TOP OF FLANGE WELDED TO WELL HEAD.
A "B" MARK ON W/ TOP OF WELL HEAD ADJACENT TO SENSOR.
Bun ABOVE; ERROR 0.00'

SEC. ~~32~~ 8 TWP ~~45~~ 46 R. 24 24

RETURNED TO "FMBMW" WELL SITE TO THE SITE
BUT I OBTAIN ADDITIONAL GRID ELEV. PER RIG.

- REFS 1. INST. SHEET
- 2. BUR DISK FOR INS BUR AS 2004 BY CONSULT. TELH

NOTE: PERFORMED AN EXTENSIVE SEARCH FOR BUR WITH GPS, METAL DETECTOR, & DIST. TIES FR. DEEL SHEET. MARK NOT FOUND. BELIEVED DESTROYED.

SFA	+	HE	-	ELEV	Bur
Bur					6.20 [88]
NE COR				5.26	6.46
" GRND	5.52	11.72		5.3	6.4
SE COR				5.29	6.43
" GRND				5.5	6.2
SW COR				5.28	6.44
" GRND				5.6	6.12
NW COR				5.28	6.44
" GRND				4.9	6.8
Bur				5.52	6.20 6.20

NOTE 2: REMAINING INFO BY EBANKS; APRIL 2017
SLADA FB 12 Pg. 47

NOTE 3: REMAINDER PHONE CALL FROM M. HOLAN REGARDING
ELEV LOCATIONS; IT IS UNCLEAR AS TO WHAT WAS
SHOT 4/17 RE. ELEVATIONS PER PHOTO TAGS PER H. EHMKE

CONTD Pg. 36

PHOTOS

- 1 Looking South
- 2 " North
- 3 " S. @ SE COR
- 4 " W @ SW COR
- 5-6 " North
- 7-8 " @ TAGS - DECEL
- 9 " @ BUR @ S. BASE OF WELL
- 10 " @ SITE BUR LOCATION (NOT FOR)
- 11 " S. @ OVERALL SITE

AT HOLOAN
X WISE
@ STRICKLAND
EQUIP: WILD NAZ
& 25' ROD

Comments

" BUR FMBMW 2017" GCP BY EBANKS 4/2017
SLADA FB 12 Pg. 47 via PHONE BY EBANKS

CONC PAD

GRND

CONC PAD

GRND

CONC PAD

GRND

CONC PAD

GRND

Bur

CONT'D FR. Pg. 35

ORIGINAL ADDITIONAL REF ELEV'S

STA	+	HI	-	ELEV	Bm
Bm					6.20

5.36 11.56

LOWER ZONE

EAST NUT		1.74		9.82
WEST NUT		1.75		9.81

UPPER ZONE

EAST NUT		3.26		8.30	
WEST NUT		3.28		8.28	
Bm		5.36		6.20	6.20

GPS START SESSION @ Bm FMBMW

ORIG GPS UNIT #	
START	10:09
END	12:20
AIR HT	1.5 M.

END Survey

N HUDSON
X WISE
/ STRICKLAND

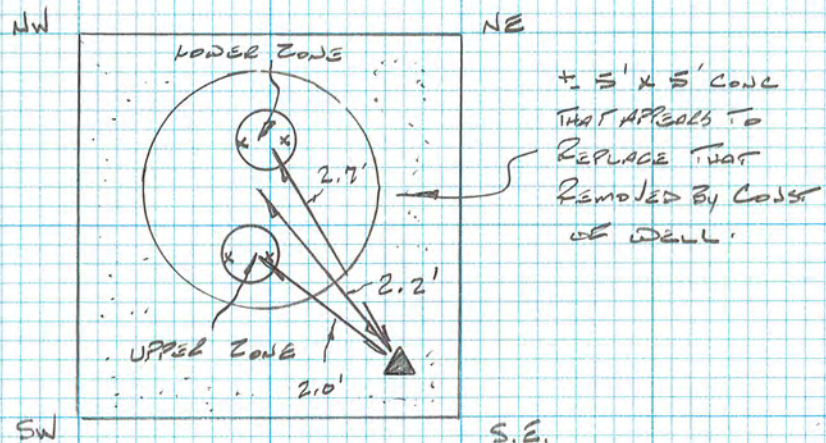
COMMENTS
FMBMW (Pg. 35)

PIC # 12 ELY TOP OF THE LOWER NUT ON E. NUT OF LOWER ZONE
 PIC # 13 SW " " " " " " W. " " " "

PIC # 14 ELY TOP OF THE LOWER NUT ON E. NUT OF UPPER ZONE
 PIC # 15 WLY " " " " " " W. " " " "

Bm ABOVE

REMAINING PIC'S 16-21 TABS
 22-23 OVERALL; ± 10'
 24-28 ATTACHED TABS PIC # 29 Bm ABOVE PUNCH MK.



Office

Project

24 May 2017

INPUT

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

OUTPUT

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

FMBMW well

1/1

Northing/Y: 785101.9246

Easting/X: 350745.5124

Elevation/Z: 0

Convergence: -0 24 59.54315

Scale Factor: 1.000048132

Combined Factor: 1.000051882

Latitude: 26 29 25.99975

Longitude: 81 56 01.58301

Elevation/Z: 1.175

Remark:

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

DBHYDRO | by station

STATION INFORMATION

Station	FMB-MZL
Site	FMBMW
Type	SUBSTATION
Latitude (ddmmss.sss)	262926.064
Longitude (ddmmss.sss)	815601.562
X Coord (ft) NAD83	350747.433
Y Coord (ft) NAD83	785108.319
County	Lee
Basin	ESTERO BAY
Section	8
Township	46
Range	24
Show Map	Google Map
Well Info	Info
Description	Substation of FMB-MW (1568-1650 ft bls)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

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 561-686-8800 | 1-800-432-2045 (Florida Only)

DBHYDRO | by station

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County	Lee
Basin	ESTERO BAY
Section	8
Township	46
Range	24
Show Map	Google Map
Well Info	Info
Description	Substation of FMB-MW (1170-1270 ft bls)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

Get Sample Data

Get Time Series Data

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