



**Data Sheet and Surveyor's Report  
for  
Buck Island Ranch  
Monitoring Well Benchmarks**

Description: **Monitoring Well "BUCK 07"**

Date: June 17, 2005

Location: Buck Island Ranch, Highlands County, Florida

**Project Results**

Benchmarks established:

1. **"BUCK 07B"**: Top of existing 1.5" steel pipe
  - a. Elevation: **8.2828 m**
2. **"BUCK 07C"**: Top of existing 3" PVC monitoring well casing
  - a. Elevation: **9.1578 m**

Party Chief: **G. Royer**

Field Book: **154**, Pages **1 - 45**

Survey Date: **February – May 2005**

Bench Mark: **"H-437"** El. **9.395 m / 30.82 ft.**  
**"J-437"** El. **11.555 m / 37.91 ft.**

Vertical Datum: **NAVD1988**

NGVD 1929 Offset: + **1.210 ft.** (add this value to convert to NGVD 1929)

Comments:

The offset value referred to as "NGVD 1929 Offset" was derived by subtracting the published NAVD 1988 elevation from the published NGVD 1929 elevation for NGS Benchmarks "H-437 and J-437".

**G.P.S. POSITION** (NAD 83, Florida East Zone, Sub-meter):

Well Site: **"BUCK 07C"**      N = **1018600**      E = **590335**

NAVD 88 - North American Vertical Datum of 1988

NGVD29 -National Geodetic Vertical Datum of 1929

NAD 83 (Horizontal Datum) North American Datum of 1983

\*Note: See the SFWMD Benchmark Description Sheet for additional information

**SURVEYOR'S REPORT**

**Vertical Control Survey**

Hyatt Survey Services, Inc. operating under sub-contract to George F Young, Inc. and the South Florida Water Management District was tasked with the execution of a Vertical Control Survey in support of the District's Benchmark Densification and Monitoring Well Elevation Initiatives.

**Purpose**

The purpose of this survey was to establish benchmarks at each of 22 monitoring wells on the Buck Island Ranch Facility in Highlands County, Florida. A minimum of two (2) benchmarks were established at each well.

1. **"A"** benchmarks are NGS Class "C", "poured-in-place," concrete monuments with SFWMD bronze disks set flush with the ground.

2. “B” benchmarks were set on the top of existing 1.5” steel pipes at each well site. Each pipe protrudes approximately 3” above the surrounding ground.
3. “C” benchmarks were set on the top of the 3” PVC well casing at each well site.

Elevations were determined by digital differential leveling performed in accordance with the Minimum Technical Standards (MTS) for Vertical Control Surveys as set forth in Chapter 61G17-6 FAC and the requirements for Second-Order Class II Vertical Control Surveys as established by the Federal Geodetic Control Sub-committee.

#### Vertical Control

All elevations are based on National Geodetic Survey Benchmarks “H-437” and “J-437” both Second Order, Class I vertical control monuments. The vertical datum used was NAVD 88 (North American Vertical Datum of 1988).

#### Level Lines

All level runs were double-run under differing atmospheric conditions and meet or exceed the formula of the Square Root in miles of the level run multiplied by 0.03’. A Leica DNA 3003 digital level and two 3 meter aluminum bar-coded “Invar Rods” with aluminum struts were utilized to obtain all leveling data.

The processing of the field data was performed by and under the supervision of Mr. Ronnie Taylor, Florida’s NGS Advisor. NGS’ “WDDPROC” leveling software was utilized to process the field data and to create the NGS benchmark descriptions.

Prepared by: **Hyatt Survey Services, Inc.**  
11007 8<sup>th</sup> Avenue East  
Bradenton, Florida 34212  
(941) 748-4693

Prepared for: **South Florida Water Management District**  
3301 Gun Club Road  
West Palm Beach, Florida 33406

#### Notes:

- 1) This survey meets all applicable requirements of the Florida Minimum Technical Standards as contained in Chapter 61G17-6 FAC.
- 2) Not valid without the signature and the original raised seal of the Florida Surveyor and Mapper in responsible Charge.
- 3) Additions or deletions to this data by anyone other than the signing party are prohibited without written consent of the signing party.

**Hyatt Survey Services, Inc.**  
Russell P. Hyatt, PSM, VP  
Professional Surveyor and Mapper  
License Number 5303

Signed: \_\_\_\_\_

Seal:

## BUCK07



Prime Contractor: George F. Young, Inc.  
Subcontractor: Hyatt Survey Services, Inc.  
Date of Photo: June 17, 2005  
View: Well Site



**BUCK07B**



Prime Contractor: George F. Young, Inc.  
Subcontractor: Hyatt Survey Services, Inc.  
Date of Photo: June 10, 2005  
View: Pipe



# BUCK07C



Prime Contractor: George F. Young, Inc.  
Subcontractor: Hyatt Survey Services, Inc.  
Date of Photo: June 10, 2005  
View: Well

CKEECHBEE MONT. WELLS

4/27/5

STAND  
DEV. 5'  
RESID

+	DIST	-	DIST
1.7039	48.60	1.7192	44.15
1.6311	50.98	1.7193	48.54
1.5721	37.57	1.3655	50.73
1.5992	43.69	1.6017	37.39
1.6002	50.60	1.5210	43.80
1.6236	50.27	1.7160	49.87
2.5383	49.21	1.4475	50.32
1.1523	47.16	0.8989	49.37
1.276	50.72	2.5504	47.11
2.7434	36.73	1.1064	50.70
2.2914	10.83	0.5408	36.53
		1.5216	10.97

98.1168

DESC

↑

S ROYER

(B) ↑ D. RAE

(A) ↑ D. FITCHER

- TP-15
- TP-16
- TP-17
- TP-18
- TP-19
- TP-20
- TP-21
- TP-22
- TP-23
- TP-24
- TP-25
- TP-26

J-437 (R) TP-22

ERROR = 0.0104 (M)  
0.0341 (F)

CSN #2

West #1

OEECLIFFE		MONT. WELLS	
F	DIST	-	DIST
11547	19.94		
11210	19.52	0.0575	39.56
		2.0719	
12024	20.01		
1598	20.07	0.9360	40.02
+ 2.2 =	COLL	2.0376	
F	DIST	-	DIST
15169	28.72		
12373	31.33	1.979276	28.6
14202	52.49	1.4567	31.49
19284	52.55	1.9629	52.47
14947	48.19	1.3268	52.52
14255	53.96	1.3108	47.71
16000	49.26	1.6578	53.66
14450	42.76	1.4455	49.07
13653	46.44	1.4990	41.98
13024	46.72	1.1377	46.78
14358	45.74	1.3508	46.01
14350	45.30	1.4171	45.83
13660	45.25	1.4840	45.40

DESC	(5)	D FEE	P FEE
R20A	1A	?	2 FEE
R20B			
R21A			
R20A			
R20B			
R22A			
DESC			
11-437			BRASS 17 IN BRIDGE
TP-1			
TP-2			
TP-3			BACK-7B (ROR)
TP-4			
TP-5			
TP-6			
TP-7			
TP-8			
TP-9			
TP-10			
TP-11			
TP-12			



CREECHBEE MONT. WELL

5/19/5

28

#	DIST	-	DIST
1.7534	19.91		
1.2202	19.98	0.9927	40.02
4.17		1.98	37.88
1.6157	28.38		
0.9892	39.26	1.8292	28.27
1.1855	21.28	1.1844	39.74
2020	23.33	1.3302	21.46
END SECTION		1.4412	23.25
1.4494	23.52		
1.2762	20.17	1.2104	23.09
1.5941	39.69	1.1945	22.43
1.8115	28.30	1.0195	37.15
END SECTION		1.5949	28.99
1.2360	43.92		
1.1291	43.77	1.3815	43.57
1.2447	43.61	1.4971	43.60
1.6178	43.58	1.4800	43.78
1.2294	43.58	0.7556	43.73
1.4177	43.91	1.2967	43.73

DESK	SSN	S ROYER
R00 A		1 D RDE
R00 B		9 D VES
R00 A		
H-437	SSN-01	
TP-1		
TP-2		
TP-3		
BACK TB	SSN-14	
BACK TB	SSN-14	
TP-1		
TP-2		
TP-3		
H-437	SSN-01	
J-437	SSN-02	
TP-1		
TP-2		
TP-3		
TP-4		
TP-5		



CREECHBEE MONT. WELL

5/18/5

#	DIST	=	DIST
1.4891	44.23	1.5608	35.18
1.5914	44.30	1.6455	44.55
1.2818	44.44	1.4254	44.84
1.4516	37.62	1.5325	44.98
1.5334	35.14	1.3724	32.85
1.4060	34.07	1.4236	34.76
1.5885	34.79	1.4518	34.83
1.4112	34.59	1.6141	34.90
1.2995	43.81	1.2895	34.23
1.5650	10.11	0.9720	44.37
1.6021	14.50	1.3509	11.37
		1.7713	14.75

DESC	A	S	ROYER
TP-11	(B)	T	D PEE
TP-12	(A)	P	D VYES
TP-13			
TP-14			
TP-15			
TP-16			
TP-17			
TP-18			
TP-19			
TP-20			
TP-21			
H-437	SSN-01		

OKEECHOWEE MOUNT. WELLS

4/28/5

12

+	DIST	-	DIST
1.7547	19.94		
1.1210	19.52	0.8675	39.56
		2.0119	
1.8084	20.01		
1.1578	20.09	0.9360	40.02
+ 2.2 = COLL		2.0326	
+	DIST	-	DIST
1.5769	28.78		
1.2373	31.33	1.979276	28.78
1.4202	52.49	1.4567	31.49
1.9284	52.55	1.9629	52.47
1.4947	48.19	1.3268	52.59
1.4255	53.96	1.3108	47.71
1.6000	49.46	1.6578	53.66
1.4450	42.26	1.4455	49.07
1.3653	46.44	1.4990	41.98
1.3029	46.22	1.1377	46.28
1.4358	45.74	1.3508	46.01
1.4350	45.32	1.4171	45.83
1.3662	45.25	1.4840	45.40

DESC	(B) 9	(A) 9	F. POWER	D. FCE	D. PITCHER
ROD A					
ROD B					
ROD A					
ROD A					
ROD B					
ROD A					
DESC					
U-437 BRASS-D IN BRIDGE					
TP-1					
TP-2					
TP-3 BUCK-7B (ROD)					
TP-4					
TP-5					
TP-6					
TP-7					
TP-8					
TP-9					
TP-10					
TP-11					
TP-12					

SSM #

Buck7.met

Identifi cation\_I nformati on:

Ci tati on:

Ci tati on\_I nformati on:

Origi nator: George F. Young, Inc.  
Publ icati on\_Date: Unknown  
Publ icati on\_Ti me: Unknown  
Ti tle: Buck Isl and Ranch Moni tori ng Well Benchmarks  
Publ icati on\_I nformati on:  
Publ icati on\_PL ace: Not publ ished  
Publ isher: None

Descri pti on:

Abstr act:

South Fl ori da Water Management Di stri ct  
Buck Isl and Ranch Moni tori ng Well Benchmarks

Purpo se:

To establ ish NAVD 88 and NGVD 29 elevati ons and  
benchmarks at each of twenty two well si tes.

Ti me\_Period\_of\_Content:

Ti me\_Period\_I nformati on:

Range\_of\_Dates/Ti mes:

Bei nni ng\_Date: 20050217

Endi ng\_Date: 20050617

Currentness\_Reference: Pendi ng NGS Approval

Status:

Progress: In work

Mai ntenance\_and\_Update\_Frequency: Unknown

Spati al\_Domai n:

Boundi ng\_Coordi nates:

West\_Boundi ng\_Coordi nate: -081°13'03"

East\_Boundi ng\_Coordi nate: -080°12'06"

North\_Boundi ng\_Coordi nate: +27°08'41"

South\_Boundi ng\_Coordi nate: +27°07'50"

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: Record Survey

Theme\_Keyword: Well Si te

PL ace:

PL ace\_Keyword\_Thesaurus: None

PL ace\_Keyword: S. F. W. M. D. Well L28WFUVM

PL ace\_Keyword: Sec. 18, Twp. 48 S., Rge. 33 E.

PL ace\_Keyword: Hendry County, Fl ori da

Access\_Constrai nts: None

Use\_Constrai nts: None

Poi nt\_of\_Contact:

Contact\_I nformati on:

Contact\_Person\_Pri mary:

Contact\_Person: Howard Ehmke

Contact\_Organi zati on: South Fl ori da Water Management

Di stri ct

Contact\_Positi on: Professi onal Surveyor & Mapper

Contact\_Address:

Address\_Type: maili ng and phys ical address

Address: 3301 Gun Cl ub Road

City: West Palm Beach

State\_or\_Provi nce: Fl ori da

Postal\_Code: 33406

Country: USA

Contact\_Voi ce\_Tel ephone: (561) 686-8800, Ext. 4636

Contact\_Facsi mi le\_Tel ephone: (561) 681-6265

Contact\_El ectroni c\_Mai l\_Address: hehmke@sfwmd.gov

Hours\_of\_Servi ce: 8:00 am to 5:00 pm EST

Data\_Quali ty\_I nformati on:



Attribute\_Accuracy:

Attribute\_Accuracy\_Report:

This survey was prepared using sub-meter GPS and DNA 3003 Leveling instruments. The horizontal location of the well and benchmark was performed using sub-meter GPS. The vertical data was collected using a Leica DNA 3003 Level. Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/90. Elevations are based on NAVD 88

Logical\_Consistency\_Report:

Horizontal data was established using Coastguard corrected sub-meter GPS  
Vertical data was established using control points H-437 and J-437.

Completeness\_Report:

Horizontal location taken at approximate center of well.  
Site Benchmark is a 3" bronze disk set in top of poured in place 48"x12" round concrete monument

THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE JUNCTION OF U. S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 292 FT WEST AND 622 FT SOUTH OF THE SOUTH END OF THE BRIDGE. THE MARK IS LOCATED ON THE SOUTH SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT WOODEN FENCE. THE MARK IS 1.5 IN STEEL PIPE, 1 FT INSIDE THE FENCED ENCLOSURE, SET 3 IN ABOVE THE SURROUNDING GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE 1018596 FT,

590335 FT. Notable Land marks: NONE  
THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE JUNCTION OF U. S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 291 FT WEST AND 619 FT SOUTH OF THE SOUTH END OF THE BRIDGE. THE MARK IS A 3 IN PVC MONITORING WELL PIPE INSIDE A STEEL BOX SURROUNDED BY A 4 FT WOODEN FENCE. THE MARK IS SET 4 FT ABOVE THE

Buck7.met  
SURROUNDING GROUND. THE NAD 1983, FLORIDA  
EAST ZONE, STATE PLANE COORDINATE FOR THE  
1018600 FT, E=590335 FT  
Notable Land  
NONE  
N270809  
W0811209

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report:

sub-meter

The horizontal positions were established with

GPS

Vertical\_Positional\_Accuracy:

Vertical\_Positional\_Accuracy\_Report:

Second Order, Class II

The methodology was approved by Mr. Ronnie Taylor,  
State, Geodetic Advisor

The NAVD 88 elevations established for this survey

was

determined by using the published values for

benchmark

H-437 and J-437.

Lineage:

Process\_Step:

Process\_Description:

Horizontal data was established using Coastguard  
corrected sub-meter GPS

Vertical data was established using control  
points H-437 and J-437.

Process\_Date: 20050617

Metadata\_Reference\_Information:

Metadata\_Date: 20050617

Metadata\_Contact:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Catherine A. Pollak

Contact\_Organization: George F. Young, Inc.

Contact\_Position: Project Surveyor

Contact\_Address:

Address\_Type: mailing and physical address

Address:

299 Dr. Martin Luther King, Jr.  
Street, North

City: St. Petersburg

State\_or\_Province: Florida

Postal\_Code: 33701

Country: USA

Contact\_Voice\_Telephone: (727) 822-4317

Contact\_Facsimile\_Telephone: (727) 822-2919

Contact\_Electronic\_Mail\_Address: pollak@georgefyoung.com

Hours\_of\_Service: 8:00 am to 5:00 pm EST

Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial

Metadata

Metadata\_Standard\_Version: 19980601



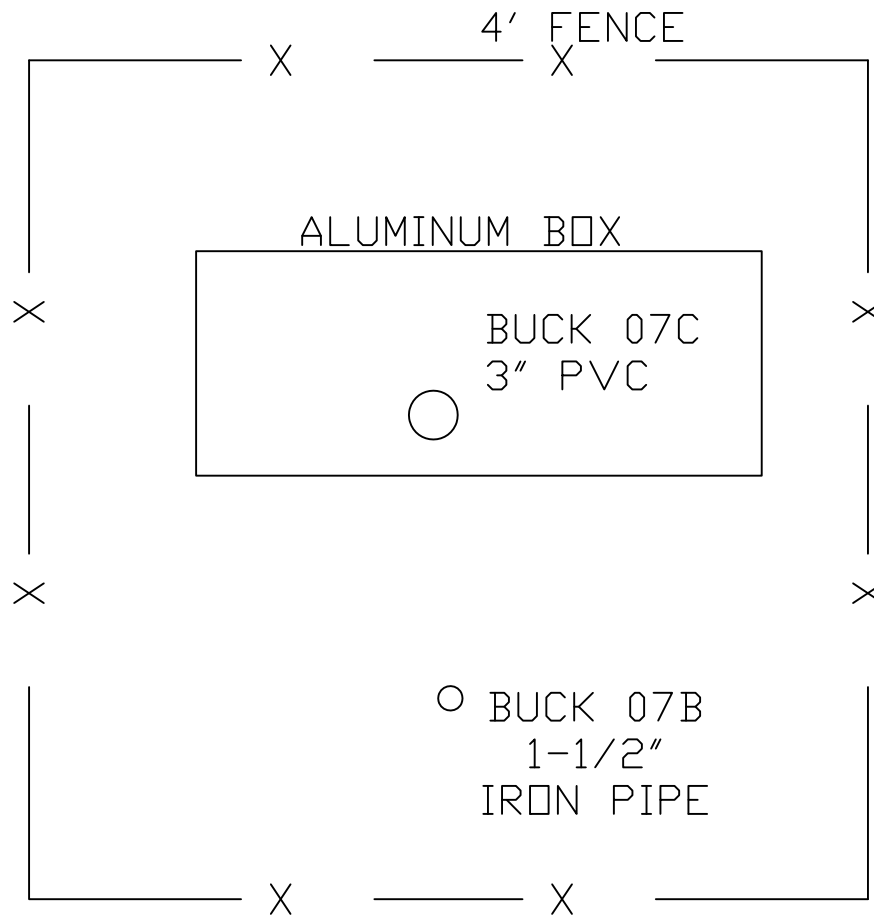
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY: HIGHLANDS		PROJECT: BUCK ISLAND RANCH		DESIGNATION: BUCK 07B	
SECTION 34		TOWNSHIP 38 SOUTH		RANGE 31 EAST	
GEOGRAPHIC INDEX OF QUAD					
Established by <u>HYATT SURVEY SERVICES</u> ____ Recovered by			NAME OF QUADRANGLE: BRIGHTON NW		
SURVEYOR <u>R. HYATT</u> DATE <u>06/16/2005</u>			FIELD BOOK <u>154</u> PAGE <u>1 - 45</u>		
HORIZONTAL DATUM: 1927 <b>1983</b> Other _____ (circle one) ZONE <b>E</b> or W					
VERTICAL DATUM: MSL 1929 <b>1988</b> Other _____ (circle one)					
CONTROL ACCURACY: HORIZONTAL 1 2 3 <b>4th</b> (circle one) VERTICAL 1 <b>2</b> 3					
STATE PLANE COORDINATES		X = 590335 FT	Y = 1018596 FT	EL. = 8.2828 m	
LATITUDE : N270809			LONGITUDE: W0811209		
<b>DESCRIPTION</b>					
<p>To Reach:            THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.</p> <p>TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 292 FT WEST AND 622 FT SOUTH OF THE SOUTH END OF THE BRIDGE.</p> <p>THE MARK IS LOCATED ON THE SOUTH SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT WOODEN FENCE. THE MARK IS 1.5 IN STEEL PIPE, 1 FT INSIDE THE FENCED ENCLOSURE, SET 3 IN ABOVE THE SURROUNDING GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE COORDINATE FOR THE MARK IS N=1018596 FT, E=590335 FT.</p>					

Notable Land marks: NONE  
 SKETCH: SEE ATTACHED SKETCH





**TITLE**

SKETCH OF BUCK 07 MONITORING WELL

**Hyatt Survey Services, Inc.**  
 Geographic Data Specialists

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212  
 PH. (941) 748-4693 FAX (941) 744-1643 LB No.: 7203

JOB NUMBER 12-0538	REVISION	SCALE NOT TO SCALE	DATE 6/17/05	DRAWN BY RSF	FILE NAME BUCK07.DWG	SHEET 1 OF 1
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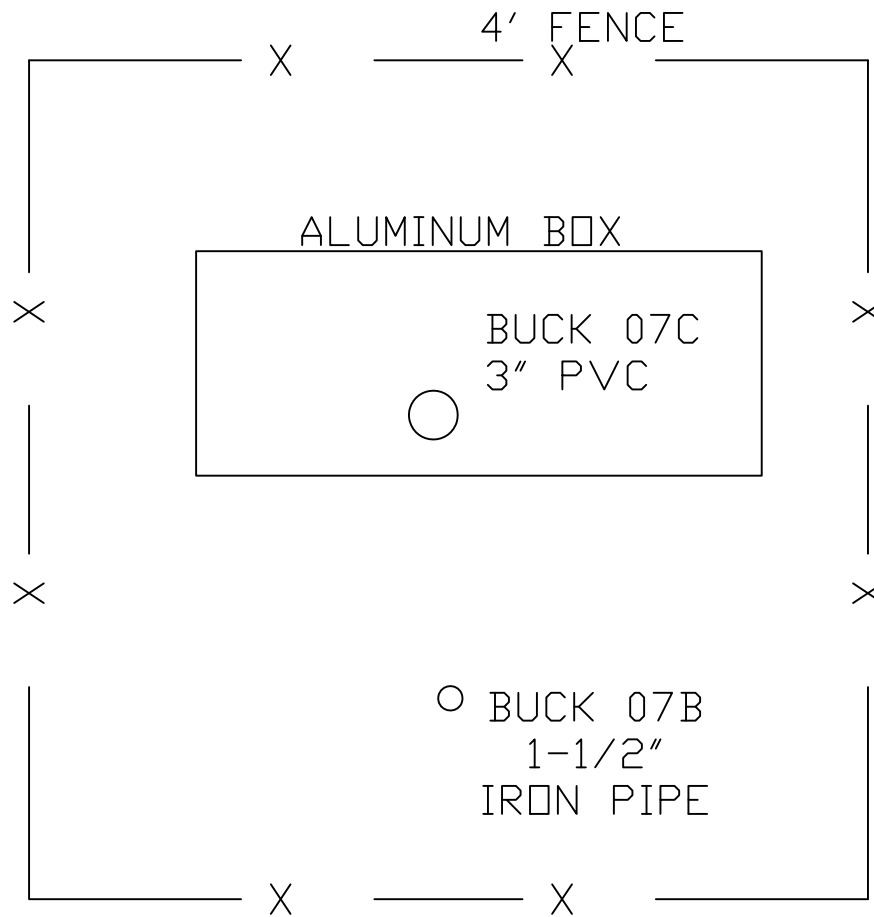


SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY: HIGHLANDS		PROJECT: BUCK ISLAND RANCH	DESIGNATION: BUCK 07C
SECTION 34		TOWNSHIP 38 SOUTH	RANGE 31 EAST
<b>GEOGRAPHIC INDEX OF QUAD</b>			
Established by <u>HYATT SURVEY SERVICES</u> ____ Recovered by		NAME OF QUADRANGLE: BRIGHTON NW	
SURVEYOR <u>R. HYATT</u> DATE <u>06/16/2005</u>		FIELD BOOK <u>154</u> PAGE <u>1 - 45</u>	
HORIZONTAL DATUM: 1927 <b>1983</b> Other _____ (circle one) ZONE <b>E</b> or W			
VERTICAL DATUM: MSL 1929 <b>1988</b> Other _____ (circle one)			
CONTROL ACCURACY: HORIZONTAL 1 2 3 <b>4th</b> _____ (circle one) VERTICAL 1 <b>2</b> 3			
STATE PLANE COORDINATES	X = 590335 FT	Y = 1018600 FT	EL. = 9.1578 m
LATITUDE : N270809		LONGITUDE: W0811209	
<b>DESCRIPTION</b>			
<p>To Reach:</p> <p>THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.</p> <p>TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 291 FT WEST AND 619 FT SOUTH OF THE SOUTH END OF THE BRIDGE.</p> <p>THE MARK IS A 3 IN PVC MONITORING WELL PIPE INSIDE A STEEL BOX SURROUNDED BY A 4 FT WOODEN FENCE. THE MARK IS SET 4 FT ABOVE THE SURROUNDING GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE COORDINATE FOR THE MARK IS N=1018600 FT, E=590335 FT</p> <p>Notable Land marks: NONE</p>			

SKETCH: SEE ATTACHED SKETCH



**TITLE**

SKETCH OF BUCK 07 MONITORING WELL

**Hyatt Survey Services, Inc.**  
 Geographic Data Specialists

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212  
 PH. (941) 748-4693 FAX (941) 744-1643 LB No.: 7203

JOB NUMBER 12-0538	REVISION	SCALE NOT TO SCALE	DATE 6/17/05	DRAWN BY RSF	FILE NAME BUCK07.DWG	SHEET 1 OF 1
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## The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.12

1 National Geodetic Survey, Retrieval Date = JANUARY 26, 2005

AE6391 \*\*\*\*\*

AE6391 DESIGNATION - H 437  
 AE6391 PID - AE6391  
 AE6391 STATE/COUNTY- FL/HIGHLANDS  
 AE6391 USGS QUAD - BRIGHTON NW (1983)

AE6391  
 AE6391 \*CURRENT SURVEY CONTROL

AE6391*	NAD 83(1986)-	27 08 14.	(N)	081 12 06.	(W)	SCALED
AE6391*	NAVD 88	-	9.395 (meters)	30.82	(feet)	ADJUSTED

AE6391  
 AE6391 GEOID HEIGHT- -25.20 (meters) GEOID03  
 AE6391 DYNAMIC HT - 9.380 (meters) 30.77 (feet) COMP  
 AE6391 MODELED GRAV- 979,125.1 (mgal) NAVD 88

AE6391 VERT ORDER - SECOND CLASS I

AE6391.The horizontal coordinates were scaled from a topographic map and have  
 AE6391.an estimated accuracy of +/- 6 seconds.

AE6391.The orthometric height was determined by differential leveling  
 AE6391.and adjusted by the National Geodetic Survey in March 1998.

AE6391.The geoid height was determined by GEOID03.

AE6391.The dynamic height is computed by dividing the NAVD 88  
 AE6391.geopotential number by the normal gravity value computed on the  
 AE6391.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 AE6391.degrees latitude (g = 980.6199 gals.).

AE6391.The modeled gravity was interpolated from observed gravity values.

AE6391;	North	East	Units	Estimated Accuracy
AE6391;SPC FL E -	310,620.	180,010.	MT	(+/- 180 meters Scaled)

AE6391  
 AE6391 SUPERSEDED SURVEY CONTROL

AE6391 No superseded survey control is available for this station.

AE6391 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML800016(NAD 83)

AE6391\_MARKER: DV = VERTICAL CONTROL DISK

AE6391\_SETTING: 38 = BRIDGE ABUTMENT

AE6391\_STAMPING: H 437 1995

AE6391\_MARK LOGO: NGS

AE6391\_MAGNETIC: N = NO MAGNETIC MATERIAL

AE6391\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AE6391\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE6391+SATELLITE: SATELLITE OBSERVATIONS - 1995

AE6391	HISTORY	- Date	Condition	Report By
AE6391	HISTORY	- 1995	MONUMENTED	FLDEP

AE6391  
 AE6391 STATION DESCRIPTION

AE6391 DESCRIBED BY FL DEPT OF ENV PRO 1995 (LGB)  
 AE6391 THE MARK IS ABOUT 15.0 MI (24.1 KM) SOUTHEAST OF LAKE PLACID, 12.5 MI  
 AE6391 (20.1 KM) NORTHWEST OF LAKEPORT IN SECTION 27, TOWNSHIP 38 SOUTH,  
 AE6391 RANGE 31 EAST. TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY  
 AE6391 27 AND STATE ROAD 70 SOUTH OF LAKE PLACID, GO EAST ON STATE ROAD 70  
 AE6391 FOR 7.7 MI (12.4 KM) TO THE WEST END OF THE BRIDGE OVER CANAL C 41  
 AE6391 (HARNEY POND CANAL), TURN RIGHT AT THE WEST END OF BRIDGE, PASSING  
 AE6391 THROUGH THE GATE, GO SOUTH ON THE LEVEE ROAD FOR 1.05 MI (1.69 KM) TO  
 AE6391 A SHARP CURVE TO THE RIGHT, CONTINUE WEST ON THE LEVEE ROAD FOR 1.85  
 AE6391 MI (2.98 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTH ON THE LEVEE ROAD  
 AE6391 FOR 2.1 MI (3.4 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTHEAST ON THE  
 AE6391 LEVEE ROAD FOR 2.7 MI (4.3 KM) TO A BRIDGE ON THE LEFT AND THE MARK  
 AE6391 SET FLUSH IN THE SOUTHWEST BRIDGE ABUTMENT. LOCATED 41.7 FT (12.7 M)

DATASHEETS

AE6391'NORTH OF THE APPROXIMATE CENTERLINE OF THE LEVEE ROAD, 18.9 FT (5.8 M)  
AE6391'NORTH OF A CARSONITE WITNESS POST, 8.4 FT (2.6 M) WEST OF THE  
AE6391'APPROXIMATE CENTERLINE OF THE BRIDGE AND 5.9 FT (1.8 M) SOUTH OF A  
AE6391'GATE. NOTE ALL GATES ON LEVEE ARE LOCKED, FOR KEY CONTACT CARL ZEISS,  
AE6391'SOUTH FLORIDA WATER MANAGEMENT DISTRICT, WEST PALM BEACH, FL. PHONE  
AE6391'NUMBER (407) 686-8800.

\*\*\* retrieval complete.  
Elapsed Time = 00:00:00

## The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.12

1 National Geodetic Survey, Retrieval Date = JANUARY 26, 2005

AE6392 \*\*\*\*\*

AE6392 DESIGNATION - J 437  
 AE6392 PID - AE6392  
 AE6392 STATE/COUNTY- FL/HIGHLANDS  
 AE6392 USGS QUAD - BRIGHTON NW (1983)

AE6392  
 AE6392 \*CURRENT SURVEY CONTROL

AE6392\* NAD 83(1999)- 27 08 13.27828(N) 081 11 02.84354(W) ADJUSTED

AE6392\* NAVD 88 - 11.555 (meters) 37.91 (feet) ADJUSTED

AE6392  
 AE6392 X - 870,509.596 (meters) COMP  
 AE6392 Y - -5,612,861.809 (meters) COMP  
 AE6392 Z - 2,891,728.917 (meters) COMP  
 AE6392 LAPLACE CORR- -3.52 (seconds) DEFLEC99  
 AE6392 ELLIP HEIGHT- -13.67 (meters) (05/31/01) GPS OBS  
 AE6392 GEOID HEIGHT- -25.25 (meters) GEOID03  
 AE6392 DYNAMIC HT - 11.537 (meters) 37.85 (feet) COMP  
 AE6392 MODELED GRAV- 979,122.9 (mgal) NAVD 88

AE6392  
 AE6392 HORZ ORDER - FIRST  
 AE6392 VERT ORDER - SECOND CLASS I  
 AE6392 ELLP ORDER - FOURTH CLASS I

AE6392.The horizontal coordinates were established by GPS observations  
 AE6392.and adjusted by the National Geodetic Survey in May 2001.

AE6392.The orthometric height was determined by differential leveling  
 AE6392.and adjusted by the National Geodetic Survey in March 1998.

AE6392.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE6392.The Laplace correction was computed from DEFLEC99 derived deflections.

AE6392.The ellipsoidal height was determined by GPS observations  
 AE6392.and is referenced to NAD 83.

AE6392.The geoid height was determined by GEOID03.

AE6392.The dynamic height is computed by dividing the NAVD 88  
 AE6392.geopotential number by the normal gravity value computed on the  
 AE6392.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 AE6392.degrees latitude (g = 980.6199 gals.).

AE6392.The modeled gravity was interpolated from observed gravity values.

AE6392  
 AE6392;  

	North	East	Units	Scale	Factor	Converg.
AE6392;SPC FL E	- 310,599.174	181,748.129	MT	0.99994529	-0 05 02.3	
AE6392;UTM 17	- 3,001,625.181	481,754.356	MT	0.99960411	-0 05 02.3	

AE6392!  
 AE6392!SPC FL E - Elev Factor x Scale Factor = Combined Factor  
 AE6392!UTM 17 - 1.00000215 x 0.99994529 = 0.99994744  
 AE6392!UTM 17 - 1.00000215 x 0.99960411 = 0.99960626

AE6392  
 AE6392 SUPERSEDED SURVEY CONTROL

AE6392 NAD 83(1990)- 27 08 13.27723(N) 081 11 02.84324(W) AD( ) 1  
 AE6392 ELLIP H (05/30/00) -13.70 (m) GP( ) 3 2  
 AE6392 NAVD 88 (05/30/00) 11.55 (m) 37.9 (f) LEVELING 3

AE6392  
 AE6392.Superseded values are not recommended for survey control.  
 AE6392.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 AE6392.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE6392  
 AE6392\_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML8175401625(NAD 83)  
 AE6392\_MARKER: I = METAL ROD  
 AE6392\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AE6392\_STAMPING: J 437 1995  
 AE6392\_MARK LOGO: NGS  
 AE6392\_PROJECTION: FLUSH  
 AE6392\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 AE6392\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 AE6392\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 AE6392+SATELLITE: SATELLITE OBSERVATIONS - July 13, 1999  
 AE6392\_ROD/PIPE-DEPTH: 24.4 meters

AE6392	HISTORY	- Date	Condition	Report By
AE6392	HISTORY	- 1995	MONUMENTED	FLDEP
AE6392	HISTORY	- 19990713	GOOD	BAH

AE6392  
 AE6392 STATION DESCRIPTION

AE6392 DESCRIBED BY FL DEPT OF ENV PRO 1995 (LGB)  
 AE6392 THE MARK IS ABOUT 15.0 MI (24.1 KM) SOUTHEAST OF LAKE PLACID, 12.1 MI  
 AE6392 (19.5 KM) NORTHWEST OF LAKEPORT IN SECTION 25, TOWNSHIP 38 SOUTH,  
 AE6392 RANGE 31 EAST. TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY  
 AE6392 27 AND STATE ROAD 70 SOUTH OF LAKE PLACID, GO EAST ON STATE ROAD 70  
 AE6392 FOR 7.7 MI (12.4 KM) TO THE WEST END OF THE BRIDGE OVER CANAL C 41  
 AE6392 (HARNEY POND CANAL), TURN RIGHT AT THE WEST END OF BRIDGE, PASSING  
 AE6392 THROUGH THE GATE, GO SOUTH ON THE LEVEE ROAD FOR 1.05 MI (1.69 KM) TO  
 AE6392 A SHARP CURVE TO THE RIGHT, CONTINUE WEST ON THE LEVEE ROAD FOR 1.85  
 AE6392 MI (2.98 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTH ON THE LEVEE ROAD  
 AE6392 FOR 2.1 MI (3.4 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTHEAST ON THE  
 AE6392 LEVEE ROAD FOR 2.7 MI (4.3 KM) TO ANOTHER CURVE TO THE LEFT, CONTINUE  
 AE6392 EAST ON THE LEVEE ROAD FOR 1.1 MI (1.8 KM) TO A PAIR OF 5.0 FT (1.5 M)  
 AE6392 DIAMETER CULVERTS, A GATE, AND THE MARK JUST EAST OF THE GATE ON THE  
 AE6392 RIGHT, A STAINLESS STEEL ROD DRIVEN TO THE DEPTH OF 80.0 FT (24.4 M)  
 AE6392 RECESSED 0.4 FT (12.2 CM) WITH A LOGO CAP FLUSH WITH THE GROUND.  
 AE6392 LOCATED 118.0 FT (36.0 M) SOUTH OF THE TOP SCARP OF CANAL C 41, 90.0  
 AE6392 FT (27.4 M) NORTH OF A FENCE LINE, 6.0 FT (1.8 M) EAST OF THE SOUTH  
 AE6392 GATE POST AND 2.5 FT (0.8 M) EAST OF A CARSONITE WITNESS POST. NOTE  
 AE6392 ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP. NOTE ALL GATES  
 AE6392 ON LEVEE ARE LOCKED, FOR KEY CONTACT CARL ZEISS, SOUTH FLORIDA WATER  
 AE6392 MANAGEMENT DISTRICT, WEST PALM BEACH, FL. PHONE NUMBER (407)  
 AE6392 686-8800.

AE6392  
 AE6392 STATION RECOVERY (1999)

AE6392 RECOVERY NOTE BY BERRYMAN & HENIGAR 1999 (BH)  
 AE6392 RECOVERED AS DESCRIBED.

\*\*\* retrieval complete.  
 Elapsed Time = 00:00:00

SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

West Side Bench Runs

Forward Run #1

Reverse Run #2

Preliminary Preliminary

Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.5769	10.9719		9.3950	H-437				1.5290	9.5759		8.0469	Buck 1A					8.0469	8.0479	Buck 1A
1.2373	10.2816	1.9276	9.0443					1.6929	10.5401	0.7287	8.8472								
1.4202	10.2451	1.4567	8.8249					1.1648	9.8373	1.8676	8.6725								
1.9284	10.2106	1.9629	8.2822					1.2641	10.1098	0.9916	8.8457								
1.4947	10.3185	1.3868	8.8238					1.6112	10.6170	1.1040	9.0058								
1.4255	10.4332	1.3108	9.0077					1.2763	10.4593	1.4340	9.1830								
1.6000	10.3754	1.6578	8.7754					1.6381	10.7007	1.3967	9.0626								
1.4450	10.3749	1.4455	8.9299					1.3182	10.4256	1.5933	9.1074								
1.3653	10.2412	1.4990	8.8759					1.4297	10.3343	1.5210	8.9046								
1.3029	10.4064	1.1377	9.1035					1.2983	10.3796	1.2530	9.0813								
1.4358	10.4914	1.3508	9.0556					1.6185	10.5848	1.4133	8.9663								
1.4350	10.5093	1.4171	9.0743					1.4891	10.5131	1.5608	9.0240								
1.3662	10.3915	1.4840	9.0253					1.5914	10.4590	1.6455	8.8676								
1.8000	10.5282	1.6633	8.7282					1.2818	10.3154	1.4254	9.0336								
1.5585	10.6713	1.4154	9.1128					1.4516	10.2345	1.5325	8.7829								
1.3980	10.6202	1.4491	9.2222					1.5334	10.3955	1.3724	8.8621								
1.8185	10.6895	1.7492	8.8710					1.4060	10.3779	1.4236	8.9719								
1.2979	10.2080	1.7794	8.9101					1.5885	10.5146	1.4518	8.9261								
1.2827	9.8445	1.6462	8.5618					1.4112	10.3117	1.6141	8.9005								
1.0878	10.0836	0.8487	8.9958					1.2958	10.3217	1.2895	9.0222								
1.5901	9.8335	1.8402	8.2434					1.5650	10.9147	0.9720	9.3497								
1.5609	9.5286	1.8658	7.9677					1.6021	11.1659	1.3509	9.5638								
		1.4837	8.0449	Buck 1A	32.4276	33.7777	-1.3501			1.7713	9.3946	H-437	32.0607	30.713	1.3477	1.3489			
1.6026	9.6475		8.0449	Buck 1A				1.5308	9.5124		7.9816	Buck 2A					7.98255	7.9839	Buck 2A
1.4547	9.6357	1.4665	8.1810					1.6312	9.8526	1.2910	8.2214								
1.5586	9.8827	1.3116	8.3241					1.4845	9.9331	1.4040	8.4486								
1.4750	9.8521	1.5056	8.3771					1.4619	10.0354	1.3596	8.5735								
1.4788	9.7537	1.5772	8.2749					1.5758	10.0207	1.5905	8.4449								
1.4061	9.6808	1.4790	8.2747					1.4685	9.6838	1.8054	8.2153								
1.3335	9.4576	1.5567	8.1241					1.5098	9.7072	1.4864	8.1974								
1.5206	9.4590	1.5192	7.9384					1.4091	9.6185	1.4978	8.2094								
		1.4775	7.9815	Buck 2A	11.8299	11.8933	-0.0634			1.5716	8.0469	Buck 1A	12.0716	12.0063	0.0653	0.06435			
1.4975	9.4790		7.9815	Buck 2A				1.2116	9.4564		8.2448	Buck 3B					8.2455	8.2470	Buck 3B
1.4772	9.5316	1.4246	8.0544					1.4400	9.5453	1.3511	8.1053								
1.5121	9.5761	1.4676	8.0640					1.6740	9.6000	1.6193	7.9260								
1.5604	9.7000	1.4365	8.1396					1.1349	9.4657	1.2692	8.3308								
		1.4558	8.2442	Buck 3B	6.0472	5.7845	0.2627			1.4841	7.9816	Buck 2A	5.4605	5.7237	-0.2632	-0.26295			
1.4879	9.7321		8.2442	Buck 3B				1.6343	9.8822		8.2479	Buck 4A					8.248	8.2497	Buck 4A
1.4041	9.9134	1.2228	8.5093					1.5949	9.9508	1.5263	8.3559								
1.4722	9.8024	1.5832	8.3302					1.5594	9.9624	1.5478	8.4030								
1.4825	9.8099	1.4750	8.3274					1.2978	9.7127	1.5475	8.4149								
		1.5638	8.2461	Buck 4A	5.8467	5.8448	0.0019			1.4679	8.2448	Buck 3B	6.0864	6.0895	-0.0031	-0.0025			
1.7678	10.0139		8.2461	Buck 4A				1.8997	10.1476		8.2479	Buck 4A							
1.4169	9.6490	1.7818	8.2321					1.9971	10.2401	1.9046	8.2430								
1.1706	9.6231	1.1965	8.4525					1.4298	9.6335	2.0364	8.2037								
1.5580	9.6904	1.4907	8.1324					1.4292	9.6045	1.4582	8.1753								
1.4653	9.7145	1.4412	8.2492					1.4951	9.7084	1.3912	8.2133								
1.4034	9.6725	1.4454	8.2691					1.4795	9.7894	1.3985	8.3099								
		1.3634	8.3091	Buck 5B	8.7820	8.7190	0.0630			1.4787	8.3107	Buck 5B	9.7304	9.6676	0.0628	0.0629	8.3109	8.3129	Buck 5B



SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.3852	9.6943		8.3091	Buck 5B				1.5646	9.6835		8.1189	Buck 6A					8.1187	8.1209	Buck 6A
1.5208	9.7372	1.4779	8.2164					1.4111	9.7320	1.3626	8.3209								
1.5257	9.6598	1.6031	8.1341					1.3968	9.6907	1.4381	8.2939								
1.5919	9.6750	1.5767	8.0831					1.4174	9.7126	1.3955	8.2952								
		1.5585	8.1165	Buck 6A	6.0236	6.2162	-0.1926			1.4019	8.3107	Buck 5B	5.7899	5.5981	0.1918	0.1922			
								1.5887	9.7312		8.1425	Buck 8A					8.14155	8.1440	Buck 8A
1.6317	9.7482		8.1165	Buck 6A				1.3058	9.5511	1.4859	8.2453								
1.4351	9.6364	1.5469	8.2013					1.6044	9.7062	1.4493	8.1018								
1.4827	9.6109	1.5082	8.1282					1.3667	9.6462	1.4267	8.2795								
1.4376	9.5918	1.4567	8.1542					1.4273	9.7208	1.3527	8.2935								
		1.4532	8.1386	Buck 8A	5.9871	5.9650	0.0221	1.4462	9.6843	1.4827	8.2381								
										1.5654	8.1189	Buck 6A	8.7391	8.7627	-0.0236	-0.02285			
1.3758	9.5144		8.1386	Buck 8A				1.4994	9.6103		8.1109	Buck 9B					8.10865	8.1114	Buck 9B
1.5503	9.5724	1.4923	8.0221					1.5640	9.6830	1.4913	8.1190								
1.0713	9.6368	1.0069	8.5655					1.4371	9.6004	1.5197	8.1633								
1.4559	9.6916	1.4011	8.2357					1.6971	9.6475	1.6500	7.9504								
1.3825	9.5313	1.5428	8.1488					0.9355	9.5707	1.0123	8.6352								
1.4845	9.5301	1.4857	8.0456					1.2466	9.3390	1.4783	8.0924								
1.6291	9.7701	1.3891	8.1410							1.1965	8.1425	Buck 8A	8.3797	8.3481	0.0316	0.0329			
1.5410	9.6333	1.6778	8.0923																
		1.5289	8.1044	Buck 9B	11.4904	11.5246	-0.0342												
1.5075	9.6119		8.1044	Buck 9B				2.0806	10.0293		7.9487	Buck 10A					7.9461	7.9490	Buck 10A
1.3061	9.5092	1.4088	8.2031					1.3675	9.5893	1.8075	8.2218								
1.6681	9.4778	1.6995	7.8097					1.5019	9.5761	1.5151	8.0742								
1.6949	9.5309	1.6418	7.8360					1.3489	9.5642	1.3608	8.2153								
		1.5894	7.9415	Buck 10A	6.1766	6.3395	-0.1629			1.4533	8.1109	Buck 9B	6.2989	6.1367	0.1622	0.16255			
1.5843	9.5258		7.9415	Buck 10A				1.3549	9.3894		8.0345	Buck 11B					8.03075	8.0340	Buck 11B
1.4540	9.5784	1.4014	8.1244					1.3880	9.4430	1.3344	8.0550								
1.4155	9.4682	1.5257	8.0527					1.4131	9.5210	1.3351	8.1079								
1.3800	9.5978	1.2504	8.2178					1.5197	9.6189	1.4218	8.0992								
1.4729	9.4851	1.5856	8.0122					1.4410	9.5470	1.5129	8.1060								
1.4729	9.4851	1.5856	8.0122					1.4633	9.5983	1.4120	8.1350								
1.1798	9.2667	1.3982	8.0869					1.4779	9.6110	1.4652	8.1331								
		1.2417	8.0250	Buck 11B	8.4865	8.4030	0.0835	1.4363	9.4476	1.5997	8.0113								
										1.4989	7.9487	Buck 10A	11.4942	11.58	-0.0858	-0.08465			
1.5778	9.6028		8.0250	Buck 11B				1.5857	10.9807		9.3950	H-437					9.3913	9.3950	H-437
1.6708	10.3053	0.9683	8.6345					1.1452	10.3988	1.7271	9.2536								
1.4559	10.1500	1.6112	8.6941					1.2592	10.1930	1.4650	8.9338								
1.2135	10.0147	1.3488	8.8012					1.5455	10.3269	1.4116	8.7814								
1.3837	10.2113	1.1871	8.8276					1.4370	10.1415	1.6224	8.7045								
1.2700	10.0314	1.4499	8.7614					1.7494	10.1537	1.7372	8.4043								
1.3796	10.1104	1.3006	8.7308					1.4437	9.9914	1.6060	8.5477								
1.2350	10.0850	1.2604	8.8500					1.3080	9.7107	1.5887	8.4027								
1.7861	10.3916	1.4795	8.6055					1.5859	9.6785	1.6181	8.0926								
1.5440	10.3077	1.6279	8.7637					1.3894	9.5304	1.5375	8.1410								
1.4888	10.1134	1.6831	8.6246							1.4959	8.0345	Buck 11B	14.449	15.8095	-1.3605	-1.36055			
1.4763	10.2948	1.2949	8.8185																
2.0240	10.6456	1.6732	8.6216																
1.6362	11.0869	1.1949	9.4507																
		1.7013	9.3856	H-437	21.1417	19.7811	1.3606												
1.6157	11.0107		9.3950	H-437				1.4494	9.7318		8.2824	Buck 7B					8.28275	8.2828	Buck 7B
0.9892	10.1507	1.8492	9.1615					1.2762	9.7976	1.2104	8.5214								
1.1855	9.8518	1.4844	8.6663					1.5941	10.1972	1.1945	8.6031								
1.2020	9.7236	1.3302	8.5216					1.8115	10.9892	1.0195	9.1777								
		1.4412	8.2824	Buck 7B	4.9924	6.1050	-1.1126			1.5949	9.3943	H-437	6.1312	5.0193	1.1119	1.11225			

SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

East Side Bench Runs																					
Foreward Run #1									Reverse Run #2									Preliminary		Preliminary	
Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description		
0.9432	12.4982		11.5550	J-437				1.9986	9.8717		7.8731	Buck 20A									
1.3173	11.0350	2.7805	9.7177					1.5150	9.3642	2.0225	7.8492										
1.2316	9.8580	2.4086	8.6264					2.9798	11.6494	0.6946	8.6696										
2.3465	10.9722	1.2323	8.6257					1.4440	9.8614	3.2320	8.4174										
1.7698	10.3788	2.3632	8.6090					2.8779	12.3977	0.3416	9.5198										
1.3100	9.2574	2.4314	7.9474					1.6664	13.4310	0.6331	11.7646										
		1.3872	7.8702	Buck 20A	8.9184	12.6032	-3.6848			1.8767	11.5543	J-437	12.4817	8.8005	3.6812	3.683	11.55985	11.5550	J-437		
1.9430	9.8132		7.8702	Buck 20A				1.4105	9.4864		8.0759	Buck 12B									
1.8603	9.4222	2.2513	7.5619					2.0659	9.7420	1.8103	7.6761										
1.5142	9.4850	1.4514	7.9708					1.4043	9.7940	1.3523	8.3897										
1.4106	9.5257	1.3699	8.1151					1.2964	9.8695	1.2209	8.5731										
1.6551	9.7508	1.4300	8.0957					1.3240	9.8208	1.3727	8.4968										
1.3601	9.5419	1.5690	8.1818					1.3201	9.8779	1.2630	8.5578										
1.4092	9.5751	1.3760	8.1659					1.4787	9.9123	1.4443	8.4336										
1.3745	9.4837	1.4659	8.1092					1.4935	9.8331	1.5727	8.3396										
		1.4120	8.0717	Buck 12B	12.5270	12.3255	0.2015	1.3980	9.7105	1.5206	8.3125										
								1.0214	9.4757	1.2562	8.4543										
										1.6026	7.8731	Buck 20A	14.2128	14.4156	-0.2028	-0.20215	7.87685	7.8725	Buck 20A		
1.5000	9.5717		8.0717	Buck 12B				1.5960	9.4309		7.8349	Buck 13A									
1.6934	9.4443	1.8208	7.7509					1.3913	9.3609	1.4613	7.9696										
1.5228	9.5503	1.4168	8.0275					1.5033	9.4892	1.3750	7.9859										
1.4841	9.4715	1.5629	7.9874					1.4601	9.5350	1.4143	8.0749										
		1.6424	7.8291	Buck 13A	6.2003	6.4429	-0.2426			1.4591	8.0759	Buck 12B	5.9507	5.7097	0.241	0.2418	8.079	8.0754	Buck 12B		
1.7948	9.6239		7.8291	Buck 13A				1.5509	9.4585		7.9076	Buck 14B									
1.4983	9.4595	1.6627	7.9612					1.9861	9.6285	1.8161	7.6424										
		1.5574	7.9021	Buck 14B	3.2931	3.2201	0.0730			1.7936	7.8349	Buck 13A	3.537	3.6097	-0.0727	-0.07285	7.8372	7.8339	Buck 13A		
1.5392	9.4413		7.9021	Buck 14B				1.5528	9.4298		7.8770	Buck 15A									
1.6278	9.4424	1.6267	7.8146					1.4583	9.4860	1.4021	8.0277										
		1.5717	7.8707	Buck 15A	3.1670	3.1984	-0.0314			1.5784	7.9076	Buck 14B	3.0111	2.9805	0.0306	0.031	7.91005	7.9069	Buck 14B		
1.5848	9.4555		7.8707	Buck 15A				1.4814	9.4556		7.9742	Buck 16B									
0.8872	9.4610	0.8817	8.5738					1.7663	9.7838	1.4381	8.0175										
1.4545	9.4376	1.4779	7.9831					1.4105	9.3790	1.8153	7.9685										
		1.4707	7.9669	Buck 16B	3.9265	3.8303	0.0962	1.4276	9.4175	1.3891	7.9899										
										1.5405	7.8770	Buck 15A	6.0858	6.183	-0.0972	-0.0967	7.87905	7.8761	Buck 15A		
1.4462	9.4131		7.9669	Buck 16B				1.6125	9.4649		7.8524	Buck 17A									
1.6787	9.4573	1.6345	7.7786					1.3993	9.4322	1.4320	8.0329										
		1.6114	7.8459	Buck 17A	3.1249	3.2459	-0.1210			1.4580	7.9742	Buck 16B	3.0118	2.89	0.1218	0.1214	7.97575	7.9731	Buck 16B		
1.6085	9.4544		7.8459	Buck 17A				1.5574	9.5152		7.9578	Buck 18B									
1.5033	9.5050	1.4527	8.0017					1.4904	9.4713	1.5343	7.9809										
		1.5548	7.9502	Buck 18B	3.1118	3.0075	0.1043			1.6189	7.8524	Buck 17A	3.0478	3.1532	-0.1054	-0.10485	7.85435	7.8518	Buck 17A		
1.4811	9.4313		7.9502	Buck 18B				1.6693	9.6490		7.9797	Buck 19A									
1.8287	9.9701	1.2899	8.1414					1.1914	9.4936	1.3468	8.3022										
1.5083	9.6509	1.8275	8.1426							1.5358	7.9578	Buck 18B	2.8607	2.8826	-0.0219	-0.02055	7.9592	7.9569	Buck 18B		
		1.6815	7.9694	Buck 19A	4.8181	4.7989	0.0192														

SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.6394	9.6088		7.9694	Buck 19A				1.9151	9.8872		7.9721	Buck 22B							
1.4109	9.6314	1.3883	8.2205					1.9112	9.9174	1.8810	8.0062								
1.3867	9.5068	1.5113	8.1201					1.4913	9.8750	1.5337	8.3837								
1.5512	9.6179	1.4401	8.0667					1.3551	9.8051	1.4250	8.4500								
1.8902	9.9212	1.5869	8.0310					1.5823	9.8941	1.4933	8.3118								
1.6636	9.7215	1.8633	8.0579					1.3200	9.6218	1.5923	8.3018								
		1.7591	7.9624	Buck 22B	9.5420	9.5490	-0.0070			1.6421	7.9797	Buck 19A	9.575	9.5674	0.0076	0.0073	7.97975	7.9776	Buck 19A
1.8973	9.8597		7.9624	Buck 22B				2.0585	9.8161		7.7576	Buck 21A							
1.5705	9.7389	1.6913	8.1684					1.4509	9.6525	1.6145	8.2016								
1.4919	9.4512	1.7796	7.9593					1.6103	9.6259	1.6369	8.0156								
1.4377	9.5509	1.3380	8.1132					1.4082	9.5472	1.4869	8.1390								
1.7685	9.7568	1.5626	7.9883					1.5949	9.6252	1.5169	8.0303								
1.1950	9.4128	1.5390	8.2178					1.4346	9.7306	1.3292	8.2960								
		1.6649	7.7479	Buck 21A	9.3609	9.5754	-0.2145	1.0665	9.4916	1.3055	8.4251								
								1.4202	9.3873	1.5245	7.9671								
										1.4152	7.9721	Buck 22B	12.0441	11.8296	0.2145	0.2145	7.97245	7.9707	Buck 22B
1.6015	9.3494		7.7479	Buck 21A				1.2360	12.7910		11.5550	J-437					11.555		
1.3305	9.3566	1.3233	8.0261					1.1291	12.5386	1.3815	11.4095								
1.7334	9.6698	1.4202	7.9364					1.2447	12.2862	1.4971	11.0415								
1.7039	9.6545	1.7192	7.9506					1.6178	12.4240	1.4800	10.8062								
1.6311	9.5663	1.7193	7.9352					1.2294	12.8978	0.7556	11.6684								
1.5721	9.7729	1.3655	8.2008					1.4177	13.0188	1.2967	11.6011								
1.5992	9.7704	1.6017	8.1712					1.5680	12.8936	1.6932	11.3256								
1.6002	9.8496	1.5210	8.2494					0.6027	11.2540	2.2423	10.6513								
1.6236	9.7572	1.7160	8.1336					1.3210	10.3158	2.2592	8.9948								
2.5383	10.8480	1.4475	8.3097					1.3232	10.4815	1.1575	9.1583								
1.1523	11.1014	0.8989	9.9491					0.9842	9.3059	2.1598	8.3217								
1.1276	9.6786	2.5504	8.5510					1.4235	9.3712	1.3582	7.9477								
2.7434	11.3156	1.1064	8.5722					1.7020	9.3506	1.7226	7.6486								
2.2914	13.0662	0.5408	10.7748					1.6132	9.5637	1.4001	7.9505								
		1.5216	11.5446	J-437	24.2485	20.4518	3.7967			1.8061	7.7576	Buck 21A	18.4125	22.2099	-3.7974	-3.79705	7.75795	7.7569	Buck 21A

SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

Subordinate Bench Runs																			
Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description			Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description
1.6484	9.4823		7.8339	Buck 13A						1.5924	9.4993		7.9069	Buck 14B					
		0.6309	8.8514	Buck 13C	1.0175								0.6432	8.8561	Buck 14C	0.9492			
0.6310	9.4824		8.8514	Buck 13C						0.6432	9.4993		8.8561	Buck 14C					
		1.6486	7.8338	Buck 13A	-1.0176	1.0176	8.8515	Buck 13C					1.5924	7.9069	Buck 14B	-0.9492	0.9492	8.8561	Buck 14C
1.4950	9.3711		7.8761	Buck 15A						1.5014	9.3775		7.8761	Buck 15A					
		1.4543	7.9168	Buck 15B	0.0407								0.6178	8.7597	Buck 15C	0.8836			
1.4541	9.3709		7.9168	Buck 15B						0.6176	9.3773		8.7597	Buck 15C					
		1.4950	7.8759	Buck 15A	-0.0409	0.0408	7.9169	Buck 15B					1.5015	7.8758	Buck 15A	-0.8839	0.88375	8.7598	Buck 15C
1.4968	9.4699		7.9731	Buck 16B						1.6031	9.5600		7.9569	Buck 18B					
		0.6344	8.8355	Buck 16C	0.8624								0.6598	8.9002	Buck 18C	0.9433			
0.6344	9.4699		8.8355	Buck 16C						0.6585	9.5587		8.9002	Buck 18C					
		1.4969	7.9730	Buck 16B	-0.8625	0.8625	8.8355	Buck 16C					1.6019	7.9568	Buck 18B	-0.9434	0.94335	8.9002	Buck 18C
1.5298	9.3816		7.8518	Buck 17A						1.5299	9.4060		7.8761	Buck 17A					
		1.4450	7.9366	Buck 17B	0.0848								0.5377	8.8683	Buck 17C	0.9922			
1.4461	9.3827		7.9366	Buck 17B						0.5378	9.4061		8.8683	Buck 17C					
		1.5300	7.8527	Buck 17A	-0.0839	0.0844	7.9362	Buck 17B					1.5296	7.8765	Buck 17A	-0.9918	0.992	8.8681	Buck 17C
1.4539	9.5293		8.0754	Buck 12B						1.4625	9.4332		7.9707	Buck 22B					
		0.5987	8.9306	Buck 12C	0.8552								0.4901	8.9431	Buck 22C	0.9724			
0.6001	9.5307		8.9306	Buck 12C						0.4924	9.4355		8.9431	Buck 22C					
		1.4559	8.0748	Buck 12B	-0.8558	0.8555	8.9309	Buck 12C					1.4650	7.9705	Buck 22B	-0.9726	0.9725	8.9432	Buck 22C
1.5261	9.5037		7.9776	Buck 19A						1.5237	9.5013		7.9776	Buck 19A					
		1.3454	8.1583	Buck 19B	0.1807								0.532	8.9693	Buck 19C	0.9917			
1.3431	9.5014		8.1583	Buck 19B						0.5324	9.5017		8.9693	Buck 19C					
		1.5236	7.9778	Buck 19A	-0.1805	0.1806	8.1582	Buck 19B					1.5234	7.9783	Buck 19A	-0.991	0.99135	8.9689	Buck 19C
1.6168	9.3737		7.7569	Buck 21A						1.6190	9.3759		7.7569	Buck 21A					
		1.5146	7.8591	Buck 21B	0.1022								0.5827	8.7932	Buck 21C	1.0363			
1.5183	9.3774		7.8591	Buck 21B						0.5806	9.3738		8.7932	Buck 21C					
		1.6206	7.7568	Buck 21A	-0.1023	0.1023	7.8591	Buck 21B					1.6166	7.7572	Buck 21A	-1.036	1.03615	8.7930	Buck 21C
1.4749	9.3474		7.8725	Buck 20A						1.4775	9.3500		7.8725	Buck 20A					
		1.4620	7.8854	Buck 20B	0.0129								0.4893	8.8607	Buck 20C	0.9882			
1.4647	9.3501		7.8854	Buck 20B						0.4859	9.3466		8.8607	Buck 20C					
		1.4775	7.8726	Buck 20A	-0.0128	0.0129	7.8853	Buck 20B					1.4744	7.8722	Buck 20A	-0.9885	0.98835	8.8608	Buck 20C
1.5426	9.5905		8.0479	Buck 1A						1.5400	9.5879		8.0479	Buck 1A					
		1.4994	8.0911	Buck 1B	0.0432								0.5966	8.9913	Buck 1C	0.9434			
1.4973	9.5884		8.0911	Buck 1B						0.6008	9.5921		8.9913	Buck 1C					
		1.5408	8.0476	Buck 1A	-0.0435	0.0433	8.0912	Buck 1B					1.5442	8.0479	Buck 1A	-0.9434	0.9434	8.9913	Buck 1C
1.5526	9.5365		7.9839	Buck 2A						1.5520	9.5359		7.9839	Buck 2A					
		1.4119	8.1246	Buck 2B	0.1407								0.5536	8.9823	Buck 2C	0.9984			
1.4106	9.5352		8.1246	Buck 2B						0.5974	9.5797		8.9823	Buck 2C					
		1.5495	7.9857	Buck 2A	-0.1389	0.1398	8.1237	Buck 2B					1.5945	7.9852	Buck 2A	-0.9971	0.99775	8.9817	Buck 2C

SFWMD - Buck Island Ranch  
Monitoring Well Benchmarks  
Computation Sheet

Subordinate Bench Runs

Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description	Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description
1.4742	9.7212		8.2470	Buck 3B					1.4047	9.7176		8.3129	Buck 5B				
		0.6842	9.0370	Buck 3C	0.7900						0.5447	9.1729	Buck 5C	0.86			
0.6855	9.7225		9.0370	Buck 3C					0.4953	9.6682		9.1729	Buck 5C				
		1.4740	8.2485	Buck 3B	-0.7885	0.7893	9.0363	Buck 3C			1.3549	8.3133	Buck 5B	-0.8596	0.8598	9.1727	Buck 5C
1.5430	9.7927		8.2497	Buck 4A					1.5457	9.7954		8.2497	Buck 4A				
		1.4687	8.3240	Buck 4B	0.0743						0.5753	9.2201	Buck 4C	0.9704			
1.4713	9.7953		8.3240	Buck 4B					0.5754	9.7955		9.2201	Buck 4C				
		1.5458	8.2495	Buck 4A	-0.0745	0.0744	8.3241	Buck 4B			1.5456	8.2499	Buck 4A	-0.9702	0.9703	9.2200	Buck 4C
1.5171	9.6380		8.1209	Buck 6A					1.5095	9.6304		8.1209	Buck 6A				
		1.3944	8.2436	Buck 6B	0.1227						0.4809	9.1495	Buck 6C	1.0286			
1.3862	9.6298		8.2436	Buck 6B					0.4782	9.6277		9.1495	Buck 6C				
		1.5091	8.1207	Buck 6A	-0.1229	0.1228	8.2437	Buck 6B			1.5062	8.1215	Buck 6A	-1.028	1.0283	9.1492	Buck 6C
1.4219	9.4559		8.0340	Buck 11B					1.4762	9.5876		8.1114	Buck 9B				
		0.5336	8.9223	Buck 11C	0.8883						0.6243	8.9633	Buck 9C	0.8519			
0.5364	9.4587		8.9223	Buck 11C					0.6285	9.5918		8.9633	Buck 9C				
		1.4240	8.0347	Buck 11B	-0.8876	0.8880	8.9219	Buck 11C			1.4802	8.1116	Buck 9B	-0.8517	0.8518	8.9632	Buck 9C
1.7537	9.7027		7.9490	Buck 10A					1.7556	9.7046		7.9490	Buck 10A				
		1.6537	8.0490	Buck 10B	0.1000						0.8109	8.8937	Buck 10C	0.9447			
1.6553	9.7043		8.0490	Buck 10B					0.808	9.7017		8.8937	Buck 10C				
		1.7548	7.9495	Buck 10A	-0.0995	0.0998	8.0487	Buck 10B			1.7521	7.9496	Buck 10A	-0.9441	0.9444	8.8934	Buck 10C
1.5719	9.7159		8.1440	Buck 8A					1.5690	9.7130		8.1440	Buck 8A				
		1.4423	8.2736	Buck 8B	0.1296						0.6185	9.0945	Buck 8C	0.9505			
1.4388	9.7124		8.2736	Buck 8B					0.618	9.7125		9.0945	Buck 8C				
		1.5691	8.1433	Buck 8A	-0.1303	0.1300	8.2739	Buck 8B			1.5686	8.1439	Buck 8A	-0.9506	0.95055	9.0945	Buck 8C
1.5024	9.7852		8.2828	Buck 7B													
		0.6280	9.1572	Buck 7C	0.8744												
0.6249	9.7821		9.1572	Buck 7C													
		1.5006	8.2815	Buck 7B	-0.8757	0.8751	9.1578	Buck 7C									



# Office

## Project

1 June 2017

### INPUT

Geographic, flhpgn - Florida HPGN  
Vertical - NAVD88, U.S. Feet

### OUTPUT

State Plane, flhpgn - Florida HPGN  
0901 - Florida East, U.S. Feet  
Vertical - NGVD29 (Custom), U.S. Feet

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## BUCK07

1/1

**Latitude:** 27 08 09  
**Longitude:** 81 12 09  
**Elevation/Z:** 0

**Northing/Y:** 1018601.317  
**Easting/X:** 590308.029  
**Elevation/Z:** 1.220  
**Convergence:** -0 05 32.49916  
**Scale Factor:** 0.999946149  
**Combined Factor:** 0.999950044

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Remark:

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

# DBHYDRO | by station

## STATION INFORMATION

Station	BUCK07
Site	BUCK07
Type	WELL
Latitude (ddmmss.sss)	270808.885
Longitude (ddmmss.sss)	811208.732
X Coord (ft) NAD83	590331
Y Coord (ft) NAD83	1018606
County	Highlands
Basin	C-41N
Section	34
Township	38
Range	31
Show Map	<a href="#">Google Map</a>
Well Info	<a href="#">Info</a>
Description	GROUNDWATER MONITORING STATION AT BUCK07
Notes	
Nearby Stations	<a href="#">Nearby Stations</a>
Attachments	None Available

Query returned 1 station record(s).

[Get Time Series Data](#)