



# Bean, Whitaker, Lutz & Kareh, Inc.

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(Ph) 239-481-1331 (Fax) 239-481-1073

October 14, 2017

Mr. Anura Karuna-Muni  
Lee County Natural Resources  
POB 398  
Fort Myers, FL 33902-0398

RE: Survey Data for High Water Marks  
Post Hurricane Irma  
BWLK Project number 44471

Dear Anura:


Please find the attached 25 survey data sheets relative to the surveyed high water marks. This work was prepared to document the high water marks from the flood waters of Hurricane Irma in September of 2017 within Lee County, Florida.

Lee County staff accompanied our survey field crews to identify the marks. We then obtained each water mark elevation by utilizing GPS real time kinematic (RTK) survey grade equipment manufactured by Leica or by conventional survey leveling. Our field procedures included survey checks to existing vertical control monuments established and data published by the National Geodetic Survey (NGS).

The vertical datum is the North American Datum (NAD) of 1988. The site specific information is on each of the attached sheets.

Sincerely,

BEAN, WHITAKER, LUTZ & KAREH, INC. (LB4919)

  
Stephen F. Shawles II, P.S.M. LS6419  
Professional Surveyor and Mapper  
State of Florida

SFS/ss

Attachments

44471 SURVEYORS REPORT.docx

PRINCIPALS:

SCOTT C. WHITAKER, PSM, PRESIDENT

JOSEPH L. LUTZ, PSM

AHMAD R. KAREH, PE, MSCE, VICE PRESIDENT

CONSULTING ENGINEERS - SURVEYORS AND MAPPERS - PLANNERS



ASSOCIATES:

JAMES A. HESSLER, PSM

ROBERT L. CARMELIA, PSM

STEPHEN F. SHAWLES II, PSM

ANDREW D. JOHNSON, PSM

Site Address: 6901 Alico Rd. Fort Myers Fl. 33912

Vertical Datum: NAVD 1988

Latitude 26°29'32.7" N - Longitude 81°50'17.1" W

High Water Mark Elev. = 10.9' (debris line along rail road)

Existing Water Elev. At 1:27 PM 09-14-17 = 8.1' (lake south of Rail Road tracks.)



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Site Address: 16351 Old US 41 Fort Myers, Fl. 33912

Vertical Datum: NAVD 1988

Latitude 26°30'21.6" N - Longitude 81°51'0.8" W

High Water Mark Elev. = 10.1' (stain on concrete sidewalk)

Existing Water Elev. At 12:40 PM 09-14-17 = 8.8' (water's edge of easterly spur of 10 Mile Canal)





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Site Address: 18101 S. Tamiami Trail Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'31.2" N - Longitude 81°50'11.4" W

High Water Mark Elev. = 6.7' (debris line along Mullock Creek bank)

Existing Water Elev. At 4:00 PM 09-14-17 = 3.4'



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Site Address: 16800 S. Tamiami Trail Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°29'56.9" N - Longitude 81°51'14.3" W

High Water Mark Elev. = 7.3' (debris line on fire hydrant)

Existing Water Elev. At 2:13 PM 09-14-17 = 6.4'





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Site Address: 5630 Harborage Rd. Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'57.1" N - Longitude 81°51'13.4" W

High Water Mark Elev. = 5.0' (debris line on brick drive)



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Site Address: 16701 Old US 41 Fort Myers, Fl. 33912

Vertical Datum: NAVD 1988

Latitude 26°29'55.2" N - Longitude 81°50'53.1" W

High Water Mark Elev. = 8.3' (debris line in grass)



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Site Address: 6111 Mellow Drive North Fort Myers, Fl. 33917.

Vertical Datum: NAVD 1988

Latitude 26°43'35.2" N - Longitude 81°51'35.1"W

High Water Mark Elev. = 17.8' (nail set at mud line on asphalt roadway)

Existing Water Elev. At 3:10 PM 09-14-17 = 16.9'



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Site Address: 8951 Nalle Grade Rd. North Fort Myers, Fl. 33917.

Vertical Datum: NAVD 1988

Latitude 26°45'19.2" N - Longitude 81°48'34.6W

High Water Mark Elev. = 23.8' (debris line on fence)

Existing Water Elev. At 2:10 PM 09-14-17 = 23.3'





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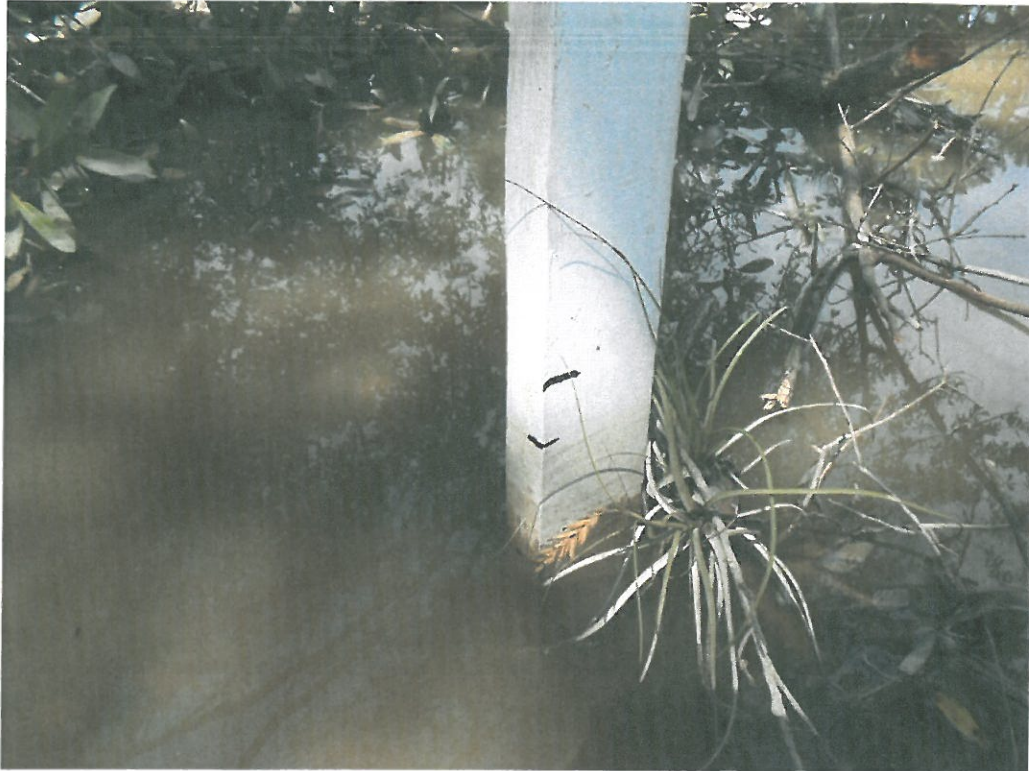
Site Address: 9440 Henderson Grade North Fort Myers, Fl. 33917.

Vertical Datum: NAVD 1988

Latitude 26°44'32.8" N - Longitude 81°48'7.9"W

High Water Mark Elev. = 20.3' (mud line on wood sign post)

Existing Water Elev. At 1:00 PM 09-14-17 = 19.9'





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Site Address: 9250 Sedgefield Rd. North Fort Myers, Fl. 33917

Vertical Datum: NAVD 1988

Latitude 26°44'10.7" N - Longitude 81°48'19.6" W

High Water Mark Elev. = 19.2' (mud line on garage.)

Existing Water Elev. At 4:23 PM 09-19-17 = 17.9'









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Site Address: 6601 Nalle Grade Rd. North Fort Myers, Fl. 33917.

Vertical Datum: NAVD 1988

Latitude 26°45'19.7N - Longitude 81°50'51.2W

High Water Mark Elev. = 23.3' (debris line on telephone riser)

Existing Water Elev. At 2:40 PM 09-14-17 = 23.0'



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Site Address: 9550 Quail Hollow Rd. North Fort Myers, Fl. 33917.

Vertical Datum: NAVD 1988

Latitude 26°45'19.1" N - Longitude 81°48'5.7"W

High Water Mark Elev. = 23.5' (mud line on telephone riser)

Existing Water Elev. At 1:30 PM 09-14-17 = 23.3'





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Site Address: 18481 Pioneer Rd. Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'26.0" N - Longitude 81°51'10.6" W

High Water Mark Elev. = 3.8' (debris line in grass)

Existing Water Elev. At 11:18 AM 09-15-17 = 2.1'





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Site Address: 18446 Pioneer Rd. Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'28.6" N - Longitude 81°51'15.2" W

High Water Mark Elev. = 4.3' (debris line on walk)

Existing Water Elev. At 3:51 PM 09-15-17 = 2.0'



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Site Address: 18092 S. Tamiami Trail Fort Myers, Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'31.1" N - Longitude 81°50'14.1" W

High Water Mark Elev. = 4.4' (debris line along Mullock Creek bank)

Existing Water Elev. At 9:34 AM 09-15-17 = 2.2'



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Site Address: 18461 Creek Dr. Fort Myers Fl. 33908

Vertical Datum: NAVD 1988

Latitude 26°28'26.5" N - Longitude 81°50'57.9" W

High Water Mark Elev. = 4.3' (debris line on shed)





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Site Address: 7525 Garry Rd. Fort Myers, Fl. 33967

Vertical Datum: NAVD 1988

Latitude 26°28'29.7" N - Longitude 81°49'28.9" W

High Water Mark Elev. = 13.6' (debris line on south side of Mullock Creek, west side of Wood Dr. bridge)

High Water Mark Elev. = 13.5' (debris line on south side of Mullock Creek, east side of Wood Dr. bridge)

Existing Water Elev. At 2:36 PM 09-15-17 = 10.6'



West side of Wood Dr. Bridge



East side of Wood Dr. Bridge

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Site Address: 7248 Coolidge Rd. Fort Myers, Fl. 33967

Vertical Datum: NAVD 1988

Latitude 26°28'25.9" N - Longitude 81°49'50.3" W

High Water Mark Elev. = 10.6' (debris line on north side of Mullock Creek west side of Constitution bridge)

High Water Mark Elev. = 11.3' (debris line on north side of Mullock Creek east side of Constitution bridge)

Existing Water Elev. At 12:02 PM 09-15-17 = 7.5'



West side of bridge



East side of bridge

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Site Address: 27711 Windsor Rd. Bonita Springs Fl. 34134

Vertical Datum: NAVD 1988

Latitude 26°20'16.3" N - Longitude 81°48'29.1" W

High Water Mark Elev. = 4.2' (set nail at debris line on wood boardwalk along River Park)

Existing Water Elev. At 2:45 PM 09-15-17 = 2.2' (water's edge of Imperial river at River Park)





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Site Address: 27551 S. Tamiami Trail Bonita Springs Fl. 34134

Vertical Datum: NAVD 1988

Latitude 26°20'17.5" N - Longitude 81°48'17.3" W

High Water Mark Elev. = 4.1' (set nail at debris line in parking lot of Imperial River boat ramp)

Existing Water Elev. At 12:00 PM 09-15-17 = 2.7' (water's edge of Imperial river at boat ramp)





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Site Address: Bedman Creek at S.R. 80 Alva, Fl. 33920

Vertical Datum: NAVD 1988

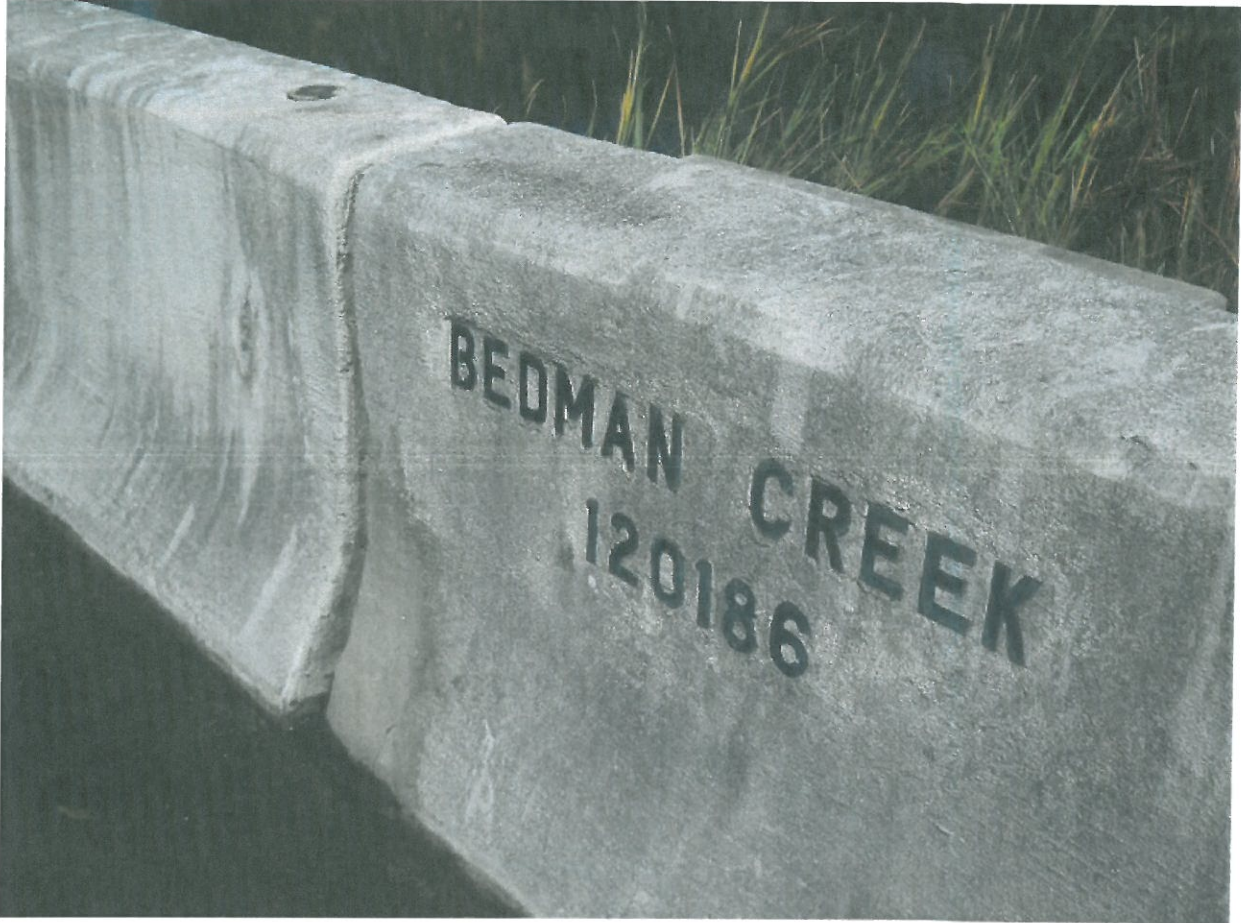
Latitude 26°42'31.9" N - Longitude 81°35'56.2" W

High Water Mark Elev. = 7.4' (NAVD88) (debris line on south bridge abutment.)

Existing Water Elev. At 11:00 AM 09-15-17 = 2.8' (south bridge abutment)

Existing Water Elev. At 11:00 AM 09-15-17 = 2.7' (north bridge abutment)





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Site Address: 2491 Bedman Drive Alva, Fl. 33920

Vertical Datum: NAVD 1988

Latitude 26°42'33.7" N - Longitude 81°35'58.7" W

High Water Mark Elev. = 7.2' (NAVD88) (debris line on aluminum shed.)

Existing Water Elev. At 11:00 AM 09-15-17 = 2.7' (Bedman Creek)





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Site Address: Dog Canal at East 26<sup>th</sup> St. and Fitch Avenue Alva, Fl. 33920

Vertical Datum: NAVD 1988

Latitude 26°41'23.3" N - Longitude 81°34'01.7" W

High Water Mark Elev. = 17.1' (NAVD88) (nail set in oak tree at debris line along bank of canal)

Existing Water Elev. At 1:45 PM 09-15-17 = 13.7' (Dog Canal)





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Site Address: Dog Canal at East 14<sup>th</sup> St. and Hines Avenue, Lehigh Acres, Fl. 33920

Vertical Datum: NAVD 1988

Latitude 26°39'08.3" N - Longitude 81°33'58.4" W

High Water Mark Elev. = 20.3' (NAVD88) (set chisel mark at debris line in west side of concrete weir abutment) - north side of weir.

High Water Mark Elev. = 21.3' (NAVD88) (set chisel mark at debris line in west side of concrete weir abutment) - south side of weir.

Existing Water Elev. At 3:15 PM 09-15-17 = 15.7' (Dog Canal north side of weir)

Existing Water Elev. At 3:15 PM 09-15-17 = 19.0' (Dog Canal south side of weir)



South side of weir



North side of weir





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Site Address: 12200 Coyle Rd.

Vertical Datum: NAVD 1988

Latitude 26°41'22.3" N - Longitude 81°45'24.3" W

High Water Mark Elev. = 5.3' (NAVD88) (debris line fiberglass reflector marker)

Existing Water Elev. At 3.25 PM 09-14-17 = 3.1' (south side of Coyle Rd.)

Existing Water Elev. At 3.25 PM 09-14-17 = 2.8' (north side of Coyle Rd.)





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Site Address: 13971 Cemetery Rd.

Vertical Datum: NAVD 1988

Latitude 26°40'17.7" N - Longitude 81°43'43.7" W

High Water Mark Elev. = 10.7' (NAVD88) (debris line on garage & window sill) — per home owner

Existing Water Elev. At 1.07 PM 09-14-17 = 8.0'



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