U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service

Datums Page

Station ID: 8662245 **PUBLICATION DATE: 04/29/2003**
Name: OYSTER LANDING, CRAB HAUL CREEK SOUTH CAROLINA
NOAA Chart: 11532 **Latitude: 33° 21.1' N**
USGS Quad: PLANTERSVILLE **Longitude: 79° 11.2' W**

T I D A L B E N C H M A R K S

PRIMARY BENCH MARK STAMPING: 2245 A 1982
DESIGNATION: 866 2245 A TIDAL

MONUMENTATION: Tidal Station disk VM#: 16408
AGENCY: National Ocean Survey (NOS) PID#: DD1345
SETTING CLASSIFICATION: Stainless steel rod

The primary bench mark is a disk set near the Belle Baruch Institute lab boat landing on Crab Haul Creek, 8.11 m (26.6 ft)ENE of the north corner of a concrete boat landing, 4.45 m (14.6 ft) north of power pole No. 70915 with a security light, 0.52 m (1.7 ft) SSE of power pole No. 0656 with three transformers, and 0.46 m (1.5 ft) ESE of a witness post. The bench mark is set 10 cm (0.3 ft) below ground level, crimped to the top of a stainless steel rod driven 11.3 m (37 ft) to refusal, and encased in a PVC pipe and concrete kickblock.

BENCH MARK STAMPING: 2245 B 1982
DESIGNATION: 866 2245 B TIDAL

MONUMENTATION: Tidal Station disk VM#: 16409
AGENCY: National Ocean Survey (NOS) PID#: DD1344
SETTING CLASSIFICATION: Stainless steel rod

The bench mark is a disk set along the road leading to the lab boat ramp and pier, 45.35 m (148.8 ft) west of power pole No. 50908, 29.29 m (96.1 ft) SE of power pole No. 0657, 4.57 m (SSW of the center of the road, 0.24 m (0.8 ft) north of a metal witness post, and 0.76 m (2.5 ft) below the road. The bench mark is 18 cm (0.6 ft) below ground level, crimped to the top of a stainless steel rod driven 13.4 m (44 ft) to refusal, and encased in a PVC pipe and concrete kickblock.

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T I D A L B E N C H M A R K S

BENCH MARK STAMPING: 2245 C 1982
DESIGNATION: 866 2245 C TIDAL

MONUMENTATION: Tidal Station disk VM#: 16410
AGENCY: National Ocean Survey (NOS) PID#: DD1343
SETTING CLASSIFICATION: Stainless steel rod

The bench mark is a disk set along the dirt road leading to the lab boat ramp and pier, 3.35 m (11.0 ft) NNE of the center of the road, 1.52 m (5.0 ft) east of a witness post, 0.94 m (3.1 ft) NW of a power pole with guy wire, and 0.15 m (0.5 ft) below the road. The bench mark is crimped to the top of a stainless steel rod driven 11.0 m (36 ft) to refusal, and encased in a PVC pipe and concrete kickblock.

BENCH MARK STAMPING: 2245 D 1982
DESIGNATION: 866 2245 D TIDAL

MONUMENTATION: Tidal Station disk VM#: 16411
AGENCY: National Ocean Survey (NOS) PID#: DD4668
SETTING CLASSIFICATION: Concrete monument

The bench mark is a disk set in top of a concrete monument near the boat sheds along the road leading to the lab boat ramp and pier, 22.56 m (74.0 ft) north of the center of the road, 7.13 m (23.4 ft) NE of the SW corner of the maintenance shed, 0.58 m (1.9 ft) east of the east corner of the shed, 6 cm (0.2 ft) below ground level and about level with the road.

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T I D A L B E N C H M A R K S

BENCH MARK STAMPING: 2245 E 1982
DESIGNATION: 866 2245 E TIDAL

MONUMENTATION: Tidal Station disk VM#: 16412
AGENCY: National Ocean Survey (NOS) PID#: DD4667
SETTING CLASSIFICATION: Concrete monument

The bench mark is a disk set in top of a concrete monument near the boat sheds along the road leading to the lab boat ramp and pier, 49.38 m (162.0 ft) WNW of the west corner of the maintenance shed, 0.82 m (2.7 ft) WNW of the southernmost pole of the boat shed (Bay 1), 0.18 m (0.6 ft) SE of a witness post, and at ground level.

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T I D A L D A T U M S

Tidal datums at OYSTER LANDING, CRAB HAUL CREEK based on:

LENGTH OF SERIES: 2 Years
TIME PERIOD: June 2001 - May 2002
TIDAL EPOCH: 1983-2001
CONTROL TIDE STATION: 8665530 CHARLESTON, COOPER RIVER ENTRANCE

Elevations of tidal datums referred to Mean Lower Low Water (MLLW), in METERS:

HIGHEST OBSERVED WATER LEVEL (07/22/2001)	=	2.228
MEAN HIGHER HIGH WATER (MHHW)	=	1.554
MEAN HIGH WATER (MHW)	=	1.446
MEAN SEA LEVEL (MSL)	=	0.815
MEAN TIDE LEVEL (MTL)	=	0.752
MEAN LOW WATER (MLW)	=	0.058
MEAN LOWER LOW WATER (MLLW)	=	0.000
LOWEST OBSERVED WATER LEVEL (02/27/2002)	=	-0.490

National Geodetic Vertical Datum (NGVD 29)

Bench Mark Elevation Information In METERS above:

Stamping or Designation	MLLW	MHW
2245 A 1982	1.770	0.324
2245 B 1982	2.352	0.906
2245 C 1982	2.577	1.131
2245 D 1982	1.930	0.484
2245 E 1982	2.257	0.811

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D E F I N I T I O N S

Mean Sea Level (MSL) is a tidal datum determined over a 19-year National Tidal Datum Epoch. It pertains to local mean sea level and should not be confused with the fixed datums of North American Vertical Datum of 1988 (NAVD 88).

NGVD 29 is a fixed datum adopted as a national standard geodetic reference for heights but is now considered superseded. NGVD 29 is sometimes referred to as Sea Level Datum of 1929 or as Mean Sea Level on some early issues of Geological Survey Topographic Quads. NGVD 29 was originally derived from a general adjustment of the first-order leveling networks of the U.S. and Canada after holding mean sea level observed at 26 long term tide stations as fixed. Numerous local and wide-spread adjustments have been made since establishment in 1929. Bench mark elevations relative to NGVD 29 are available from the National Geodetic Survey (NGS) data base via the World Wide Web at National Geodetic Survey.

NAVD 88 is a fixed datum derived from a simultaneous, least squares, minimum constraint adjustment of Canadian/Mexican/United States leveling observations. Local mean sea level observed at Father Point/Rimouski, Canada was held fixed as the single initial constraint. NAVD 88 replaces NGVD 29 as the national standard geodetic reference for heights. Bench mark elevations relative to NAVD 88 are available from NGS through the World Wide Web at National Geodetic Survey.

NGVD 29 and NAVD 88 are fixed geodetic datums whose elevation relationships to local MSL and other tidal datums may not be consistent from one location to another.

The Vertical Mark Number (VM#) and PID# shown on the bench mark sheet are unique identifiers for bench marks in the tidal and geodetic databases, respectively. Each bench mark in either database has a single, unique VM# and/or PID# assigned. Where both VM# and PID# are indicated, both tidal and geodetic elevations are available for the bench mark listed.

The NAVD 88 elevation is shown on the Elevations of Tidal Datums Table Referred to MLLW only when two or more of the bench marks listed have NAVD 88 elevations. The NAVD 88 elevation relationship shown in the table is derived from an average of several bench mark elevations relative to tide station datum. As a result of this averaging, NAVD 88 bench mark elevations computed indirectly from the tidal datums elevation table may differ slightly from NAVD 88 elevations listed for each bench mark in the NGS database.