

OPR-B310-TJ-07

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

**HORIZONTAL AND VERTICAL
CONTROL REPORT**

Type of Survey: **Navigable Area**

Registry Numbers: **H11709**

LOCALITY

State: New York & New Jersey

General Locality: New York Harbor and Approaches, NY & NJ

Sub-locality: 2 NM Northeast of Sandy Hook

2007

CHIEF OF PARTY
CDR P. Tod Schattgen
NOAA

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

OPR-B310-TJ-07

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State: **New York & New Jersey**

General Locality: **New York Harbor and Approaches, NY & NJ**

Sub-Locality: **2 NM Northeast of Sandy Hook**

Scale: **1:10,000** Date of Survey: **29 June to 27 September 2007**

Instructions Dated: **12 June 2007** Project Number: **OPR-B310-TJ-07**

Vessel: **NOAA Ship THOMAS JEFFERSON, S-222**

Chief of Party: **CDR P. Tod Schattgen, NOAA**

Surveyed by: **THOMAS JEFFERSON Personnel**

Soundings by: **RESON 8101 and 8125 Multibeam Echosounder**

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A**

Protracted by: **N/A** Automated Plot: **N/A**

Verification by: **Atlantic Hydrographic Branch Personnel**

Soundings in: **Meters at MLLW**

Remarks:

- 1) All Times are in UTC.**
- 2) This is a Navigable Area Hydrographic Survey.**
- 3) Projection is UTM Zone 18.**

A. VERTICAL CONTROL

Vertical control for project OPR-B310-TJ-07 is consistent with Letter Instructions as provided by Hydrographic Surveys Division and CO-OPS. This project includes Navigable Area survey H11709.

A.1.1 WATER LEVEL OBSERVATION STATIONS

The primary water level observation stations for project OPR-B310-TJ-07 are the National Water Level Observation Network (NWLON) stations located at The Battery, New York (851-8750) and Sandy Hook, New Jersey (853-1680). No installation, servicing, leveling, or maintenance of these stations was required by THOMAS JEFFERSON personnel. Apparent erroneous observed water level data were found in the observation station at Sandy Hook, New Jersey (853-1680), as shown in Figure 1.

A.1.2 WATER LEVEL CORRECTORS

All tidal datum reduction procedures are consistent with the Letter Instructions and Tide Note. Datum reduction procedures are discussed in detail in the 2007 THOMAS JEFFERSON Data Acquisition and Processing Report, as well as the TCARI SOP supplied to the field party by CO-OPS.

All echosounder soundings have been corrected to MLLW using observed water levels with a preliminary TCARI model supplied to THOMAS JEFFERSON by CO-OPS for project OPR-B310-TJ-07. Verified water levels will be applied to all OPR-B310-TJ-07 echosounder data upon receipt of verified water levels and a final TCARI model from CO-OPS.

A.1.3 Benchmark Positioning Procedures

No tidal benchmarks were positioned during project OPR-B310-TJ-07.

B. Horizontal Control

All horizontal control methods, techniques, and procedures for project OPR-B310-TJ-07 are adequately described in the 2007 THOMAS JEFFERSON Data Acquisition and Processing Report and the Descriptive Report for Navigable Area survey H11709. No horizontal control stations were established, serviced, or maintained by the field unit for project OPR-B310-TJ-07.

Sandy Hook Tide Gage

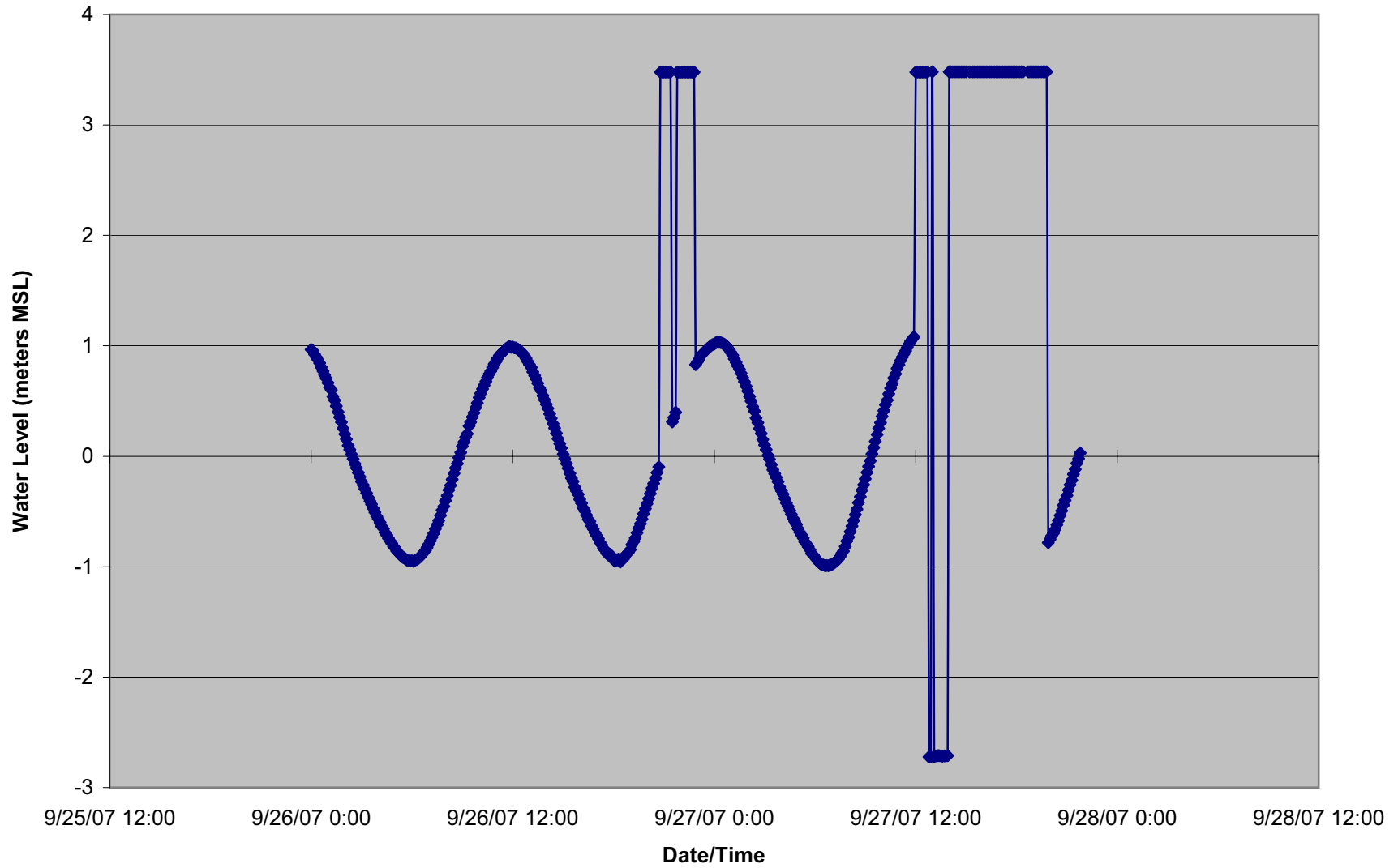


Figure 1. Bad water level data (Sandy Hook gage)

Table 1 – Times of Hydrography**H11709**

Year DOY	Min Time	Max Time
2007_180	14:40:46	19:24:17
2007_181	13:33:32	19:12:19
2007_182	12:50:09	19:22:26
2007_183	12:43:01	19:26:23
2007_184	12:41:06	19:05:53
2007_185	12:43:43	16:09:40
2007_186	12:30:41	19:15:03
2007_187	12:43:00	19:16:47
2007_188	12:47:19	19:01:45
2007_216	13:09:11	19:09:09
2007_217	13:09:20	19:03:17
2007_218	13:18:11	19:13:05
2007_219	13:53:29	19:22:35
2007_220	13:02:06	19:08:09
2007_221	13:20:12	19:03:13
2007_225	16:55:15	19:00:15
2007_226	12:57:16	20:44:59
2007_227	13:04:51	19:15:36
2007_228	12:49:44	21:16:26
2007_229	13:14:28	18:59:49
2007_231	12:39:08	21:03:37
2007_234	12:49:48	21:29:23
2007_235	13:11:07	21:29:07
2007_236	13:04:34	21:05:54
2007_237	14:56:35	21:28:51
2007_265	12:50:19	21:25:06
2007_266	12:45:17	21:24:50
2007_267	12:37:57	21:17:14
2007_268	12:49:33	21:25:02
2007_269	12:32:58	21:17:11
2007_270	12:50:51	20:51:58

E. APPROVAL

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the National Ocean Service Standing Instructions for Hydrographic Surveys, Office of Coast Survey Hydrographic Surveys Division's 2007 *Field Procedures Manual*, and NOS 2007 *Hydrographic Surveys Specifications and Deliverables*.

I acknowledge that all of the information contained in this report is complete and accurate to the best of my knowledge.

Respectfully Submitted:

Handwritten signature of Megan A. Nadeau, ENS/NOAA.

ENS Megan A. Nadeau, NOAA
Tides Officer

Approved and Forwarded:

LT Christiaan vanWestendorp, NOAA
Field Operations Officer

CDR P. Tod Schattgen, NOAA
Commanding Officer