

W00295

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Hydrographic Survey**
Project No. **S-B904-TJ-15**
Registry No. **W00295**

LOCALITY

State **New Jersey**
General Locality **N Atlantic Ocean**
Sub-locality **18 NM SE of Absecon Inlet**

2015

CHIEF OF PARTY
CAPT Shepard Smith, NOAA
HYDROGRAPHER
CAPT Shepard Smith, NOAA

LIBRARY & ARCHIVES

DATE July 2, 2015

The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <https://www.ncei.noaa.gov/>.

Descriptive Report Summary to Accompany W00295	
Project	S-B904-TJ-15
Survey	W00295
State	New Jersey
Locality	N Atlantic Ocean
Sub Locality	18NM SE of Absecon Inlet
Scale of Survey	1:40,000
Sonars Used	Reson 7125 SV2
Horizontal Datum	North American Datum of 1983 (NAD83)
Vertical Datum	Mean Lower Low Water (MLLW)
Vertical Datum Correction	Ellipsoidal Reference
Projection	Latitude-Longitude (NAD83) - UTM Zone 18N
Field Unit	<i>Thomas Jefferson</i>
Survey Dates	06/25/2015 – 07/02/2015
Chief of Party	CAPT Shepard Smith, NOAA

A. Area Surveyed

W00295 was surveyed with a Reson 7125 SV2 multibeam echosounder (MBES) aboard NOAA Ship *Thomas Jefferson*. The survey was conducted from 6/25/2015 to 7/2/2015. The data were acquired to standards set forth in the NOAA Hydrographic Surveys Specifications and Deliverables, the NOAA Field Procedures Manual, and the NOAA Ship *Thomas Jefferson* Data Acquisition and Processing Report.

Data were acquired within the following limits:

Northeast Limit	Southwest Limit
39° 17' 12.2"N	39° 03' 39.7"N
074° 05' 35.7"W	074° 11' 45.5"W

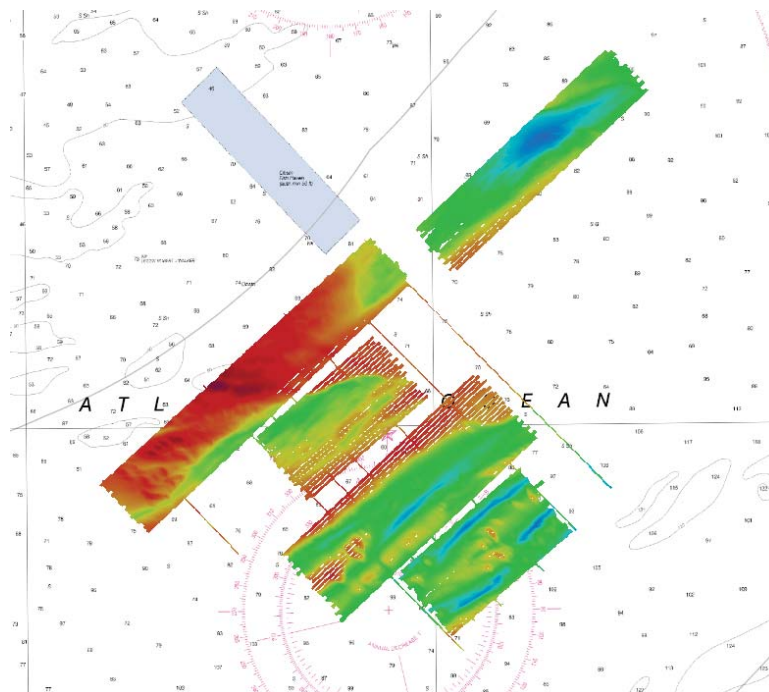


Figure 1: Survey W00295 2m CUBE surface overlaying Chart 12318.

B. Survey Purpose

Data were acquired by NOAA Ship *Thomas Jefferson* on cruise TJ-15-04 in support of National Marine Fisheries Service's (NMFS) Northeast Fisheries Science Center (NEFSC) Benthic Habitat Assessment (BHA) project. The goal of the project was to characterize offshore benthic habitats falling within a proposed Wind Energy Area, as well as to develop benthic habitat models, maps, and other data projects to improve NEFSC's analytical and decision-making capabilities with regards to a number of fisheries projects and research areas. Refer to Cruise Instruction TJ-15-04 for information on the project.

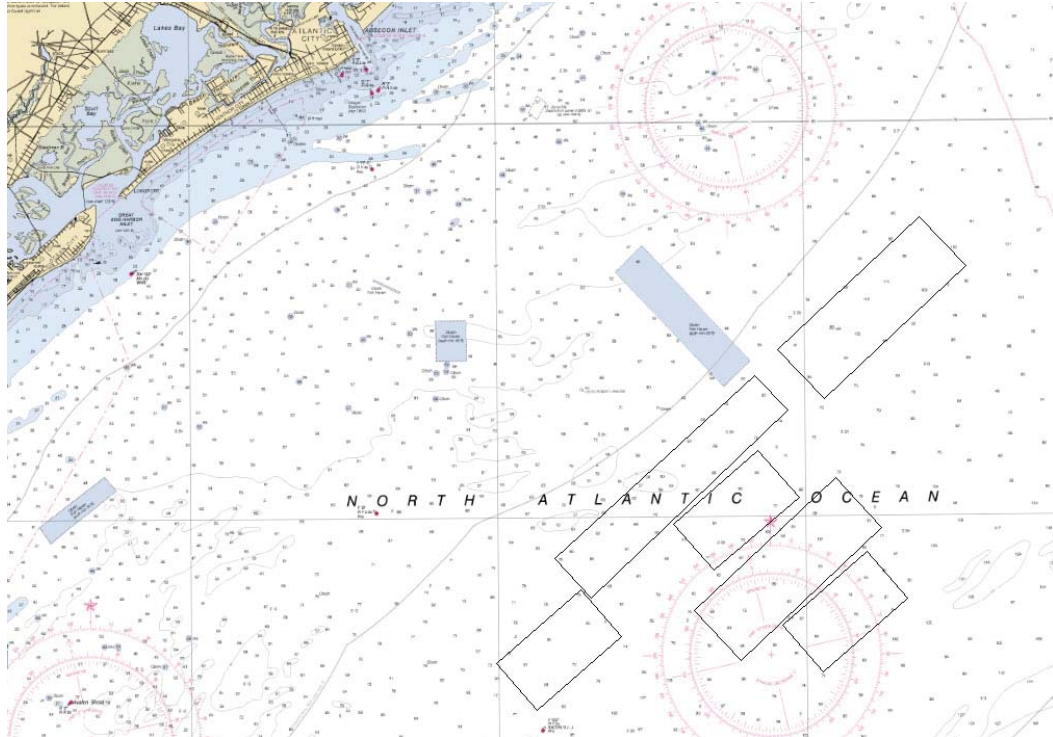


Figure 2: Investigation areas identified by NEFSC (black lines) in relation to Atlantic City and Absecon Inlet.

C. Intended Use of Survey

The data were acquired principally for benthic habitat mapping; however, given that they were acquired to NOAA hydrographic standards, the data is suitable for charting purposes.

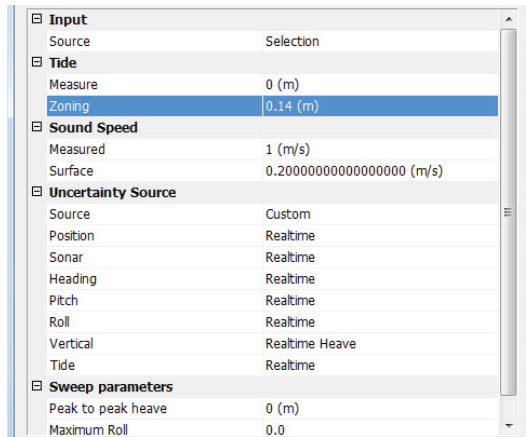
D. Data Acquisition and Processing

Data were acquired and processed in accordance with the Data Acquisition and Processing Report for project OPR-G380-TJ-15.

E. Uncertainty

E.1 Total Propagated Uncertainty (TPU)

Uncertainty values for zoning corrections from water level gauge 8534720, Atlantic City, NJ, provided by the Center for Operational Oceanographic Products and Services (CO-OPS) were applied to the water level zoning for this project. Otherwise, TPU values for project OPR-G380-TJ-15 were used.



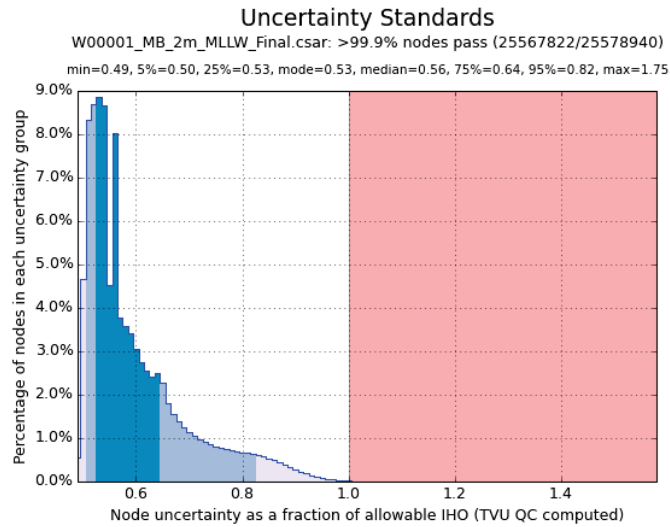
The screenshot shows a software interface with a list of parameters and their corresponding TPU values. The 'Zoning' parameter is highlighted in blue.

Input	
Source	Selection
Tide	
Measure	0 (m)
Zoning	0.14 (m)
Sound Speed	
Measured	1 (m/s)
Surface	0.20000000000000000 (m/s)
Uncertainty Source	
Source	Custom
Position	Realtime
Sonar	Realtime
Heading	Realtime
Pitch	Realtime
Roll	Realtime
Vertical	Realtime Heave
Tide	Realtime
Sweep parameters	
Peak to peak heave	0 (m)
Maximum Roll	0.0

Figure 3: TPU values applied to data.

E2. Uncertainty

99.9% of nodes met uncertainty requirements, with a median vertical uncertainty of 0.56m and a mean of 0.368m.



E3. Internal Consistency

No crossline comparison was conducted. Internal consistency was checked via subjective comparison of crossline data and mainscheme bathymetry. No significant vertical or horizontal issues were found through this process.

F. Results and Recommendations

The following surfaces were created from the processed data:

Surface Name	Surface Type	Resolution (m)	Depth Range (m)
W00295_MB_2m_MLLW_Final	CUBE Base Surface	2	17.45-41.66

Table 2: List of surfaces and mosaics created for this project.

F1. Chart Comparisons

It is recommended that this survey supersede the chart data. A chart comparison was conducted using a sounding set derived from the 2m CUBE surface. The comparison showed almost complete agreement, with the few soundings that disagreed with the charted ones being 1-2' deeper. W00295 was compared with the following RNC and ENC, which cover the survey area:

Chart	Scale	Edition	Edition Date	NM Date
12318	1:80,000	45	4/1/2012	6/18/2015
USNJ22M	1:80000	15.0	10/29/2015	N/A

Table 3: ENC and RNC covered with W00295

F2. Features

No features were found over the course of the survey.

F3. Cross-line Comparison

No crossline comparison was conducted for W00295.

F4. Junction Surveys

No contemporary surveys junction with W00295.

F5. Density

No density analysis was conducted for this survey.

F6. Acoustic Backscatter

Acoustic backscatter data were acquired and processed aboard ship into .asc format by NEFSC personnel. GSF files were created for internal quality control and quality assurance by shipboard personnel.

G. Vertical and Horizontal Control

The vertical datum for this project is Mean Lower Low Water. Discrete Zoning was the vertical control method used. A compilation of verified tides for the dates of this survey were obtained from CO-OPS and entered into CARIS. The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:


Station Name	Station ID
Atlantic City, NJ	8534720

The horizontal datum for this project is North American Datum of 1983 (NAD83). Horizontal control was established via the MarineStar solution and applied to the data via the 5P processing pipeline.

Refer to the DAPR for OPR-G380-TJ-15 for more information.

H. Approval

The survey data meets the requirements as set forth in the cruise instructions. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required. All records are forwarded for final review and processing to the Processing Branch.

Approver Name	Approver Title	Approval Date	Signature
Shepard M. Smith, CAPT/NOAA	Commanding Officer, NOAA Ship <i>Thomas Jefferson</i>		c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=NOAA, cn=SMITH.SHEPARD.M.10067 78930 2015.11.19 18:01:10 -05'00'

APPENDIX I
TIDES AND WATER LEVELS



Joseph Carrier - NOAA Federal <joseph.carrier@noaa.gov>

Fwd: Preliminary Tidal Zoning for NMFS_NHJ Absecon Inlet and Atlantic City, NJ

Matthew Forrest - NOAA Federal <matthew.r.forrest@noaa.gov>
To: Joseph Carrier - NOAA Federal <joseph.carrier@noaa.gov>

Thu, Aug 27, 2015 at 3:05 PM

Forwarded for reference.

V/r,

Forrest

----- Forwarded message -----

From: Louis Licate - NOAA Affiliate <louis.licate@noaa.gov>

Date: Thu, Aug 27, 2015 at 3:00 PM

Subject: Re: Preliminary Tidal Zoning for NMFS_NHJ Absecon Inlet and Atlantic City, NJ

To: Matthew Forrest - NOAA Federal <matthew.r.forrest@noaa.gov>

Matt-

Here is a graphic of some error analysis we did in the region. In your area I would suggest using the error value from Atlantic City, NJ to Lewes, NJ or **14.1 cm**.

This value is the 2RMS uncertainty in the region. I'm willing to bet that the actual uncertainty will be slightly less than 14.1 given the proximity of the survey area to the Atlantic City, NJ station but the best actual value we can give is 14.1 cm.

Hope this helps!

-L

On Tue, Aug 25, 2015 at 5:09 PM, Matthew Forrest - NOAA Federal <matthew.r.forrest@noaa.gov> wrote:

Lou,

Quick question about these zones. Do you have any uncertainty values for them? Thanks!

V/r,

Forrest

On Tue, Aug 18, 2015 at 2:16 PM, Matthew Forrest - NOAA Federal <matthew.r.forrest@noaa.gov> wrote:

Lou,

Thanks for the quick turnaround on this! I appreciate it. Hope all's well, and may all of your tables have an old man in a hat at them.

V/r,

Forrest

On Mon, Aug 17, 2015 at 5:00 PM, Louis Licate - NOAA Affiliate <louis.licate@noaa.gov> wrote:

Hello OCS-

Attached is a zip file that contains the zoning files in MapInfo format, a Caris zoning definition file (.zdf), and graphic. The time correctors and range correctors should be applied to the six minute data from the

stations Atlantic City, NJ (853-4720) which can be retrieved from our website here:<http://opendap.co-ops.nos.noaa.gov/axis/text.html>.

The .zip file will also be uploaded to SharePoint.

Please feel free to contact me with any questions.

-Lou Licate

--

Louis Licate
Oceanographic Division
Center for Operational Oceanographic Products and Services
National Ocean Service
National Oceanic and Atmospheric Administration

1305 East-West Highway, 7129
Silver Spring, MD 20910
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LTJG Matthew Forrest, NOAA
Operations Officer in Training
NOAA Ship Thomas Jefferson
439 W York St
Norfolk, VA 23510
Tel: [\(757\) 647-0187](tel:757-647-0187)
Iridium: [\(808\) 434-2706](tel:808-434-2706)

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8/27/2015

National Oceanic and Atmospheric Administration Mail - Fwd: Preliminary Tidal Zoning for NMFS_NHJ Absecon Inlet and Atlantic City, NJ

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Operations Officer in Training
NOAA Ship Thomas Jefferson
439 W York St
Norfolk, VA 23510
Tel: (757) 647-0187
Iridium: (808) 434-2706



TJ_NJ_2015_TPEgraphic.pdf
141K



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
<Unknown 'Field Unit' (Pydro: Config...PSS Metadata)>

October 23, 2015

MEMORANDUM FOR: Gerald Hovis, Chief, Products and Services Branch, N/OPS3

FROM: <Unknown 'Field Unit' and/or 'Lead Hydrographer' (Pydro: Config...PSS Metadata)>

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final TCARI grid
3. Final zoning in MapInfo and .MIX format
4. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

<Unknown 'Data Transmit Address' (Pydro: Config...PSS Metadata)>

These data are required for the processing of the following hydrographic survey:

Project No.: <Unknown (Pydro: Config...PSS Metadata)>
Registry No.:
State:
Locality:
Sublocality:

Attachments containing:

- 1) an Abstract of Times of Hydrography,
- 2) digital MID MIF files of the track lines from Pydro



Year_DOY	Min Time	Max Time
2015_176	13:16:24	23:15:21
2015_177	00:20:59	23:50:29
2015_178	00:11:15	21:01:17
2015_180	21:08:57	23:49:48
2015_181	00:13:08	21:25:33
2015_182	01:42:17	23:54:14
2015_183	00:38:26	10:25:12

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCE

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[- Hide quoted text -](#)

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APPROVAL PAGE

W00295

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- W00295_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- W00295_GeoImage.pdf

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____

Lieutenant Commander Briana Welton, NOAA
Chief, Atlantic Hydrographic Branch