

H12277

NOAA Form 76-35A

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Survey

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H12277

LOCALITY

State: Virginia

General Locality: Southern Chesapeake Bay

Sub-locality: Newport News Pt to Craney Island

2011

CHIEF OF PARTY
CDR Lawrence T. Krepp

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET**H12277****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: **Virginia**

General Locality: **Southern Chesapeake Bay**

Sub-Locality: **Newport News Pt to Craney Island**

Scale: **10000**

Dates of Survey: **10/26/2010 to 04/13/2012**

Instructions Dated: **02/11/2011**

Project Number: **OPR-E350-TJ-11**

Field Unit: **NOAA Ship *Thomas Jefferson***

Chief of Party: **CDR Lawrence T. Krepp**

Soundings by: **Singlebeam Echo Sounder Multibeam Echo Sounder**

Imagery by: **Side Scan Sonar**

Verification by: **Atlantic Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

Remarks:

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. Revisions and Red notes were generated during office processing. The processing branch concurs with all information and recommendations in the DR unless otherwise noted. Page numbering may be interrupted or non-sequential. All pertinent records for this survey, including the Descriptive Report, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.

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Descriptive Report to Accompany Survey H12277

Project: OPR-E350-TJ-11

Locality: Southern Chesapeake Bay

Sublocality: Newport News Pt to Craney Island

Scale: 1:10000

October 2010 - April 2012

NOAA Ship *Thomas Jefferson*

Chief of Party: CDR Lawrence T. Krepp

A. Area Surveyed

The survey sheet area extends from Newport News Pt to Craney Island.

A.1 Survey Limits

Data was acquired within the following survey limits:

Northeast Limit	Southwest Limit
36.9568 N	36.9250083333 N
76.3642611111 W	76.40995 W

Table 1: Survey Limits

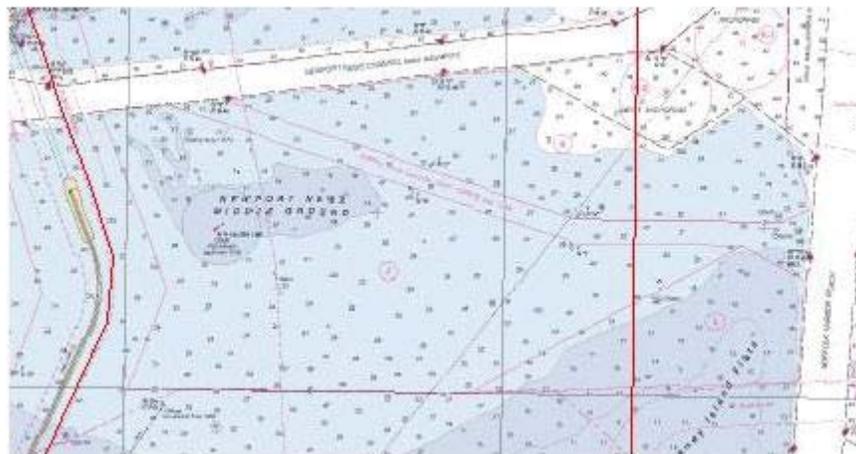


Figure 1: H12277 Survey Limits

Survey Limits were acquired in accordance with the requirements in the Project Instructions and the HSSD. There were a few days left of the 2010 field season when this survey was started. This survey was started in October of 2010 before there were project instructions and sheet limits. The survey was scheduled to be a 2011 survey. The entire survey area was not covered.

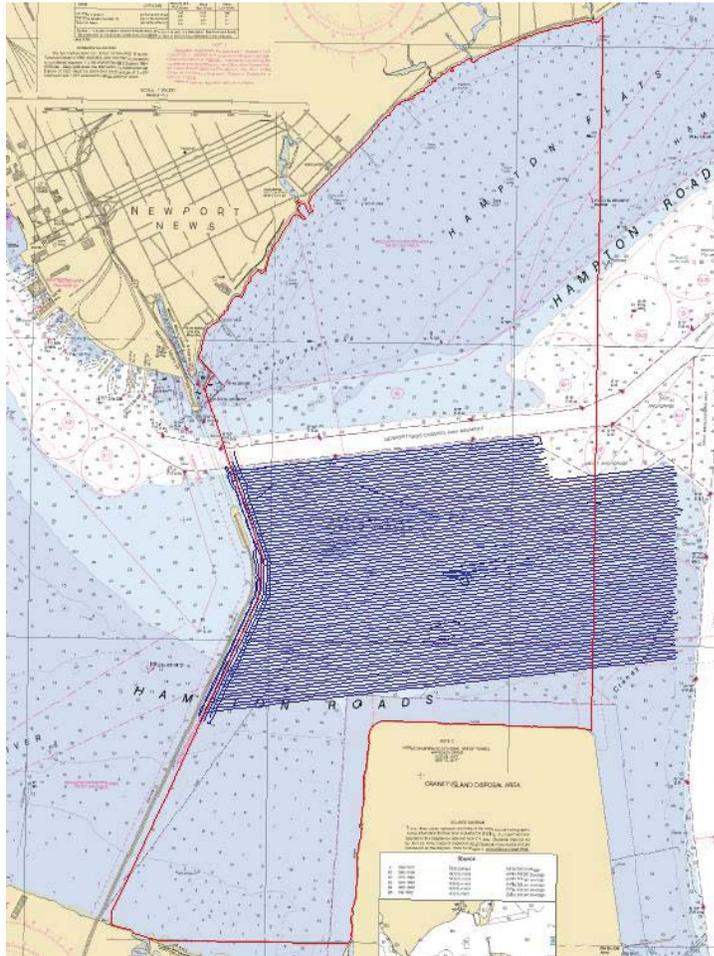


Figure 2: H12277 Sheet Limits With Lines

A.2 Survey Purpose

The purpose of this project is to provide contemporary surveys to update National Ocean Service (NOS) nautical charting products.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

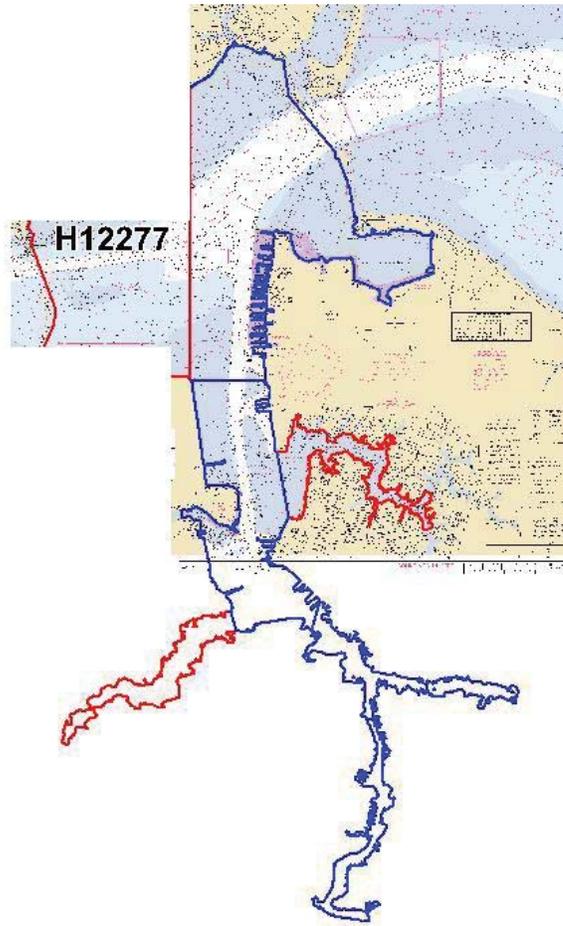


Figure 3: H12277 Within the Project Area

Survey Coverage was in accordance with the requirements in the Project Instructions and the HSSD.

A.5 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	HULL ID	3101	3102	Total
LNM	SBES Mainscheme	0	0	0
	MBES Mainscheme	0	0	0
	Lidar Mainscheme	0	0	0
	SSS Mainscheme	0	0	0
	SBES/MBES Combo Mainscheme	0	0	0
	SBES/SSS Combo Mainscheme	51.82	191.05	242.87
	MBES/SSS Combo Mainscheme	0	0	0
	SBES/MBES Combo Crosslines	0	14.05	14.05
	Lidar Crosslines	0	0	0
	Number of Bottom Samples			
Number of DPs				3
Number of Items Items Investigated by Dive Ops				0
Total Number of SNM				2

Table 2: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey:

<i>Survey Dates</i>
10/26/2010
10/27/2010
10/28/2010
08/05/2011
08/15/2011
08/16/2011
11/18/2011
04/13/2012

Table 3: Dates of Hydrography

A.6 Shoreline

Shoreline was investigated in accordance with the Project Instructions and the HSSD.

A.7 Bottom Samples

Bottom Samples were acquired in accordance with the Project Instructions or the HSSD.

B. Data Acquisition and Processing

B.1 Equipment and Vessels

Refer to the Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are discussed in the following sections.

B.1.1 Vessels

The following vessels were used for data acquisition during this survey:

Hull ID	<i>3101</i>	<i>3102</i>
LOA	31 feet	31 feet
Draft	0.8 meters	0.8 meters

Table 4: Vessels Used

B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

Manufacturer	Model	Type
Applanix	POS/MV	Vessel Attitude System
Seabird	Seacat 19+	Sound Speed System
Klein	HydroChart5000	SSS
Reson	7125	MBES
Odom	ETCV200	SBES
Klein	5000	SSS

Table 5: Major Systems Used

Data were acquired by Hydrographic Survey Launches 3101 and 3102. Launch 3101 acquired Klein 5000 side scan imagery, Odom ETCV200 vertical beam echosounder soundings, and sound velocity profiles. Launch 3102 acquired Klein HydroChart5000 side scan imagery, Odom ETCV200 vertical beam echosounder soundings, Reson 7125 multibeam echosounder soundings, sound velocity profiles, and bottom samples.

The utility boat 1701 was used to acquire single beam in shallow water and DPs. There were positional problems with the data and it was not used. The bathymetry acquired by the HydroChart5000 was not used.

B.2 Quality Control

B.2.1 Crosslines

The acquisition type for survey H12277 was 200% side scan with concurrent bathymetry. The Cross line requirement for VBES is 8% per FPM, however, the field achieved approximately 6% Cross line coverage. The sheet has more Main scheme Lines than was originally planned. Cross lines were acquired on the first day of survey acquisition.

As per the HSSD 2011, section 5.2.4.3 the quality control check was done using the standard deviation layer of the survey's combined surface. Areas of unusually high standard deviation were investigated and resolved in processing, except where caused by areas of high bathymetric relief or features.

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Measured	Zoning
0meters	0meters

Table 6: Survey Specific Tide TPU Values

Hull ID	Measured - CTD	Measured - MVP	Surface
3101	4meters/second	N/Ameters/second	0.2meters/second
3102	4meters/second	N/Ameters/second	0.2meters/second

Table 7: Survey Specific Sound Speed TPU Values

These values were calculated for all bathymetry data following CARIS merge.

B.2.3 Junctions

The project instructions state there are no junctions for this project. This survey does not junction with any of the sheets (H12282 and H12285) that were acquired as part of this project.

There are no contemporary surveys that junction with this survey.

B.2.4 Sonar QC Checks

Sonar system quality control checks were conducted as detailed in the quality control section of the DAPR.

B.2.5 Equipment Effectiveness

B.2.5.1 None Exist

There were no conditions or deficiencies that affected equipment operational effectiveness.

B.2.6 Factors Affecting Soundings

B.2.6.1 None Exist

There were no other factors that affected corrections to soundings.

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: CTD casts were taken once a day when doing vertical beam and every four hours for multibeam.

B.2.8 Coverage Equipment and Methods

All equipment and survey methods were used as detailed in the DAPR.

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

All data reduction procedures conform to those detailed in the DAPR.

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

B.4 Backscatter

Backscatter was not collected for this survey.

B.5 Data Processing

B.5.1 Software Updates

There were no software configuration changes after the DAPR was submitted.

The following Feature Object Catalog was used:

There were no software configuration changes after the DAPR was submitted.

B.5.2 Surfaces

The following CARIS surfaces were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H12277_SSS_100	SSS Mosaic	1 meters	0 meters - 0 meters	N/A	100% SSS
H12277_SSS_200	SSS Mosaic	1 meters	0 meters - 0 meters	N/A	200% SSS
H12277_Uncertainty_MLLW_4m_Fin	BASE Uncertainty	4 meters	3.28 meters - 17.26 meters	N/A	SBES Set Line Spacing
H12277_MB_CUBE_MLLW_50cm_Fir	CUBE	0.5 meters	2.27 meters - 17.26 meters	NOAA_0.5m	Object Detection

Table 8: CARIS Surfaces

The following CARIS surfaces were submitted to the Processing Branch.

B.5.3 Lines not adding to surface

There is a problem with some single beam lines not adding to the surface or partially adding to the surface. This occurs in some of the northern lines and on one of the middle lines.

C. Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR.

C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

Standard Vertical Control Methods Used:

TCARI

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
Sewells Point, VA	8638610
Money Point, VA	8639348

Table 9: NWLON Tide Stations

File Name	Status
8638610	Final Approved
8639348	Final Approved

Table 10: Water Level Files (.tid)

File Name	Status
E350TJ2011	Final

Table 11: Tide Correctors (.zdf or .tc)

A request for final approved tides was sent to N/OPS1 on 12/13/2011. The final tide note was received on 01/05/2012.

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).

The following DGPS Stations were used for horizontal control:

DGPS Stations
Driver, VA (289 kHz)

Table 12: USCG DGPS Stations

D. Results and Recommendations

D.1 Chart Comparison

D.1.1 Raster Charts

The following are the largest scale raster charts, which cover the survey area:

Chart	Scale	Edition	Edition Date	LNLM Date	NM Date
12245	1:20000	67	08/2008	09/25/2012	09/29/2012

Table 13: Largest Scale Raster Charts

12245

In general the soundings agree to within 2 feet. On the west side there are some 7 foot differences where it has gotten deeper near the bridge.

D.1.2 Electronic Navigational Charts

The following are the largest scale ENC's, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5VA15M	1:20000	39	09/17/2012	09/17/2012	NO

Table 14: Largest Scale ENC's

US5VA15M

In general the soundings agree within 1 meter

D.1.3 AWOIS Items

Number of AWOIS Items Addressed: 0

Number of AWOIS Items Not Addressed: 2

AWOIS items exist for this survey, but were not addressed.

D.1.4 Charted Features

Consult the FFF for further information.

D.1.5 Uncharted Features

Consult the FFF for further information.

The following orthometric imagery was used:

File Name	Source	Source Image Date
54459987	NAIP	06/02/2009
82134003	NAIP	06/02/2009
90653222	NAIP	06/02/2009

Table 15: Orthometric Imagery

D.1.6 Dangers to Navigation

Danger to Navigation Reports are included in Appendix I of this report.

D.1.7 Shoal and Hazardous Features

In the vicinity of 36/57/03.89N 076/23/34.81W there is a charted shoaling reported to 11ft PA. No shoaling was found in that area during the present survey.

D.1.8 Channels

There is a channel for shallow draft vessels and tows. The present survey soundings agree with the charted soundings in the channel.

D.2 Additional Results**D.2.1 Shoreline**

Shoreline was not assigned in the Hydrographic Survey Project Instructions or Statement of Work.

D.2.2 Prior Surveys

Results of prior surveys are represented by charted features and soundings as discussed in chart comparisons above.

D.2.3 Aids to Navigation

There are seven charted Aids to Navigation (ATON) within the area surveyed.

All Aids to Navigation were found to be on station and serving their intended purpose. The hydrographer has no recommendations regarding these ATONs.

D.2.4 Overhead Features

There is a charted bridge on the western side of the area surveyed. The bridge is properly charted.

D.2.5 Submarine Features

There is one pipeline area and one pipeline in the survey area. No pipelines are visible in the side scan imagery and are assumed to be properly buried.

D.2.6 Ferry Routes and Terminals

No ferry routes or terminals exist for this survey.

D.2.7 Platforms

No platforms exist for this survey.

D.2.8 Significant Features

No significant features exist for this survey.

D.2 Construction and Dredging

There is no present or planned construction or dredging within the survey limits.

E. Approval Sheet

As Chief of Party, Field operations for this hydrographic survey were conducted under my direct supervision, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to the Processing Branch.

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, Standing and Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Approver Name	Approver Title	Approval Date	Signature
Kimberly Glomb	Survey Technician	12/05/2012	
LT William Winner	Field Operations Officer	12/05/2012	
CDR Lawrence Krepp	Commanding Officer	12/10/2012	

F. Table of Acronyms

Acronym	Definition
AFF	Assigned Features File
AHB	Atlantic Hydrographic Branch
AST	Assistant Survey Technician
ATON	Aid to Navigation
AWOIS	Automated Wreck and Obstruction Information System
BAG	Bathymetric Attributed Grid
BASE	Bathymetry Associated with Statistical Error
CO	Commanding Officer
CO-OPS	Center for Operational Products and Services
CORS	Continually Operating Reference Station
CTD	Conductivity Temperature Depth
CEF	Chart Evaluation File
CSF	Composite Source File
CST	Chief Survey Technician
CUBE	Combined Uncertainty and Bathymetry Estimator
DAPR	Data Acquisition and Processing Report
DGPS	Differential Global Positioning System
DP	Detached Position
DR	Descriptive Report
DTON	Danger to Navigation
ENC	Electronic Navigational Chart
ERS	Ellipsoidal Referenced Survey
ERZT	Ellipsoidally Referenced Zoned Tides
FOO	Field Operations Officer
FPM	Field Procedures Manual
GAMS	GPS Azimuth Measurement Subsystem
GC	Geographic Cell
GPS	Global Positioning System
HIPS	Hydrographic Information Processing System
HSD	Hydrographic Surveys Division
HSSDM	Hydrographic Survey Specifications and Deliverables Manual

Acronym	Definition
HSTP	Hydrographic Systems Technology Programs
HSX	Hypack Hysweep File Format
HTD	Hydrographic Surveys Technical Directive
HVCR	Horizontal and Vertical Control Report
HVF	HIPS Vessel File
IHO	International Hydrographic Organization
IMU	Inertial Motion Unit
ITRF	International Terrestrial Reference Frame
LNM	Local Notice to Mariners
LNM	Linear Nautical Miles
MCD	Marine Chart Division
MHW	Mean High Water
MLLW	Mean Lower Low Water
NAD 83	North American Datum of 1983
NAIP	National Agriculture and Imagery Program
NALL	Navigable Area Limit Line
NM	Notice to Mariners
NMEA	National Marine Electronics Association
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NRT	Navigation Response Team
NSD	Navigation Services Division
OCS	Office of Coast Survey
OMAO	Office of Marine and Aviation Operations (NOAA)
OPS	Operations Branch
MBES	Multibeam Echosounder
NWLON	National Water Level Observation Network
PDBS	Phase Differencing Bathymetric Sonar
PHB	Pacific Hydrographic Branch
POS/MV	Position and Orientation System for Marine Vessels
PPK	Post Processed Kinematic
PPP	Precise Point Positioning
PPS	Pulse per second

Acronym	Definition
PRF	Project Reference File
PS	Physical Scientist
PST	Physical Science Technician
RNC	Raster Navigational Chart
RTK	Real Time Kinematic
SBES	Singlebeam Echosounder
SBET	Smooth Best Estimate and Trajectory
SNM	Square Nautical Miles
SSS	Side Scan Sonar
ST	Survey Technician
SVP	Sound Velocity Profiler
TCARI	Tidal Constituent And Residual Interpolation
TPU	Total Propagated Error
TPU	Topside Processing Unit
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positioning System timing message
ZDF	Zone Definition File

Appendix I:
Tides and Water Levels



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship THOMAS JEFFERSON (MOA-TJ)
439 West York St
Norfolk, VA 23510-1145

December 13, 2011

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

FROM: CDR Lawrence T. Krepp, NOAA Ship THOMAS JEFFERSON (MOA-TJ)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final TCARI grid
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

NOAA Ship THOMAS JEFFERSON (MOA-TJ)
439 West York St
Norfolk, VA 23510-1145

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 W York Street
Norfolk, VA 23510
Attn: Chief AHB

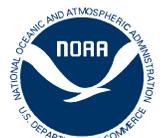
These data are required for the processing of the following hydrographic survey:

Project No.: OPR-E350-TJ-11
Registry No.: H12277
State: Virginia
Locality: Southern Chesapeake Bay
Sublocality: Newport News to Craney Island

Attachments containing:

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

cc: MOA-TJ
N/CS33



Year_DOY	Min Time	Max Time
2010_299	12:56:02	21:49:34
2010_300	12:43:30	21:16:08
2010_301	12:17:22	21:37:06
2011_217	13:31:37	16:08:55
2011_227	14:12:46	18:23:19
2011_228	16:02:38	16:34:54
2011_322	13:22:51	13:42:03



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : January 03, 2012

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-E350-TJ-2011
HYDROGRAPHIC SHEET: H12277

LOCALITY: Newport News to Craney Island, Southern Chesapeake Bay, VA
TIME PERIOD: October 26 - November 18, 2011

TIDE STATION USED: Sewells Point, VA 863-8610
Lat.36° 56.8' N Long. 76° 19.8' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.778 meters

TIDE STATION USED: Money Point, VA 863-9348
Lat.36° 46.7' N Long. 76° 18.1' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.915 meters

REMARKS: RECOMMENDED GRID

Please use the TCARI grid "E350TJ2011.tc" submitted with the project instructions as the final grid for project OPR-E350-TJ-2011, H12277 during the time period between October 26 and November 18.

Refer to attachments for grid information.

Note 1: Provided time series data are tabulated in metric units(meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

**Gerald
Hovis**

Digitally signed by Gerald Hovis
DN: cn=Gerald Hovis, o=Center for
Operational Oceanographic
Products and Services, ou=NOAA/
NOS/CO-OPS/OD/PSB,
email=gerald.hovis@noaa.gov,
c=US
Date: 2012.01.05 14:29:07 -05'00'

CHIEF, PRODUCTS AND SERVICES BRANCH



Appendix II:

Supplemental Survey Records and Correspondence



UNITED STATES DEPARTMENT COMMERCE

National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship *Thomas Jefferson* S-222
439 West York Street
Norfolk, VA 23510-1114

April 18, 2012

Memorandum For: Nautical Data Branch

From: CDR Shepard M. Smith, NOAA
 Commanding Officer, NOAA Ship *Thomas Jefferson*

Subject: Coast Pilot Report, H12277

We reviewed the Coast Pilot as might be affected by this survey, and have no comments to forward as a result.

The general comments about the area will be reviewed as part of one of the other surveys in this project.



Michael Davidson <michael.davidson@noaa.gov>

H12277 Dangers to Navigation - New Port News Pt to Craney Island.

1 message

Michael Davidson <michael.davidson@noaa.gov>

Sat, May 19, 2012 at 4:02 PM

To: OCS NDB <ocs.ndb@noaa.gov>, Marc Moser <Marc.S.Moser@noaa.gov>, Christiaan VanWestendorp <christiaan.vanwestendorp@noaa.gov>, Andrew Larkin <andrew.w.larkin@noaa.gov>

Cc: _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, ops.thomas.jefferson@noaa.gov

NDB,

Attached are two additional Dangers to Navigation for survey H12277. These were generated some time ago, but were overlooked and never got submitted. There are 3 DtoNs total that were discovered during H12277. One additional DtoN was submitted earlier today, but I believe the XML file was omitted. All 3 DtoNs associated with H12277 are attached for your convenience.

Please feel free to contact me with any questions.

V/R,
Mike

--

LT Michael C. Davidson
Operations Officer
NOAA Ship Thomas Jefferson

439 W York St

Norfolk, VA 23510

[757-647-0187](tel:757-647-0187) (ship's cell)

[808-434-2706](tel:808-434-2706) (ship's Iridium)

[301-713-7782](tel:301-713-7782) (ship's VOIP)

ops.thomas.jefferson@noaa.gov

3 attachments

 **H12277_DtoN.zip**
1096K

 **H12277_DtoN#2.zip**
116K

 **H12277_DtoN#3.zip**
207K



Michael Davidson <michael.davidson@noaa.gov>

Danger to Navigation - West of Craney Island

1 message

Michael Davidson <michael.davidson@noaa.gov>

Fri, May 18, 2012 at 10:01 PM

To: OCS NDB <ocs.ndb@noaa.gov>, Andrew Larkin <andrew.w.larkin@noaa.gov>, Christiaan

VanWestendorp <christiaan.vanwestendorp@noaa.gov>

NDB,

Attached is a Danger to Navigation from H12277. The feature is a sewer diffuser currently charted with a "(Covered 20ft rep 1982). Current survey data indicates a least depth of 16ft and the sewer pipe is exposed.

Mid-Atlantic Navigation Manager,

Wanted to make sure you were aware of this due to OpSail.

V/R,
Mike

--

LT Michael C. Davidson
Operations Officer
NOAA Ship Thomas Jefferson

439 W York St

Norfolk, VA 23510

[757-647-0187](tel:757-647-0187) (ship's cell)

[808-434-2706](tel:808-434-2706) (ship's Iridium)

[301-713-7782](tel:301-713-7782) (ship's VOIP)

ops.thomas.jefferson@noaa.gov

 **H12277_DtoN#3.pdf**
128K



Michael Davidson <michael.davidson@noaa.gov>

Final Tide Note for OPR-E350-TJ-2011, H12277

1 message

Lijuan Huang <Lijuan.Huang@noaa.gov>

Thu, Jan 5, 2012 at 5:02 PM

To: CO.Thomas.Jefferson@noaa.gov, OPS.Thomas.Jefferson@noaa.gov, Thomas.Jefferson.Tides@noaa.gov
Cc: "_NOS.CO-OPS.HPT" <NOS.COOPS.HPT@noaa.gov>, Corey Allen <Corey.Allen@noaa.gov>, Richard Brennan <Richard.T.Brennan@noaa.gov>



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

DATE: 01/05/2012

MEMORANDUM FOR: CDR Larry Krepp
Commanding Officer, NOAA Ship Thomas Jefferson

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

SUBJECT: Delivery of Tide Requirements for Hydrographic Surveys

This is notification that the preliminary zoning is accepted as the final zoning for survey project OPR-E350-TJ-2011, H12277 during the time period between October 26 and November 18, 2011. The accepted reference stations for registry No. H12277 are Sewells Point, VA (863-8610) and Money Point, VA (863-9348).

Included with this memo is the Tide Note in .PDF format, stating the preliminary zoning has been accepted as the final zoning.

 **H12277.pdf**
573K

Subject: Re: Crossline comparison

From: Chris van Westendorp <Christiaan.VanWestendorp@noaa.gov>

Date: Thu, 10 Sep 2009 13:00:35 -0400

To: "mark.blankenship" <Mark.Blankenship@noaa.gov>

CC: LCDR Rick Brennan <Richard.T.Brennan@noaa.gov>, Castle Parker <Castle.E.Parker@noaa.gov>, Edward Owens <Edward.Owens@noaa.gov>, LT Jasper Schaer <jasper.schaer@noaa.gov>, CDR Shep Smith <Shep.Smith@noaa.gov>, Daniel Wright <Daniel.Wright@noaa.gov>

Mark,

Per 5.1.4.3 of the HSSD, AHB authorizes TJ to use the Standard Deviation layer to conduct surface difference comparison and analysis on future survey submissions of multibeam data. This meets the crossline comparison requirement laid out in HSSD.

Please let me know if you have any questions or need for further clarification.

R/

LCDR Chris van Westendorp, NOAA

mark.blankenship wrote:

Chris,

You mentioned in the meeting today that AHB was not going to require the multiple CUBE surface comparison, instead allowing us to use a single surface standard deviation layer to do our checks with. Is there any memo coming out for that?

Mark

LCDR Chris van Westendorp <christiaan.vanwestendorp@noaa.gov>

Atlantic Hydrographic Branch

NOAA OCS



Michael Davidson <michael.davidson@noaa.gov>

RE: Survey Submission Structure for passback surveys

1 message

Castle Parker <castle.e.parker@noaa.gov>
To: Michael Davidson <michael.davidson@noaa.gov>

Thu, May 10, 2012 at 3:23 PM

Mike,

I concur. Speaking for AHB, I will accept this deviation from the deliverable specifications. I think that it's important for the directory structure to be consistent at the time of survey submission. Please include this accepted spec deviation in DR Appendix 5.

Thanks for your consideration with this subject and I completely agree with you.

Regards,

Gene

From: Michael Davidson [mailto:michael.davidson@noaa.gov]
Sent: Thursday, May 10, 2012 3:01 PM
To: Castle Parker
Subject: Survey Submission Structure for passback surveys

Gene,

TJ has a few surveys that were passed back for additional work. In the next several weeks, we will be submitting surveys from 2009, 2010, 2011, followed soon there after by current surveys from 2012. In an attempt to make things consistent, I would like to submit all the surveys according to the 2012 Specs and Deliverables. Before doing this, I wanted to check with you to see if this would be considered non-compliant with S&D for the prior year surveys.

If AHB agrees with our proposal to submit all surveys in the 2012 Directory Structure, please email back concurrence and I will include this email thread in Appendix V for documentation.

Thank you for your time.

V/R,

Mike

--

LT Michael C. Davidson

Appendix III:

Feature Report

AWOIS: 2

DtoN: 3

Maritime Boundary: 0

Wrecks: 1 (see also DtoN #2)

H12277_AWOIS

Registry Number: H12277
State: Virginia
Locality: Southern Chesapeake Bay
Sub-locality: Newport News Pt to Craney Island
Project Number: OPR-E350-TJ-11
Survey Dates: 10/26/2010 - 04/13/2012

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12245	67th	08/01/2008	1:20,000 (12245_1)	[L]NTM: ?
12222	51st	01/01/2009	1:40,000 (12222_1)	[L]NTM: ?
12206	33rd	10/01/2008	1:40,000 (12206_1)	[L]NTM: ?
12221	80th	01/01/2009	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	8th	03/01/2008	1:200,000 (12280_2)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
1.2	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---

1.1) AWOIS #829 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 56' 25.2" N, 076° 21' 10.8" W
Historical Depth: 3.96 m
Search Radius: 150
Search Technique: MB, VB, SSS, DI
Technique Notes: [None]

History Notes:

UNKNOWN SOURCE, CHARTED AS SUNKEN WRECK
 FE 1 1967 HUNG AT 16 FT, CLEARED TO 13 FT(ACTUAL TIDE), NO IDENTIFICATION OF
 HANG RECOMMENDED DELETE FROM CHART; PSR ITEM 4.

Survey Summary

Charts Affected: 12245_1, 12206_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 829	0.00	000.0	Primary

Hydrographer Recommendations

Delete charted obstruction

S-57 Data

[None]

Office Notes

SAR: Charted Obstruction, depth from wire drag 13ft considered as disproved by 200% SSS at the charted location. Three Obstructions exist in the near vicinity.

Compile: Concur. Delete charted dangerous obstruction, wire drag cleared to 13 feet. Update area with present survey depths.

1.2) AWOIS #14860 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 55' 48.8" N, 076° 24' 16.7" W
Historical Depth: [None]
Search Radius: 150
Search Technique: MB, VB, SSS, DI, VS
Technique Notes: [None]

History Notes:

SOURCE UNKNOWN

Survey Summary

Charts Affected: 12245_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 14860	0.00	000.0	Primary

Hydrographer Recommendations

Delete obstruction PA

S-57 Data

[None]

Office Notes

COMPILATION: Delete charted dangerous obstruction PA, depth unknown. Update area with present survey depths.

H12277_Dangers to Navigation

Registry Number: H12277
State: Virginia
Locality: Southern Chesapeake Bay
Sub-locality: Newport News Pt to Craney Island
Project Number: OPR-E350-TJ-11
Survey Date: 04/13/2012

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12245	67th	08/01/2008	1:20,000 (12245_1)	[L]NTM: ?
12222	51st	01/01/2009	1:40,000 (12222_1)	[L]NTM: ?
12221	80th	01/01/2009	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	8th	03/01/2008	1:200,000 (12280_2)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DTON #3 - Dangerous obstruction, least depth 16 feet.	Obstruction	5.03 m	36° 55' 54.6" N	076° 23' 47.8" W	---
1.2	DTON #1 - Dangerous obstruction, least depth 7 feet	Obstruction	2.27 m	36° 56' 47.2" N	076° 23' 32.5" W	---
1.3	DTON #2 - Dangerous wreck, least depth 9 feet	Wreck	2.94 m	36° 55' 51.2" N	076° 22' 45.8" W	---

1.1) DTON #3 - Dangerous obstruction, least depth 16 feet.

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36° 55' 54.6" N, 076° 23' 47.8" W
Least Depth: 5.03 m (= 16.51 ft = 2.751 fm = 2 fm 4.51 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2012-104.00:00:00.000 (04/13/2012)
Dataset: Dton_pydro_report_2.000
FOID: US 0000116265 00001(02260001C6290001)
Charts Affected: 12245_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

OBSTRN/remrks: Feature is sewer outfall pipe, with least depth on sewer diffuser that extends above main pipe.

Feature Correlation

Source	Feature	Range	Azimuth	Status
Dton_pydro_report_2.000	US 0000116265 00001	0.00	000.0	Primary

Hydrographer Recommendations

Remove "covered 20 ft rep 1982". Add obstruction at surveyed position.

Cartographically-Rounded Depth (Affected Charts):

16ft (12245_1, 12222_1, 12207_1, 12221_1, 12280_2)

2 ¾fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 3:diffuser
 NINFOM - Add obstruction
 QUASOU - 6:least depth known
 SORDAT - 20120413

SORIND - US,US,graph,H12277

TECSOU - 3,2:found by multi-beam,found by side scan sonar

VALSOU - 5.031 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Obstruction (sewer diffuser) located at survey position by 200% sidescan sonar and object detection multibeam. Reported by field unit as danger to navigation and applied to current chart as 16ft obstruction (diffuser).

Compile: Concur. Delete charted dangerous obstruction, Diffuser, (16) feet. Add dangerous obstruction,(Diffuser), least depth 16 feet in present survey position.

Feature Images

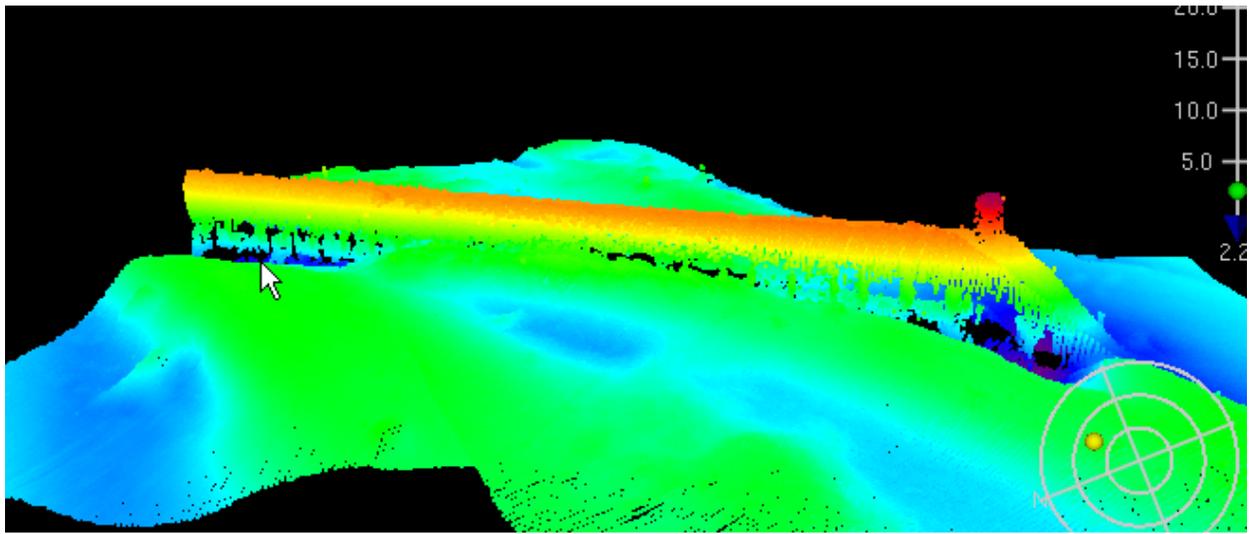


Figure 1.1.1

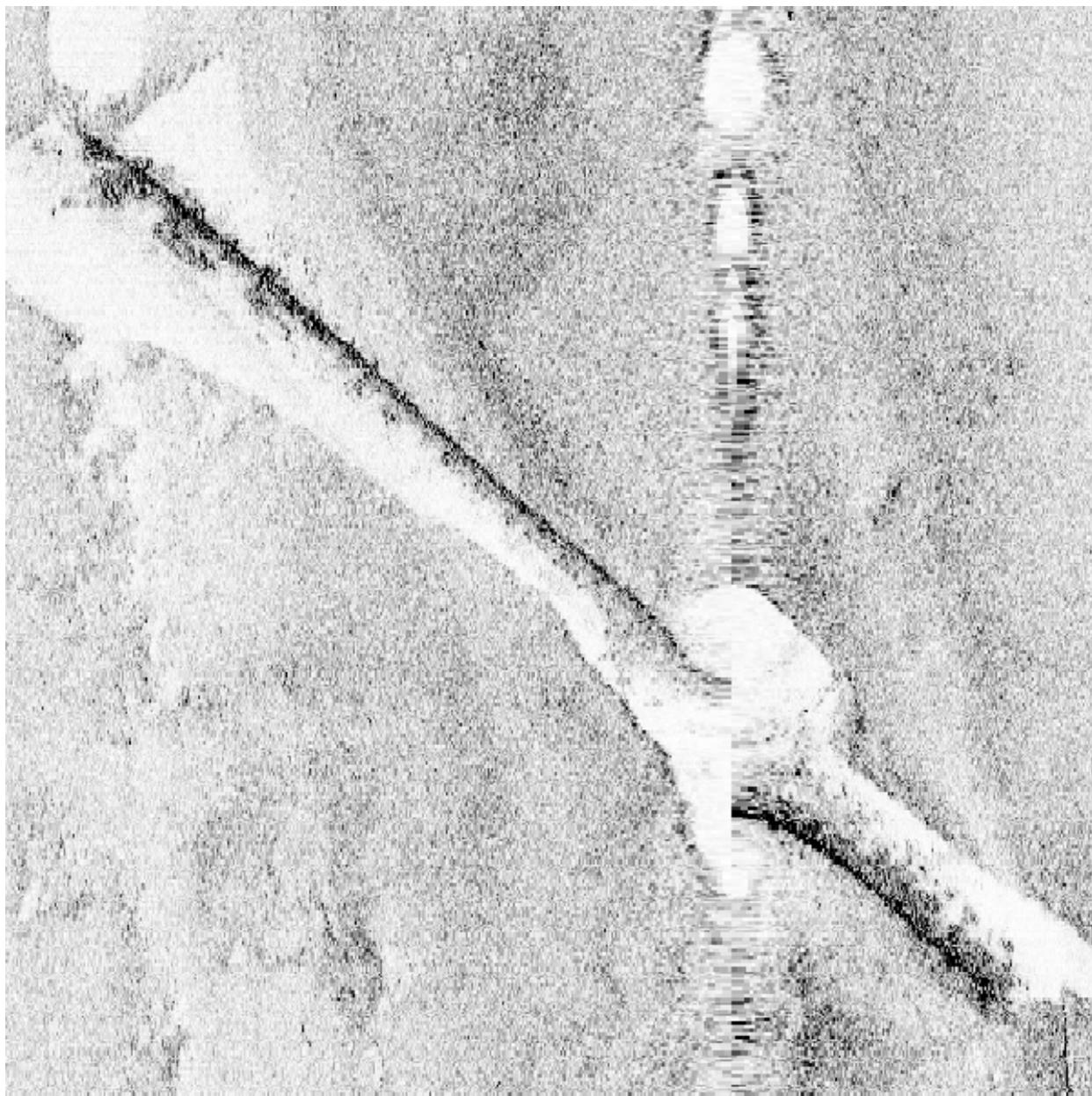


Figure 1.1.2

1.2) DTON #1 - Dangerous obstruction, least depth 7 feet

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36° 56' 47.2" N, 076° 23' 32.5" W
Least Depth: 2.27 m (= 7.46 ft = 1.243 fm = 1 fm 1.46 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2012-104.00:00:00.000 (04/13/2012)
Dataset: Dton_pydro_report_2.000
FOID: US 0000116242 00001(02260001C6120001)
Charts Affected: 12245_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
Dton_pydro_report_2.000	US 0000116242 00001	0.00	000.0	Primary

Hydrographer Recommendations

Recommend updating authorized minimum depth of fish haven

Cartographically-Rounded Depth (Affected Charts):

7ft (12245_1, 12222_1, 12221_1, 12280_2)

1 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 1:snag / stump
 NINFOM - Add obstruction
 QUASOU - 6:least depth known
 SORDAT - 20120413
 SORIND - US,US,graph,H12277

TECSOU - 3,2:found by multi-beam,found by side scan sonar

VALSOU - 2.274 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Obstruction (snag/stump) located at survey position by 200% sidescan sonar and object detection multibeam. Reported by field unit as danger to navigation and applied to current chart as 7ft sounding within a Fish Haven.

Compile: Concur. Add obstruction, least depth 7 feet in present survey position. Also, Fish Haven auth min depth needs to be updated to 7 feet. Defer to MCD for charting. See also HR section 5.0.

Feature Images

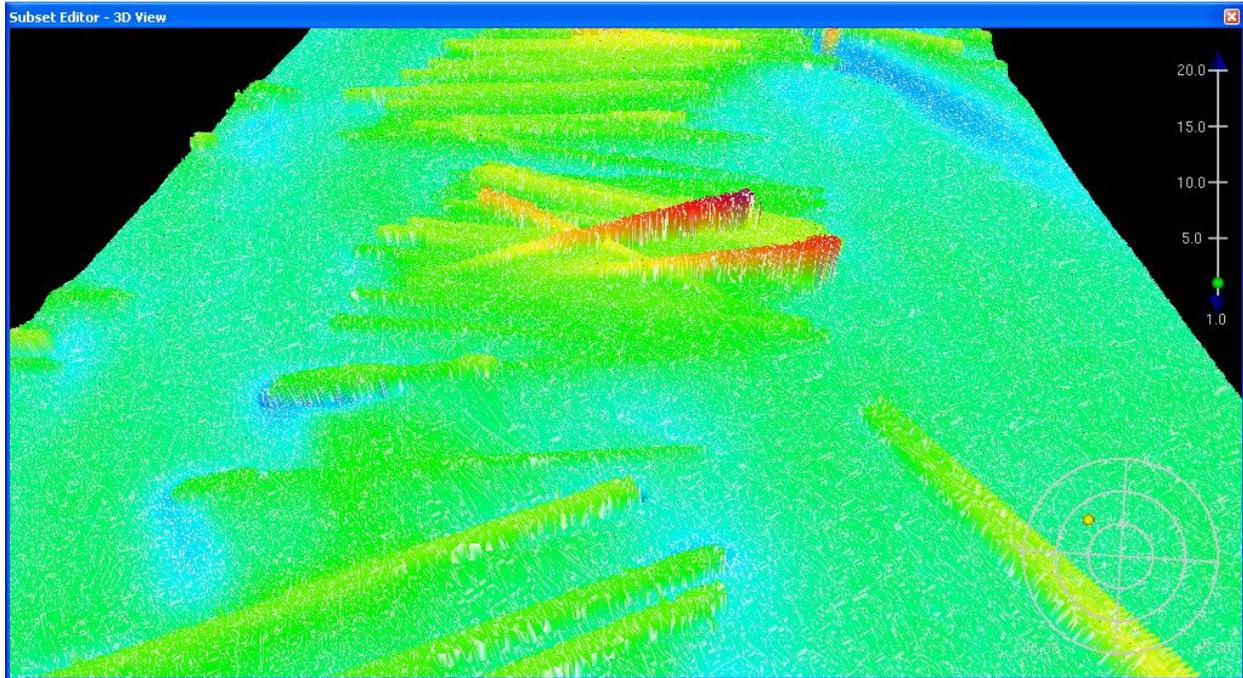


Figure 1.2.1

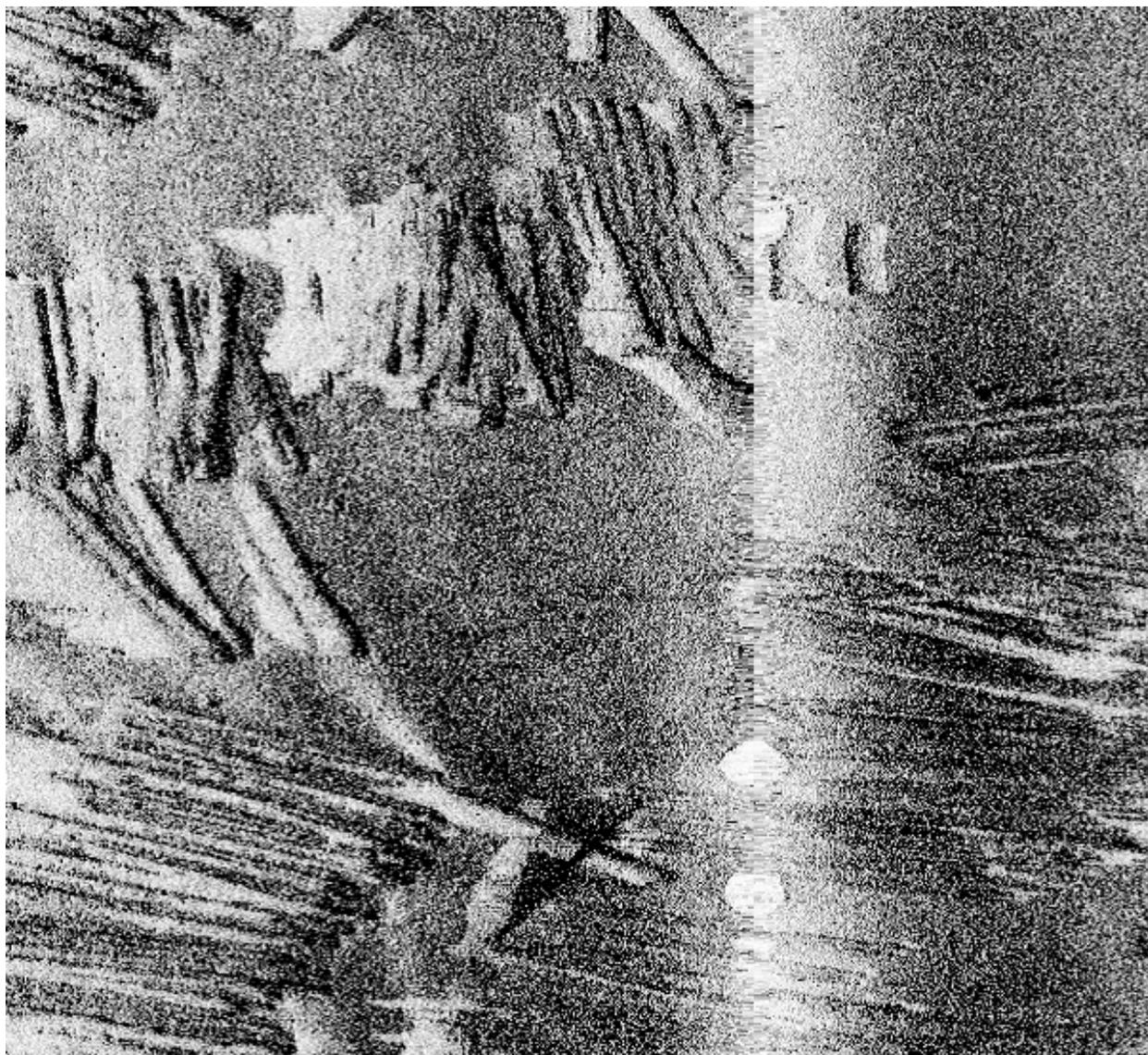


Figure 1.2.2

1.3) DTON #2 - Dangerous wreck, least depth 9 feet

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36° 55' 51.2" N, 076° 22' 45.8" W
Least Depth: 2.94 m (= 9.66 ft = 1.610 fm = 1 fm 3.66 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2012-104.00:00:00.000 (04/13/2012)
Dataset: Dton_pydro_report_2.000
FOID: US 0000116236 00001(02260001C60C0001)
Charts Affected: 12245_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

WRECKS/remrks: Wreck found with SSS and MB

Feature Correlation

Source	Feature	Range	Azimuth	Status
Dton_pydro_report_2.000	US 0000116236 00001	0.00	000.0	Primary

Hydrographer Recommendations

Add wreck

Cartographically-Rounded Depth (Affected Charts):

9ft (12245_1, 12222_1, 12207_1, 12221_1, 12280_2)

1 ½fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 QUASOU - 6:least depth known
 SORDAT - 20120413
 SORIND - US,US,graph,H12277

TECSOU - 3,2:found by multi-beam,found by side scan sonar

VALSOU - 2.944 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Wreck located at survey position by 200% sidescan sonar and object detection multibeam. Reported by field unit as danger to navigation and applied to current chart as 10ft wreck. Recommend to update feature.

Compile: Concur. Delete charted 10 foot dangerous wreck. Add dangerous wreck, least depth 9 feet in present survey position.

Feature Images

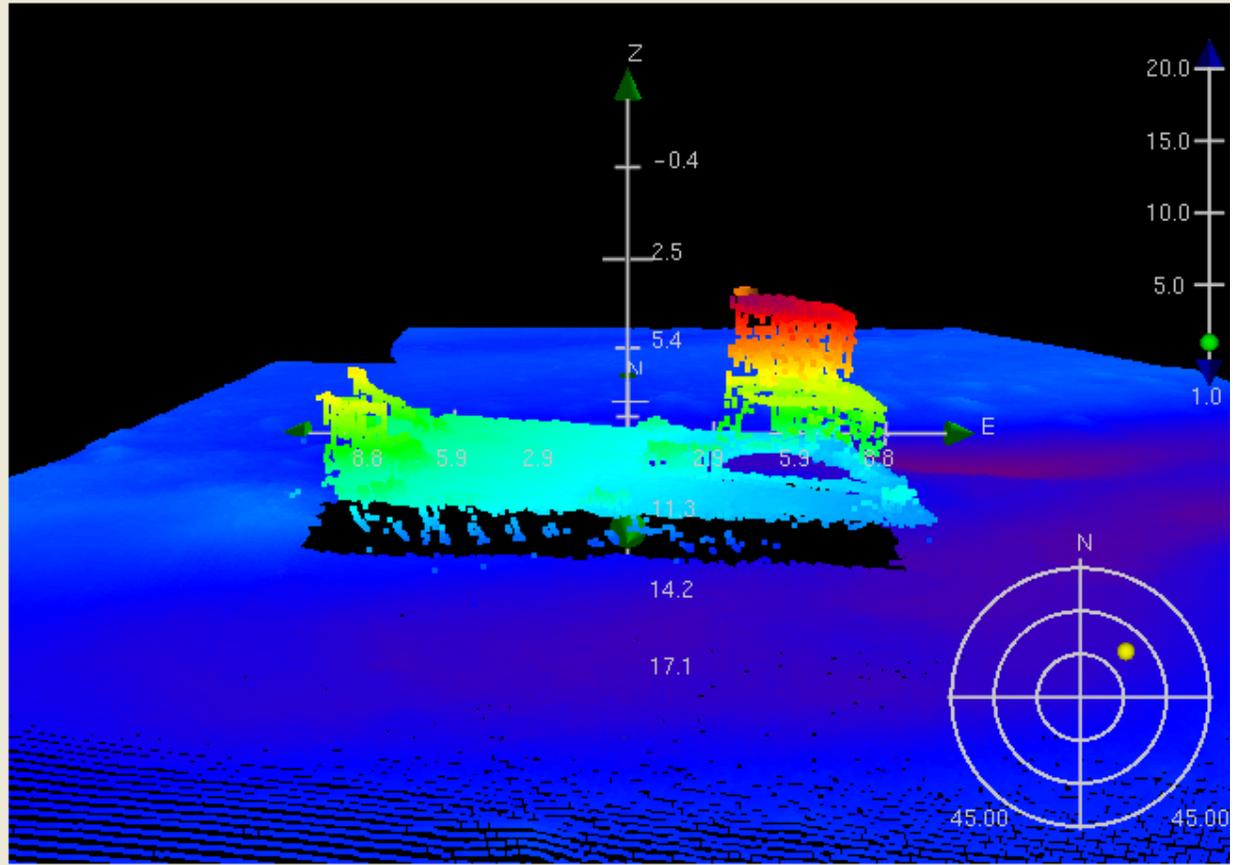


Figure 1.3.1

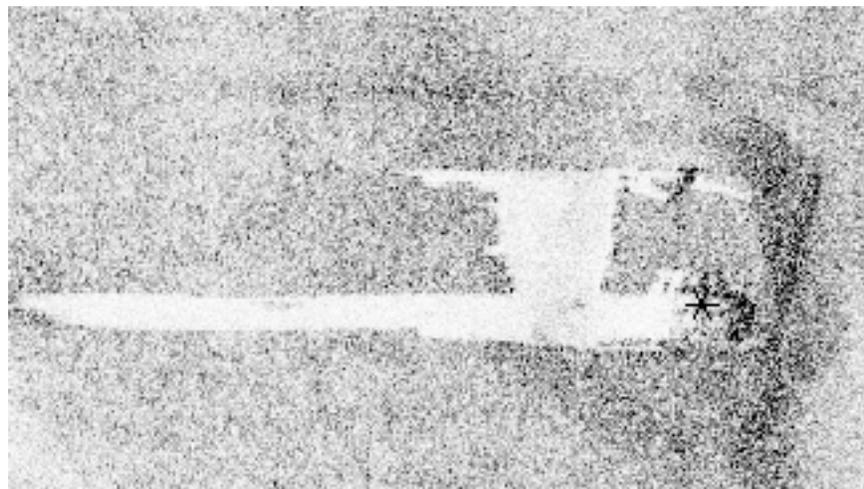


Figure 1.3.2

H12277_Wrecks

Registry Number: H12277
State: Virginia
Locality: Southern Chesapeake Bay
Sub-locality: Newport News Pt to Craney Island
Project Number: OPR-E350-TJ-11
Survey Date: 04/13/2012

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12245	67th	08/01/2008	1:20,000 (12245_1)	[L]NTM: ?
12222	51st	01/01/2009	1:40,000 (12222_1)	[L]NTM: ?
12221	80th	01/01/2009	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	8th	03/01/2008	1:200,000 (12280_2)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Uncharted dangerous wreck, least depth 23 feet	Wreck	7.11 m	36° 55' 55.3" N	076° 22' 49.6" W	---

1.1) Uncharted dangerous wreck, least depth 23 feet

Survey Summary

Survey Position: 36° 55' 55.3" N, 076° 22' 49.6" W
Least Depth: 7.11 m (= 23.31 ft = 3.886 fm = 3 fm 5.31 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2012-104.00:00:00.000 (04/13/2012)
Dataset: Wreck_pydro_report_2.000
FOID: US 0000116241 00001(02260001C6110001)
Charts Affected: 12245_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
Wreck_pydro_report_2.000	US 0000116241 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12245_1, 12222_1, 12207_1, 12221_1, 12280_2)

3 ¾fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 QUASOU - 6:least depth known
 SORDAT - 20120413
 SORIND - US,US,graph,H12277
 TECSOU - 3,2:found by multi-beam,found by side scan sonar
 VALSOU - 7.106 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Uncharted wreck located at survey position by 200% sidescan sonar and object detection multibeam.

Compile: Concur. Add dangerous wreck, least depth 23 feet in present survey position.

Feature Images

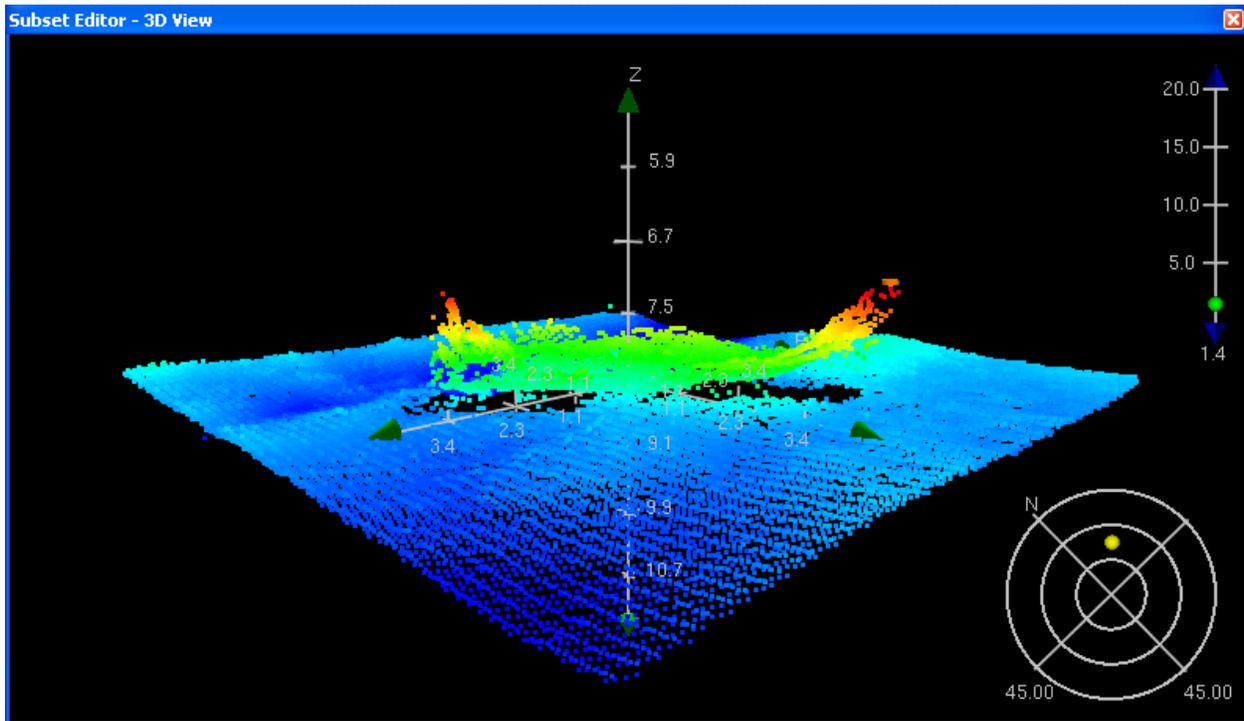


Figure 1.1.1

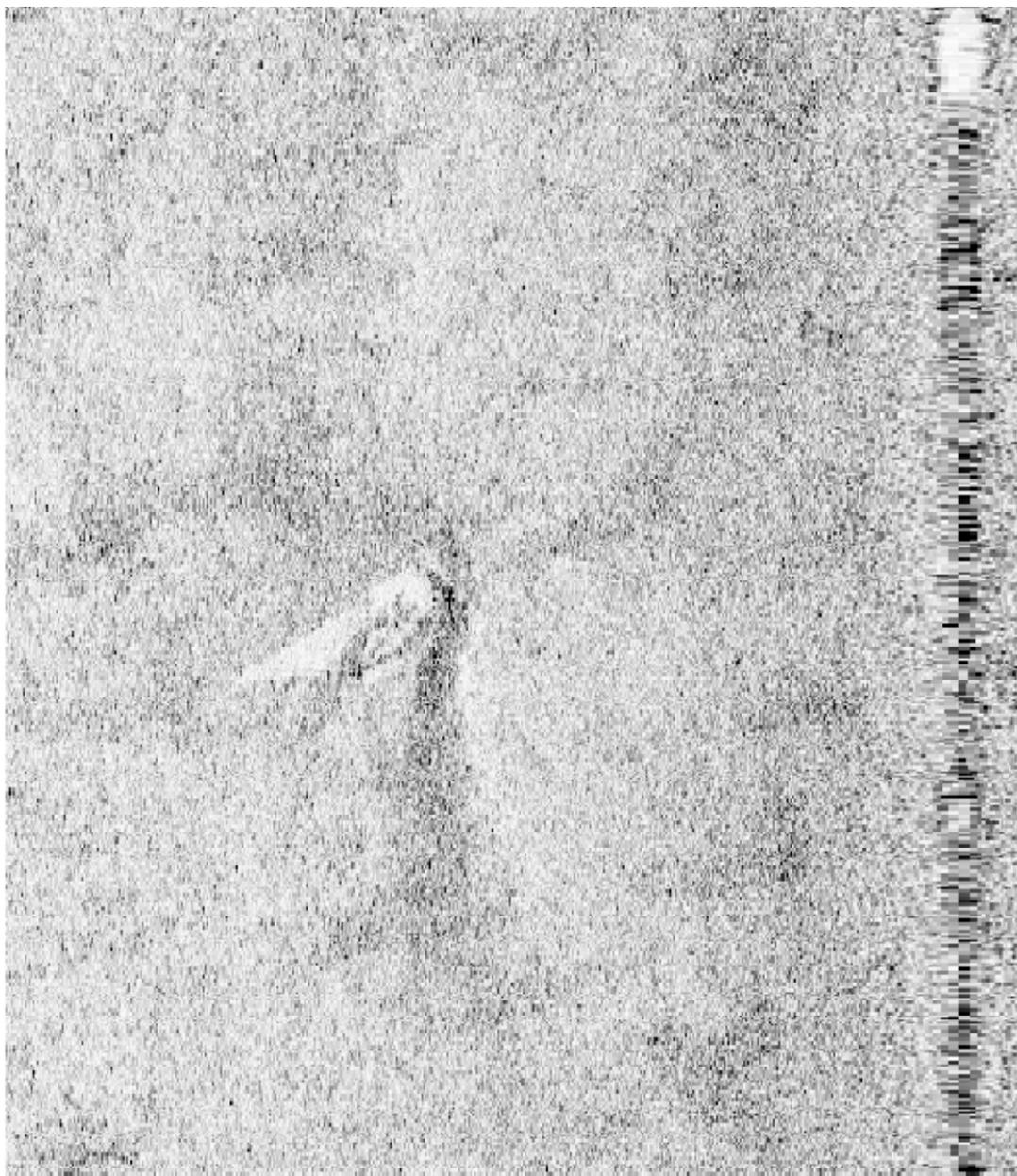


Figure 1.1.2

APPROVAL PAGE

H12277

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 NGDC for archive

- H12277_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H12277_GeoImage.pdf

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

Approved: _____

LT Abigail Higgins, NOAA
Chief, Atlantic Hydrographic Branch