

UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration NOAA Marine and Aviation Operations Marine Operations Center 439 W. York Street Norfolk, VA 23510-1114

MEMORANDUM FOR: Captain Shepard M. Smith, NOAA Commanding Officer, NOAA Ship *Thomas Jefferson*

Captain Anne K. Lynch, NOAA

FROM:

Captain Anne K. Lynch, NOAA Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT:

Project Instruction for Southern Chesapeake Bay Thomas Jefferson Launch Work

Attached is the final Project Instruction for Southern Chesapeake Bay, which is scheduled to be performed by *Thomas Jefferson*'s Hydrographic Survey Launches between the period of March 14 – May 13, 2016. No allocated sea days are being used for this project. Both MOC-A and *Thomas Jefferson* Commands concur the use of the launches for this survey will aid in maintaining the proficiency of the coxswains and survey crew during the ship's three month yard period.

The launches will be based out of MOC-A from March 14 – 31, 2016 and then out of Little Creek from April 1 – May 13, 2016. The crew will work 9 hour days. Normal protocol will be followed and all safety equipment is aboard. The Operations Officer will be in Norfolk and will be the local person in charge. The Operations Officer can be reached at 757-284-9747. Acknowledge receipt of these instructions via e-mail to **OpsMgr.MOA@noaa.gov** at Marine Operations Center-Atlantic.



The following individuals will be participating during some or all of the Survey Launch work:

LCDR Olivia Hauser LT Joe Carrier LT Matt Forrest LTjg Eileen Pye ENS Peter Gleichauf ENS Marybeth Head ENS Max Andersen ENS Kaitlyn Seberger CST Peter Lewit SST Alison Stone SST Todd Walsh ST Kimberly Glomb ST Rita Bowker ST Alex Ligon BGL Robert Bayliss SS Anthony Teele SS Chris Marcum AB Francine Graines AB Patrick Osborne 2AE Steve Williams JE Sharon Gilliam

Hydrographic Survey Project Instructions

Project Name:	Southern Chesapeake Bay
Project Number:	OPR-E350-TJ-16
Assigned Field Unit:	NOAA Ship Thomas Jefferson
Assigned Processing Branch:	Atlantic Hydrographic Branch
Signed Date:	02/19/2016
Project Instructions Version:	Draft
Planned Acquisition Time:	Start Date: 03/2016 End Date: 05/2016
Delivery Dates:	120 days from completion of data acquisition.

Purpose and Location:

Local constituents have raised concerns over the accuracy of nautical charts in the area, directly affecting their ability to safely navigate. This project will cover approximately 50 square nautical miles. Survey data from this project is intended to supersede all prior survey data in the common area.

Supporting Documents:

Hydrography shall consist of Navigable Area Surveys in accordance with the following support documents.

NOS Hydrographic Surveys Specifications and Deliverables Manual (HSSD), May 2015

NOS Field Procedures Manual for Hydrographic Surveying (FPM), April, 2014

Hydrographic Survey Technical Directive (HTD): HTD 2015-1 Configuration Management

Hydrographic Survey Technical Directive (HTD): 2015-3 File Name Character Limit

Hydrographic Survey Technical Directive (HTD): 2015-4 Revision of Feature Flagging Guidance

PERSONNEL SAFETY AND DATA QUALITY SHALL ALWAYS BE EMPHASIZED OVER DATA QUANTITY! THE HYDROGRAPHER SHALL NEVER SUBJECT PERSONNEL OR BOATS TO UNDUE RISKS AND HAZARDS.

Registry Details:						
General L	.ocality:	Chesapeake Ba	у			
Registry Number	Sheet Number	Sublocality	State or Territory	Scale	Estimated SNM	Instructions
H12866	1	Willoughby Bank	Virginia	10000	50	

Limits & Coverage:

Inshore Limit: The inshore limit of hydrography will be the farthest offshore of the following: (1) the 1-meter depth contour or (2) the line defined by the distance seaward from the MHW line which is equivalent to 0.8 millimeters at the scale of the largest scale nautical chart. Please ensure the following: 1) Indications of shoaling falling between set line spacing main scheme lines must be investigated 2) Set Line Spacing Line orientation should be approximately perpendicular to isobaths whenever possible.

Coverage Requirements:				
Coverage Water Depth	Coverage Required			
All waters non-contiguous to shore	Complete Coverage			
Inshore Limit to 4 meters	100 meter Set Line Spacing contiguous to the shore.			
Offshore Shoals of depths 0-4 meters	50 meter Set Line Spacing			
Charted Submerged Features	200 meter radius of 200% SSS with concurrent SBES or MBES.			
Features with Qualifiers (e.g. PA, PD, ED)	400 meter radius of 200% SSS with concurrent SBES or MBES.			

Assigned Tasks

Acknowledgement:

The project manager for this project is Jacklyn James. Contact information for the project manager may be found in the User Contacts section of this document. The field unit shall acknowledge receipt of these instructions and submit any comments or questions via email to the project manager. Additionally, the project manager shall be included on all discussions or correspondence involving issues concerning the project.

Environmental Compliance Requirements

Comply with the marine mammal observation and reporting requirements in Section 7.6 of the HSSD.

Aids to Navigation (ATONs):

There are no ATONs specifically assigned for this project. Any ATONs located within the survey area should be verified so that they serve their intended purpose in accordance with Section 7.2 of the HSSD.

AWOIS Items:

There are no AWOIS investigation requirements for this project. For reference, a dataset containing all AWOIS items can be accessed within the GIS files located within the project folder or found in multiple formats at http://www.nauticalcharts.noaa.gov/hsd/wrecks_and_obstructions.html

Maritime Boundary Points (MBPs):

There are no Maritime Boundary investigation requirements for this project.

Bottom Samples:

There is no Bottom Sample requirement for this project.

Chart Comparison:

Perform a chart comparison in accordance with Section 4.5 of the FPM and Sections 8.1.4 and D.1 of the HSSD. Use only the latest editions of the largest scale NOS charts covering the project area. Resolve any discrepancies identified in the field and explain them in the Descriptive Report. The charts, listed below, were used in the preparation of these project instructions and accompanying project files, however, this list is for reference only and not exhaustive. Some charts listed may have larger scale sections to which survey data must be compared.

Affected Raster Charts								
Chart Number	Scale	Ec NL	dition Imber	Edition Date		Kapp Number	LNM Date	NM Date
12256	20000		18	02/2014		500	02/13/2016	02/09/2016
12245	20000		68	05/2013 225		225	02/13/2016	02/09/2016
12255	5000		18	08/20	14	412	02/13/2016	02/09/2016
12222	40000		55 02/2		15	914	02/13/2016	02/09/2016
Affected ENCs								
ENC Name	Scale	e Edi		ition	l Ap	Jpdate plication Date	Issue Date	Preliminary
US5VA13M	40000)	3	81	09/	/09/2015	02/08/2016	YES
US5VA15M	2000)	4	3 09/		/02/2015	01/20/2016	YES
US5VA18M	5000		13		05/	/16/2012	05/19/2015	YES
US5VA20M	20000)	12		05/	/21/2014	09/11/2014	YES

Coast Pilot:

Submit a Coast Pilot Review Report in accordance with section 7.5 of the HSSD.

Dangers to Navigation (DTONs):

Generate DTON reports in accordance with Section 8.1.3 of the HSSD. DTON reports should be sent to ocs.ndb@noaa.gov with a courtesy copy to the project manager. It is of paramount importance that DTONs be reported as soon as possible.

Junctions:						
Junction with data from the surveys listed below. Refer to sections 2.2.2.3 and 4.5.2 of the FPM.						
Registry Number	Scale	Year	Platform	Relative Location		
H11028	10000	2002	NOAA Ship <i>Rude</i>	E		
H10945	10000	2004	NOAA Ship <i>Rude</i>	E		
H11323	10000	2006	NOAA Ship Thomas Jefferson	E		
D00151	10000	2009	NOAA Ship Thomas Jefferson	S		
F00622	10000	2012	NOAA Ship Ferdinand R. Hassler	S		

Progress Reports:

Submit a weekly acquisition progress report during field operations in accordance with Section 8.1.1 of the HSSD.

Survey Outlines:

Generate a survey outline in accordance with Section 8.1.2 of the HSSD. Submit survey outlines to survey.outlines@noaa.gov.

Special Data Handling Requirements:

ATTENTION: NOAA Ship Thomas Jefferson

Submit all Conductivity Temperature and Depth (CTD) data to the National Oceanographic Data Center (NODC) ensuring data are in an appropriate file format as outlined on the NODC website at http://www.nodc.noaa.gov/access/dataformats.html.

Horizontal Control Requirements:

Comply with the horizontal control requirements in Section 3 of the HSSD.

RTK

Horizontal control will be via Real Time Kinematic (RTK) corrections.

Vertical Control Requirements:

Comply with the vertical control requirements in Section 4 of the HSSD.

TCARI

Comply with the requirements from CO-OPS which are included with the project data from the Operations Branch. Submit surveys with final approved water levels applied. Contact the Operations Branch if this causes the survey to miss a submission deadline.

VDatum

Vertical control for this survey will be via RTK. All survey lines shall be processed using RTK correctors and reduced to MLLW via the VDatum SEP model provided with these project instructions. Should the field experience difficulty in realizing chart datum via the ellipse, then, after pursuing technical assistance, the field shall communicate with the project manager for guidance on how to proceed.

VDatum Version	Geoid	Area Area Sepa Version Unce			Separation Uncertainty
3.5	2012	Virginia/Marylan	1.2	9.2 centimeters	
NWLON			Gauges		
Operating Water Level Station			Station ID		
Kiptopeke			8632200		
Yorktown			8637689		
Sewells Point			8638610		
Chesapeake Bay Bridge Tunnel			8638863		

Orthometric Imagery:

No Orthometric Imagery has been provided for this project.

Shoreline and Nearshore Features:

Conduct a limited shoreline verification using the composite source file (CSF). All features with attribute asgnmt populated with 'Assigned' shall be addressed in accordance with Sections 5.2.1.2 and 8.2 of the HSSD, even if they are inshore of NALL. For reference, prior survey features are provided in S57 format. See Section 3.5.5.2.2 of the FPM. Features that DO NOT have the attribute asgnmt populated with 'Assigned' need not be addressed unless they are deemed by the field unit as a navigationally significant hazard. For the purposes of disproving a feature, either complete MB coverage or 200% SSS is necessary. The search radius for such disprovals are as follows: charted features in H12866 labeled with a "PA, PD, or ED" will have a search radius of 400 meters. All charted submerged features will have a search radius of 200 meters. Please contact the HSD OPS Project Manager if there are any questions in regards to feature assignment. In addition, see Section 3.5.5.2.2 of the FPM.

GC Number	Horizontal Position Accuracy
GC10737	0.6 meters
GC Number	Horizontal Position Accuracy
GC11024	0.6 meters
GC Number	Horizontal Position Accuracy
GC11173	0.36 meters

User Contacts

The following primary offices and persons shall be contacted at or near the beginning and end of the field operations to discuss survey objectives and accomplishment (Mandatory) or are listed for contact at the discretion of the Commanding Officer (Reference).

Project Manager

Jacklyn James NOAA *Phone:* 301-713-2702 x 120 *Fax: Email:* Jacklyn.C.James@noaa.gov *Obligation:* Mandatory

Back-Up Project Manager

Patrick Keown NOAA Phone: 301-713-2702 x 107 Fax: Email: Patrick.Keown@noaa.gov Obligation: For Reference

NOAA Navigation Manager Mid-Atlantic

LT Ryan Wartick NOAA *Phone:* 757-268-8164 *Fax: Email:* Ryan.Wartick@noaa.gov *Obligation:* For Reference