



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Marine and Aviation Operations
Marine Operations Center - Atlantic
Norfolk, Virginia 23510-1114

MEMORANDUM FOR: Lieutenant Commander Matthew Jaskoski, NOAA
Commanding Officer, NOAA Ship *Ferdinand Hassler*

FROM: Captain Scott M. Sirois, NOAA
Commanding Officer, NOAA Marine Operations Center Atlantic

SUBJECT: Project Instruction for FH-17-01
Approaches to Jacksonville, FL

Attached is the final Project Instruction for FH-17-01 Approaches to Jacksonville, FL, scheduled aboard NOAA Ship *Ferdinand Hassler* during the period of January 24, 2017 to September 29, 2017. Of the 110 DAS scheduled for this project, 110 days are funded by a Line Office Allocation. This project is estimated to exhibit a medium Operational Tempo. Acknowledge receipt of these instructions via e-mail to chiefops.moa@noaa.gov at Marine Operations Center-Atlantic.





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Coast Survey
Silver Spring, Maryland 20910-3282

Project Instructions

Date Submitted: January 11, 2016


Platform: NOAA Ship *Ferdinand R. Hassler*

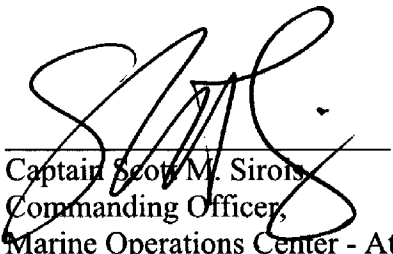
Project Number: FH-17-01

Project Title: Approaches to Jacksonville, FL

Project Dates: January 24, 2017 to September 29, 2017

Prepared by: 2017.01.12
11:42:33
-05'00' Dated: _____
Lieutenant Russell Quintero, NOAA
Chief, Operations Branch
Hydrographic Surveys Division

Approved by:  Dated: January 12, 2017
for Captain Richard Brennan, NOAA
Chief, Hydrographic Surveys Division
Office of Coast Survey

Approved by:  Dated: 1/17/17
Captain Scott M. Siros
Commanding Officer,
Marine Operations Center - Atlantic



I. Overview

A. Brief Summary and Project Period

This survey is scheduled to begin in January 2017 and end in September 2017. This project is being conducted in support of NOAA's Office of Coast Survey's mission to provide contemporary hydrographic data in order to update the nautical charting products and reduce survey backlog in the area.

B. Days at Sea (DAS)

Of the 110 DAS scheduled for this project, 0 DAS are funded by an OMAO allocation, 110 DAS are funded by a Line Office Allocation, 0 DAS are Program Funded, and 0 DAS are Other Agency funded. This project is estimated to exhibit a medium Operational Tempo.

C. Operating Area

The project area is located offshore of Jacksonville, FL. A map of the project area can be found with the detailed project instructions appended to these instructions.

D. Summary of Objectives

This project will support the following primary mission:
To support safe navigation through the acquisition and processing of hydrographic survey data for updating nautical charts and by the identification and dissemination of dangers to navigation as identified during the course of survey operations.

E. Participating Institutions

Office of Coast Survey

F. Personnel/Science Party: name, title, gender, affiliation, and nationality

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Miller, James	PS	2/6/2017	2/17/2017	M	AHB	US
Wood, Doug	PS	2/20/2017	3/3/2017	M	OPS	US
Wilson, Matthew	PS	3/6/2017	3/17/2017	M	AHB	US
TBD						

G. Administrative

1. Points of Contacts:

Principal Investigator:
Lieutenant Russell Quintero, NOAA Chief,
Operations Branch Hydrographic Surveys
Division 1315 East West Hwy, #6854
Silver Spring, MD 20910
301-713-2702 x112
russell.quintero@noaa.gov

Project Manager:
Kathryn Pridgen
Physical Scientist, Operations Branch
Hydrographic Surveys Division
1315 East West Hwy, #6854
Silver Spring, MD 20910
301-713-2702 x178
Kathryn.Pridgen@noaa.gov

Back up Project Manager:
Christina Belton
Physical Scientist, Operations Branch
Hydrographic Surveys Division
1315 East West Hwy, #6854
Silver Spring, MD 20910
301-713-2698 x113
christina.belton@noaa.gov

Chief Scientist:
LCDR Matthew Jaskoski, NOAA
Commanding Officer, NOAA Ship *Ferdinand R. Hassler*
439 West York Street
Norfolk VA 23510-1114
603-812-8748
CO.ferdinand.hassler@noaa.gov

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

The Office of Coast Survey is sensitive to the potential effects of its operations on the physical, biological, and cultural marine environment. In accordance with the National Environmental Policy Act, Coast Survey prepared a Programmatic Environmental

Assessment to gauge the environmental impacts resulting from surveying and other data-gathering activities. As a result, the National Ocean Service has published a Finding of No Significant Impact (FONSI) for the Office of Coast Survey program of conducting hydrographic surveys for the calendar years 2013 - 2018.

In addition, The Office of Coast Survey has implemented Best Management Practices (BMPs) based on the ESA mitigation and monitoring measures agreed to between the OCS Hydrographic Services Division (HSD) and the NMFS Office of Protected Resources (OPR-ESA) and documented in the April 30, 2013 Biological Opinion. They were adopted in the context of the ESA, but include BMPs for marine mammals listed in the ESA (“depleted” under MMPA).

For further information on the BMPs, please refer to the Environmental Compliance Section of the Hydrographic Survey Project Instructions. For further information on OCS Regulations and Policies go to: <http://www.nauticalcharts.noaa.gov/Legal/>

II. Operations

The Chief Scientist is responsible for ensuring the scientific staff are trained in planned operations and are knowledgeable of project objectives and priorities. The Commanding Officer is responsible for ensuring all operations conform to the ship’s accepted practices and procedures.

A. Project Itinerary:

DEP: 1/24/2017 Tue Norfolk, VA FH-16-02 Leg 1

ARR: 2/3/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL (transit/HSRR)

DEP: 2/6/2017 Mon Fernandina, FL FH-16-02 Leg 2

ARR: 2/17/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 2/20/2017 Mon Fernandina, FL FH-16-02 Leg 3

ARR: 3/3/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 3/6/2017 Mon Fernandina, FL FH-16-02 Leg 4

ARR: 3/17/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 3/20/2017 Mon Fernandina, FL FH-16-02 Leg 5

ARR: 3/27/2017 Mon New Castle, NH (transit to home port)

DEP: 7/26/2017 Wed Norfolk, VA FH-17-01 Leg 6

ARR: 8/4/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 8/8/2017 Tue Fernandina, FL FH-17-01 Leg 7

ARR: 8/18/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 8/22/2017 Tue Fernandina, FL FH-17-01 Leg 8
ARR: 9/1/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 9/5/2017 Tue Fernandina, FL FH-17-01 Leg 9
ARR: 9/15/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

DEP: 9/18/2017 Mon Fernandina, FL FH-17-01 Leg 10
ARR: 9/29/2017 Fri Fernandina, FL OPR-G343 Jacksonville, FL

B. Staging and Destaging:

None Required.

C. Operations to be Conducted:

Hydrographic survey operations shall be conducted per the appended project instructions.

The ship shall operate both sonars for a total of 24 hr/day for data acquisition and project field support. Alternatively, in coordination with HSD Operations, periodic day operations with the smaller survey vessel may be appropriate; in which case, HSD acknowledges production will be reduced.

D. Dive Plan

All dives are to be conducted in accordance with the requirements and regulations of the NOAA Diving Program (<http://www.ndc.noaa.gov/dr.html>) and require the approval of the ship's Commanding Officer.

Dives are not planned for this project.

E. Applicable Restrictions

Conditions which preclude normal operations

- Poor weather conditions
- Equipment failure
- Safety concerns
- Personnel Shortages

III. Equipment

A. Equipment and Capabilities

- Ship fully-outfitted with hydrographic survey equipment to support multibeam and/or side scan sonar survey operations.
- Personnel to staff and operate the ship's survey equipment for the required operational hours/day described in Section II. C. Operations to be Conducted.

- The Office of Coast Survey may staff the survey department with rotating physical scientists to efficiently manage the project’s data acquisition and processing requirements.
- One survey launch fully-outfitted with hydrographic survey equipment to support multibeam and/or side scan sonar survey operations.

IV. Hazardous Materials

A. Policy and Compliance

No Hazardous Materials are being brought aboard the ship for this project.

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

V. Additional Projects

A. Supplementary (“Piggyback”) Projects

No Supplementary Projects are planned.

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

VI. Disposition of Data and Reports

Disposition of data gathered aboard NOAA ships will conform to NAO 216-101 *Ocean Data Acquisitions* and NAO 212-15 *Management of Environmental Data and Information*. To guide the implementation of these NAOs, NOAA’s Environmental Data Management Committee (EDMC) provides the *NOAA Data Documentation Procedural Directive* (data documentation) and *NOAA Data Management Planning Procedural Directive* (preparation of Data Management Plans). OMAO is developing procedures and allocating resources to manage OMAO data and Programs are encouraged to do the same for their Project data.

A. Data Classifications: *Under Development*

a. OMAO Data

b. Program Data

B. Responsibilities: *Under Development*

VII. Meetings, Vessel Familiarization, and Project Evaluations

- A. Pre-Project Meeting: The Chief Scientist and Commanding Officer will conduct a meeting of pertinent members of the scientific party and ship's crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all concerns. This meeting shall be conducted before the beginning of the project with sufficient time to allow for preparation of the ship and project personnel. The ship's Operations Officer usually is delegated to assist the Chief Scientist in arranging this meeting.
- B. Vessel Familiarization Meeting: The Commanding Officer is responsible for ensuring scientific personnel are familiarized with applicable sections of the standing orders and vessel protocols, e.g., meals, watches, etiquette, drills, etc. A vessel familiarization meeting shall be conducted in the first 24 hours of the project's start and is normally presented by the ship's Operations Officer.
- C. Post-Project Meeting: The Commanding Officer is responsible for conducted a meeting no earlier than 24 hrs before or 7 days after the completion of a project to discuss the overall success and shortcomings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, the Chief Scientist, and members of the scientific party and is normally arranged by the Operations Officer and Chief Scientist.
- D. Project Evaluation Report

Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Chief Scientist. The form is available at <https://sites.google.com/a/noaa.gov/omao-intranet-dev/operations/marine/customer-satisfaction-survey> and provides a "Submit" button at the end of the form. It is also located at https://docs.google.com/a/noaa.gov/forms/d/1a5hCCkgIwaSII4DmrHPudAehQ9HqhRqY3J_FXqbJp9g/viewform. Submitted form data is deposited into a spreadsheet used by OMAO management to analyze the information. Though the complete form is not shared with the ships, specific concerns and praises are followed up on while not divulging the identity of the evaluator.

VIII. Miscellaneous

- A. Meals and Berthing

The ship will provide meals for the scientists listed above. Meals will be served 3 times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically

meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the project.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Chief Scientist. The Chief Scientist and Commanding Officer will work together on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The Chief Scientist is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The Chief Scientist is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The Chief Scientist will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Chief Scientist to ensure that the entire scientific party has a mechanism in place to provide lodging and food and to be reimbursed for these costs in the event that the ship becomes uninhabitable and/or the galley is closed during any part of the scheduled project.

All persons boarding NOAA vessels give implied consent to comply with all safety and security policies and regulations which are administered by the Commanding Officer. All spaces and equipment on the vessel are subject to inspection or search at any time. All personnel must comply with OMAO's Drug and Alcohol Policy dated May 17, 2000 which forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, NF 57-10-01 (3-14)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Chief Scientist or the NOAA website <http://www.corporateservices.noaa.gov/noaaforms/eforms/nf57-10-01.pdf>.

All NHSQs submitted after March 1, 2014 must be accompanied by [NOAA Form \(NF\) 57-10-02](#) - Tuberculosis Screening Document in compliance with [OMAO Policy 1008](#) (Tuberculosis Protection Program).

The completed forms should be sent to the Regional Director of Health Services at the applicable Marine Operations Center. The NHSQ and Tuberculosis Screening Document should reach the Health Services Office no later than 4 weeks prior to the start of the project to allow time for the participant to obtain and submit additional information should health services require it, before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of either form. Ensure to fully complete each form and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

The participant can mail, fax, or email the forms to the contact information below. Participants should take precautions to protect their Personally Identifiable Information (PII) and medical

information and ensure all correspondence adheres to DOC guidance (http://ocio.os.doc.gov/ITPolicyandPrograms/IT_Privacy/PROD01_008240).

The only secure email process approved by NOAA is [Accellion Secure File Transfer](#) which requires the sender to setup an account. [Accellion's Web Users Guide](#) is a valuable aid in using this service, however to reduce cost the DOC contract doesn't provide for automatically issuing full functioning accounts. To receive access to a "Send Tab", after your Accellion account has been established send an email from the associated email account to accellionAlerts@doc.gov requesting access to the "Send Tab" function. They will notify you via email usually within 1 business day of your approval. The "Send Tab" function will be accessible for 30 days.

Contact information:

Regional Director of Health Services
Marine Operations Center – Atlantic
439 W. York Street
Norfolk, VA 23510
Telephone 757-441-6320
Fax 757-441-3760
Email MOA.Health.Services@noaa.gov

Prior to departure, the Chief Scientist must provide an electronic listing of emergency contacts to the Executive Officer for all members of the scientific party, with the following information: contact name, address, relationship to member, and telephone number.

C. Shipboard Safety

Hard hats are required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. At the discretion of the ship CO, safety shoes (i.e. steel or composite toe protection) may be required to participate in any work dealing with suspended loads, including CTD deployment and recovery. The ship does not provide safety-toed shoes/boots. The ship's Operations Officer should be consulted by the Chief Scientist to ensure members of the scientific party report aboard with the proper attire.

D. Communications

A progress report on operations prepared by the Chief Scientist may be relayed to the program office. Sometimes it is necessary for the Chief Scientist to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Chief Scientist. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via email and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessels staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to

the scientific party. If increased bandwidth is being considered, program accounting is required and it must be arranged through the ship's Commanding Officer at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *OMAO Fleet IT Security Policy* 1.1 (November 4, 2005) prior to establishing a direct connection to the NOAA WAN. Requirements include, but are not limited to:

- (1) Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
- (2) Installation of the latest critical operating system security patches.
- (3) No external public Internet Service Provider (ISP) connections.

Completion of the above requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

Foreign National access to the NOAA ship or Federal Facilities is not required for this project.

VIII. Appendices

1. Primary Project Instructions OPR-G343-FH-17 Approaches to Jacksonville, FL

Hydrographic Survey Project Instructions

Project Name:	Approaches to Jacksonville, FL
Project Number:	OPR-G343-FH-17
Assigned Field Unit:	Ferdinand R. Hassler
Assigned Processing Branch:	Atlantic Hydrographic Branch
Signed Date:	01/09/2017
Project Instructions Version:	Final
Planned Acquisition Time:	Start Date: 01/2017 End Date: 09/2017
Delivery Dates:	120 days from completion of data acquisition.

Purpose and Location:
<p>The Port of Jacksonville generates approximately \$27 billion in economic revenue annually and employs about 24,340 people locally. The port deals with approximately 915,292 containers on average every year. The container volume has grown 34% since 2008. The increase in container activity has also led directly to job growth of 57%. The port also has future plans to add a \$60 million JAXPORT Cruise Terminal for Carnival cruises. The inclusion of this cruise terminal is expected to add \$67 million in new annual economic income for the region and add approximately 460 new jobs. The harbor and channel entrance is in need of updated mapping to meet the needs of larger ships transiting into the Port of Jacksonville. The charts would aid in continuing to support larger, fully loaded Neo-Panamax ships transiting to the Port of Jacksonville. USACE has two major capital projects currently underway that will enable larger vessels to access to the St. Johns River. The first, Mile Point Turn, is a \$36.5 million project that is intended to fix a severe cross current at Mile Point Turn that currently limits vessel movements in the harbor. This project is nearing completion. The harbor deepening project when completed will increase the allowed draft from 40' to 47'. This significant increase in allowable draft will drastically change the under keel clearance currently seen in the project area. There are several environmental concerns in the area as well. The Marine Regulatory Program regulates and monitors dredging activity in the area and relies on hydrographic data to designate areas of avoidance around bottom features and marine habitats. The Florida Geological Survey has already been working on mapping sediment in the area and has expressed interest in our sediment data to further their own projects further offshore. This project will provide contemporary surveys to update National Ocean Service (NOS) nautical charting products. Survey areas will encompass 721 SNM, of which 517 SNM are classified as Priority 1, in accordance with the National Hydrographic Survey Priorities (2014). Survey data from this project is intended to supersede all prior survey data in the common area.</p>
Supporting Documents:
Hydrography shall consist of Navigable Area Surveys in accordance with the following support documents.
NOS Hydrographic Surveys Specifications and Deliverables Manual (HSSD), March 2016
NOS Field Procedures Manual for Hydrographic Surveying (FPM), April, 2014

Hydrographic Survey Technical Directive (HTD): 2016-2 Configuration Management
--

Hydrographic Survey Technical Directive (HTD): 2016-3 Horizontal Datums

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 Locality:** Jacksonville, FL

<i>Registry Number</i>	<i>Sheet Number</i>	<i>Sublocality</i>	<i>State or Territory</i>	<i>Scale</i>	<i>Estimated SNM</i>	<i>Instructions</i>
H12976	1	Inshore-Pilot Circle	Florida	40000	41	
H12977	2	Main Channel	Florida	40000	47	
H12978	3	17 NM due East of Nassau Sound	Florida	40000	33	
H12979	4	20 NM due East of Nassau Sound	Florida	40000	49	
H12980	5	25 NM due East of Nassau Sound	Florida	40000	60	
H12981	6	Due East of Junctin H12099	Florida	40000	63	
H12982	7	20 NM due East of Pilot Circle	Florida	40000	93	
H12983	8	20 NM Southeast of Pilot Circle	Florida	40000	54	
H12984	9	Due South of Pilot Circle	Florida	40000	33	
H12985	10	Due South of Main Channel	Florida	40000	47	
H12986	11	10 NM Northeast of St. Augustine Inlet	Florida	40000	47	
H12987	12	5 NM South of Junction H11821	Florida	40000	68	
H12988	13	Due South of Junction H11821	Florida	40000	41	
H12989	14	Due East of Junction H11821	Florida	40000	45	

Limits & Coverage:	
<i>Inshore Limit:</i> The Inshore Limit is the 30 foot contour.	
Coverage Requirements:	
<i>Coverage Water Depth</i>	<i>Coverage Required</i>
All waters in survey area	Complete Coverage (refer to HSSD Section 5.2.2.3)
All waters in survey area	All MBES acquisition requires backscatter acquisition (refer to HSSD Section 6.2)

Assigned Tasks

Acknowledgement:
The project manager for this project is Kathryn Pridgen. 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 HSSD Section 1.4. Please see all Best Management Practices (BMPs) listed and the Critical Habitat map at the end of the Project Instructions.

Aids to Navigation (ATONs):	
One private aid to navigation is assigned as a crane in the CSF. Active Captain reports this light is off station. Refer to Section 7.3.5 of the HSSD.	
<i>Number of Priority ATONs assigned by MCD:</i>	1
<i>Total Number of ATONs assigned by MCD:</i>	1

Maritime Boundary Points (MBPs):
There are no Maritime Boundary investigation requirements for this project.

Bottom Samples:
Obtain bottom samples in accordance with HSSD Sections 7.2 and 7.2.2.

Chart Comparison:

Perform a chart comparison in accordance with 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. The Triangle Rule function (available in QC Tools) may be used to compare survey soundings (must be .000) to the current ENC, and this may be helpful to alert the user to any shoal points or potential dangers to navigation

Affected Raster Charts

<i>Chart Number</i>	<i>Scale</i>	<i>Edition Number</i>	<i>Edition Date</i>	<i>Kapp Number</i>	<i>LNМ Date</i>	<i>NM Date</i>
11480	449659	41	11/2010	376	11/15/2016	11/26/2016
11488	80000	28	09/2012	285	11/15/2016	11/26/2016
11490	40000	21	02/2015	258	11/15/2016	11/26/2016

Affected ENCs

<i>ENC Name</i>	<i>Scale</i>	<i>Edition</i>	<i>Update Application Date</i>	<i>Issue Date</i>	<i>Preliminary</i>
US3GA10M	449659	28	09/21/2016	09/21/2016	NO
US4FL50M	80000	14	07/18/2016	07/18/2016	NO
US5FL51M	40000	34	05/03/2016	05/03/2016	NO

Coast Pilot:

There is no Coast Pilot review for this survey area. Should the field unit feel an addition to the Coast Pilot is warranted, please contact the Project Manager.

Dangers to Navigation (DTONs):

Generate DTON reports in accordance with Section 1.5 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:

Perform a junction analysis with the surveys listed below and between current project sheets. Refer to HSSD Section 8.1.4 Junction guidance.

<i>Registry Number</i>	<i>Scale</i>	<i>Year</i>	<i>Platform</i>	<i>Relative Location</i>
H12099	20000	2009	Leidos	N
H11821	20000	2008	NOAA Ship <i>Thomas Jefferson</i>	W

Progress Reports:

Submit weekly (refer to HSSD Section 8.1.1.1) and monthly (refer to HSSD Section 8.1.1.2) progress reports.

Survey Outlines:

Generate and submit survey outline in accordance with Section 8.1.2 of the HSSD.

Horizontal Control Requirements:

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

PPP

It is expected that the Marinestar solution will be processed in real time or post processed with trajectories relative to the ellipsoid.

Vertical Control Requirements:

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

Discrete Zoning

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.

Ellipsoidally-Referenced Survey via VDATUM

This project has a requirement to acquire survey data vertically-referenced to the ellipse. Based on analysis of existing infrastructure, this will most likely be achieved through MarineStar. For this project, the field unit shall use a VDatum derived separation model to realize chart datum via the ellipse. At the commencement of survey operations, checklines shall be acquired across the entirety of the survey to identify any systematic procedural, hardware, or configuration errors prior to the bulk of data acquisition. To determine the quality of the 3D trajectory, the checkline crossline analysis shall be performed between the ERZT separation model and the VDatum derived separation model. If the field's recommendation on the method of acquiring 3D trajectories and the method of reducing the ellipse-referenced data to chart datum is accepted, all survey lines shall be delivered with 3D trajectory and associated uncertainty files applied (e.g. SBETs and RMS) and GPS tides computed. All delivered grids shall be derived via the ellipse. If at any point the field unit experiences difficulty in realizing chart datum via the ellipse, the field shall communicate with the HSD Project Manager for guidance on how to proceed. Within 60 days of the completion of acquisition, the field unit shall prepare an ERS Capability Memorandum, summarizing the degree to which ERS surveying campaign was successful.

VDATUM Model

<i>VDatum Version</i>	<i>Geoid</i>	<i>Area</i>	<i>Area Version</i>	<i>Separation Uncertainty</i>
3.6.1	2012	Florida/Georgia - Shelf, Fort Lauderdale FL to Sapelo Island GA	4.1	9.3 centimeters

ERS Deliverable

The ERS Checkline and ERS Capability Memo requirements are detailed in the ERS Capability Requirements document. The ERS deliverables shall be submitted to the HSD Project Manager with a CC to ERS.Deliverables@noaa.gov. Project specific data quality issues or departures from standard processing approaches shall be captured in the DAPR or DR.

NWLON Gauges

<i>Operating Water Level Station</i>	<i>Station ID</i>
Mayport	8720218

Orthometric Imagery:

No Orthometric Imagery has been provided for this project.

Shoreline and Nearshore Features:

Submit a Final Feature File in accordance with HSSD Section 7. Contact the HSD Project Manager if there are any questions regarding feature assignments and feature management.

Additional Task: *Actionable Response - Special data handling required*

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes. Also notify the Project Manager in all cases.

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).

Primary Project Manager

Kathryn Pridgen

NOAA

Phone: 301-713-2702vx178

Email: kathryn.pridgen@noaa.gov

Obligation: Mandatory

Project Manager Backup

Christina Belton

NOAA

Phone: 301-713-2968 x113

Email: christina.belton@noaa.gov

Obligation: For Reference

Navigation Manager

Kyle Ward

NOAA

Phone: 843-740-1153

Fax: 301-651-4852

Email: kyle.ward@noaa.gov

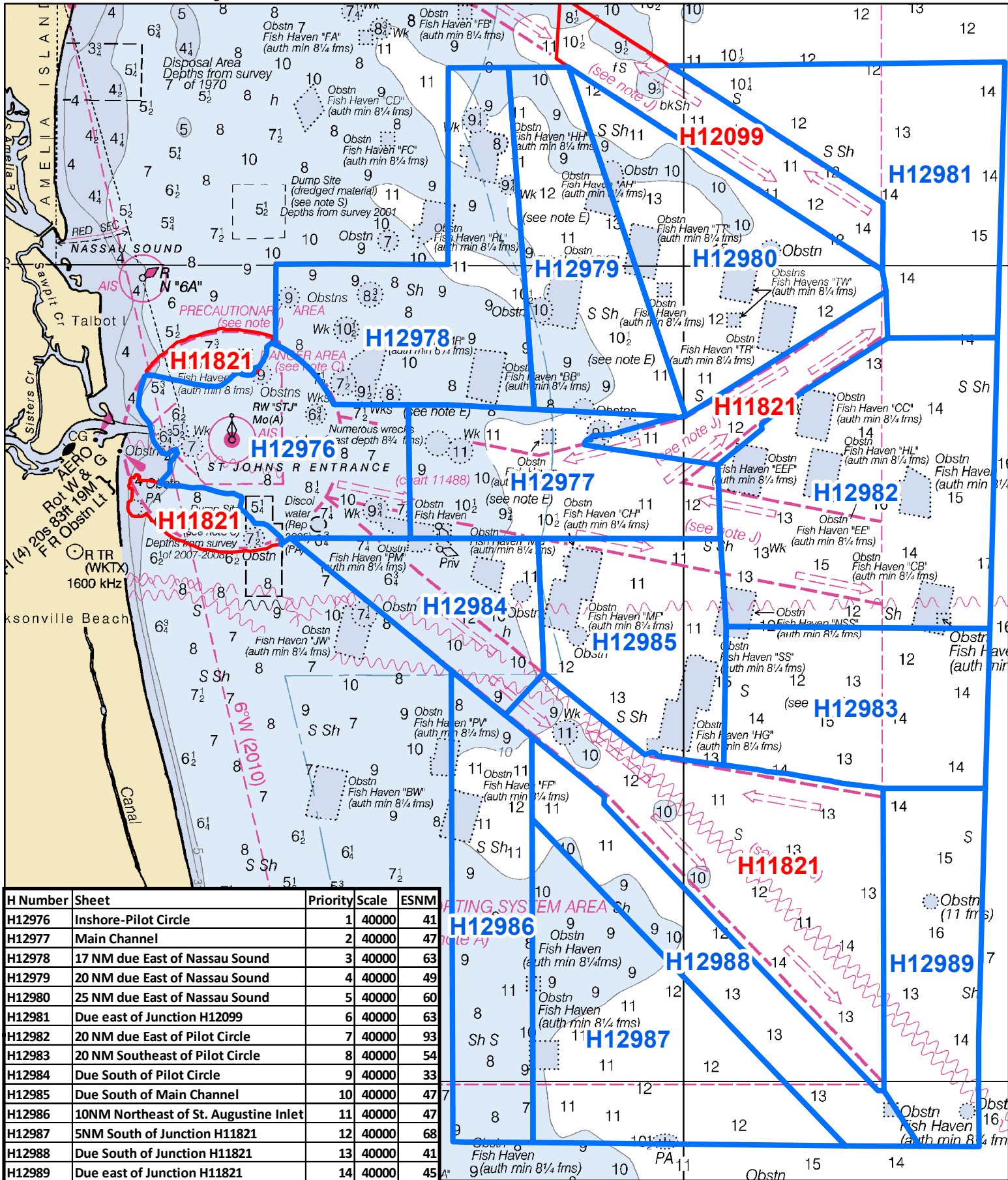
Obligation: Mandatory

OPR-G343-FH-17

"Approaches to Jacksonville, FL"

New sheet layout

Total SNM: 751
Priority 1 SNM: 517



H Number	Sheet	Priority	Scale	ESNM
H12976	Inshore-Pilot Circle	1	40000	41
H12977	Main Channel	2	40000	47
H12978	17 NM due East of Nassau Sound	3	40000	63
H12979	20 NM due East of Nassau Sound	4	40000	49
H12980	25 NM due East of Nassau Sound	5	40000	60
H12981	Due east of Junction H12099	6	40000	63
H12982	20 NM due East of Pilot Circle	7	40000	93
H12983	20 NM Southeast of Pilot Circle	8	40000	54
H12984	Due South of Pilot Circle	9	40000	33
H12985	Due South of Main Channel	10	40000	47
H12986	10NM Northeast of St. Augustine Inlet	11	40000	47
H12987	5NM South of Junction H11821	12	40000	68
H12988	Due South of Junction H11821	13	40000	41
H12989	Due east of Junction H11821	14	40000	45

**Preliminary Tidal Zoning for
OPR-G343-FH-2017
Approaches to Jacksonville, FL**

8720218 MAYPORT, FL ★

- SA196
- SA197
- SA195
- SA199
- SA198
- SA204
- SA205
- SA200
- SA203
- SA206
- SA209
- SA201
- SA202
- SA207
- SA208



WATER LEVEL INSTRUCTIONS
OPR-G343-FH-2017 Approaches to Jacksonville, FL
(12/21/2016 HY)

1.0. TIDES AND WATER LEVELS

1.1. Specifications

Tidal data acquisition, data processing, tidal datum computation and final tidal zoning shall be performed utilizing sound engineering and oceanographic practices as specified in National Ocean Service (NOS) Hydrographic Surveys Specifications and Deliverables (HSSD), dated March, 2016, and OCS Field Procedures Manual (FPM), dated April, 2014. Specifically reference Chapter 4 of the HSSD and Sections 1.5.8, 1.5.9, 2.4.3, and 3.4.2 of the FPM.

1.2. Vertical Datums

The tidal datums for this project are referenced to Chart Datum, Mean Lower Low Water (MLLW) and Mean High Water (MHW). Soundings are referenced to MLLW and heights of overhead obstructions (bridges and cables) are referenced to MHW.

1.2.1. Water Level Data Acquisition Monitoring

The Commanding Officer (or Team Leader) and the Center for Operational Oceanographic Products and Services (CO-OPS) are jointly responsible for ensuring that valid water level data are collected during periods of hydrography. The Commanding Officer (or Team Leader) is required to monitor the pertinent water level data via the CO-OPS Web site at <http://tidesandcurrents.noaa.gov/hydro.shtml>, or through regular communications with CO-OPS/Oceanographic Division (OD) personnel before and during operations. During traditional non-duty hours, the Commanding Officer/Team Leader may contact the Continuous Operational Real-Time Monitoring System (CORMS) watch stander who is available 24 hours/day - 7 days/week for assistance in assessing the status of applicable water level station operation. The CORMS watch stander may be contacted either by phone at 301-713-2540 or by email: CORMS@noaa.gov. Problems or concerns regarding the acquisition of valid water level data identified by the Commanding Officer/Team Leader shall be communicated with CO-OPS/OD (nos.coops.hpt@noaa.gov) to coordinate the appropriate course of action to be taken such as gauge repair and/or developing contingency plans for hydrographic survey operations. In addition, CO-OPS is required to coordinate with the Commanding Officer (or Team Leader) before interrupting the acquisition of water level data for the NWLON stations mentioned above for any reason during periods of hydrography.

1.2.2. The Hydro Hot List (HHL)

Please contact the CO-OPS/Hydrographic Planning Team (HPT) at nos.coops.hpt@noaa.gov and the Operational Engineering Team (OET) at nos.coops.oetteam@noaa.gov at least three business days before survey operations begin, and within 1 business day after survey operations are completed so that the appropriate CO-OPS National Water Level Observation Network (NWLON) control water level station is added to, or removed from, the CO-OPS Hydro Hotlist (HHL) (<http://tidesandcurrents.noaa.gov/hydro>). Include start and end survey dates, full project number (e.g. OPR-H355-TJ-10), and control station numbers. The notification must be sent to both teams as OET is responsible for configuring the stations in the CO-OPS data base and HPT manages the addition and removal of stations from the HHL.

Station	Station ID	Residual Control	Type (e.g. NWLON, PORTS [®] , etc.)	Comment
Mayport, FL	8720218	Residual control	NWLON	

Table 1: All stations that need to be added to the HHL in support of OPR-G343-FH-2017

It is important to know that the addition of a water level station to the HHL ensures the station is monitored by CORMS and any problems are reported daily. However, platforms should view the HHL each morning of active survey operations and click on the “Plot” to double check that there are no problems with the required stations on that day. If a platform notices problems with data on their survey day of operation, please contact HPT at nos.coops.hpt@noaa.gov, CORMS at CORMS@noaa.gov, and their respective headquarters point of contact at HSD or NSD. Stations on the HHL are given priority for maintenance should a station cease normal operation during scheduled times of hydrography. CO-OPS will notify a field unit within 1 business day if a HHL water level station ceases operation during scheduled times of hydrography. This is in addition to the daily CORMS report that CORMS sends to NOAA field units, if the field unit's e-mail address is added to the CORM's daily e-mail list. To be added to the CORMS daily HHL report, the platform should contact CO-OPS’ Data Monitoring and Analysis Team (DMAT) at nos.co-ops.dmat@noaa.gov and request to be added.

If the stations are listed on HHL, then weekly priority processing will occur and, for those water level stations, verified 6-minute water level data will be made available every week on Monday or Tuesday. If Monday happens to be a federal holiday, then the 6-minute verified water level data will be made available on the following Tuesday or Wednesday. In order to ensure that verified data is correctly downloaded please **select a date that is more than 7 days prior to the day of interest** in the 'From' field on the CO-OPS website.

1.3. Operating Tide Reducer Stations

1.3.1. CO-OPS Long Term Water Level Station Operation and Maintenance

The operating water level station Mayport, FL (8720218) will provide water level reducers for this project. Therefore it is critical that it remains in operation during the survey. See Sections 1.1. and 1.2. concerning responsibilities.

No leveling is required at Mayport, FL (8720218) by NOAA’s Ferdinand Hassler personnel.

CO-OPS/FOD is responsible for the operation and maintenance of all NWLON primary control stations. If a problem is identified at an NWLON primary control station, FOD shall make all reasonable efforts to repair the malfunctioning station. However, CO-OPS may request assistance from the NOAA ship or NRT personnel in the actual repair of the water level station to facilitate a rapid repair. CO-OPS/FOD and the Commanding Officer (or Team Leader) shall maintain the required communications until the repairs to the water level station have been completed.

1.3.2. Subordinate Station Requirements

No subordinate water level stations are required for this project, however, supplemental and/or back-up water level stations may be necessary depending on the complexity of the hydrodynamics and/or the severity of the environmental conditions of the project area. The installation and continuous operation of water level measurement systems (tide gauges) at subordinate station locations is left to the discretion of the Commanding Officer (or Team Leader), subject to the approval of CO-OPS. If the Commanding Officer (or Team Leader) decides to install additional water level stations, then a 30-day minimum of

continuous data acquisition is required. For all subordinate stations, data must be collected throughout the entire survey period for which they are applicable, and not less than 30 continuous days. This is necessary to facilitate the computation of an accurate datum reference as per NOS standards.

1.3.3. Tide Component Error Estimation

The estimated tidal error contribution to the total survey error budget in the vicinity of Approaches to Jacksonville, FL is 0.25 meters at the 95% confidence level, and includes the estimated gauge measurement error, tidal datum computation error, and tidal zoning error. It should be noted that the tidal error component can be significantly greater than stated if a substantial meteorological event or condition should occur during time of hydrography.

1.3.4. GOES Satellite Enabled Subordinate Stations

This section is not applicable for this project.

1.3.5. Benchmark Recovery and GPS Requirements

This section is not applicable for this project.

1.3.6. This section is not applicable for this project.

1.4. Discrete Tidal Zoning

1.4.1. The water level station at Mayport, FL (8720218) is the reference station for preliminary tides for hydrography in Approaches to Jacksonville, FL. The time and height correctors listed below for applicable zones should be applied to the preliminary data at Mayport, FL (8720218) during the acquisition and preliminary processing phases of this project. **Preliminary data may be retrieved in one month increments over the Internet from the CO-OPS SOAP web services at <http://opendap.co-ops.nos.noaa.gov/axis/text.html>.** The Commanding Officer (or Team Leader) must notify CO-OPS/ED personnel immediately of any problems concerning the preliminary tides. Preliminary data are six-minute time series data relative to MLLW in metric units on Greenwich Mean Time. For the time corrections, a negative (-) time correction indicates that the time of tide in that zone is earlier than (before) the preliminary tides at the reference station. A positive (+) time correction indicates that the time of tide in that zone is later than (after) the predicted tides at the reference station. For height corrections, the water level heights **relative to MLLW** at the reference station are multiplied by the range ratio to estimate the water level heights relative to MLLW in the applicable zone.

<u>Zone</u>	<u>Time Corrector (min)</u>	<u>Range Ratio</u>	<u>Predicted Reference Station</u>
SA195	-24	x1.22	8720218
SA196	-36	x1.22	8720218
SA197	-36	x1.17	8720218
SA198	-24	x1.17	8720218
SA199	-30	x1.13	8720218
SA200	-36	x1.13	8720218
SA201	-48	x1.13	8720218
SA202	-48	x1.08	8720218
SA203	-36	x1.08	8720218
SA204	-30	x1.08	8720218
SA205	-30	x1.04	8720218

SA206	-36	x1.04	8720218
SA207	-48	x1.04	8720218
SA208	-48	x1.00	8720218
SA209	-36	x1.00	8720218

1.4.2. Polygon nodes and water level corrections referencing Mayport, FL (8720218) are provided in CARIS® format denoted by a *.zdf extension file name.

NOTE: The tide corrector values referenced to Mayport, FL (8720218) are provided in the zoning file “G343FH2017CORP” for this project and are in the fourth set of correctors designated as TS4. Longitude and latitude coordinates are in decimal degrees. Negative (-) longitude is a representation of West longitude.

“Preliminary” data for the control water level station, Mayport, FL (8720218) are available in near real-time and verified data will be available on a weekly basis for the previous week. **These water level data may be obtained from the CO-OPS SOAP web services at <http://opendap.co-ops.nos.noaa.gov/axis/text.html>.**

1.4.3 Zoning Diagram(s)

Zoning diagrams are provided in digital format to assist with the zoning in section 1.4.1.

1.4.4 Final Zoning

Upon completion of project OPR-G343-FH-2017, submit a Pydro generated request for final tides, with times of hydrography abstract and mid/mif tracklines attached. Forward this request to Final.Tides@noaa.gov . Provide the project number, as well as a sheet number, in the subject line of the email.

CO-OPS will review the times of hydrography, final tracklines, and six-minute water level data from all applicable water level gauges. After review, CO-OPS will send a notice indicating that the tidal zoning scheme sent with the project instructions has been approved for final zoning. If there are any discrepancies, CO-OPS will make the appropriate adjustments and forward a revised tidal zoning scheme to the field group and project manager for final processing.

1.5 Fetchtides

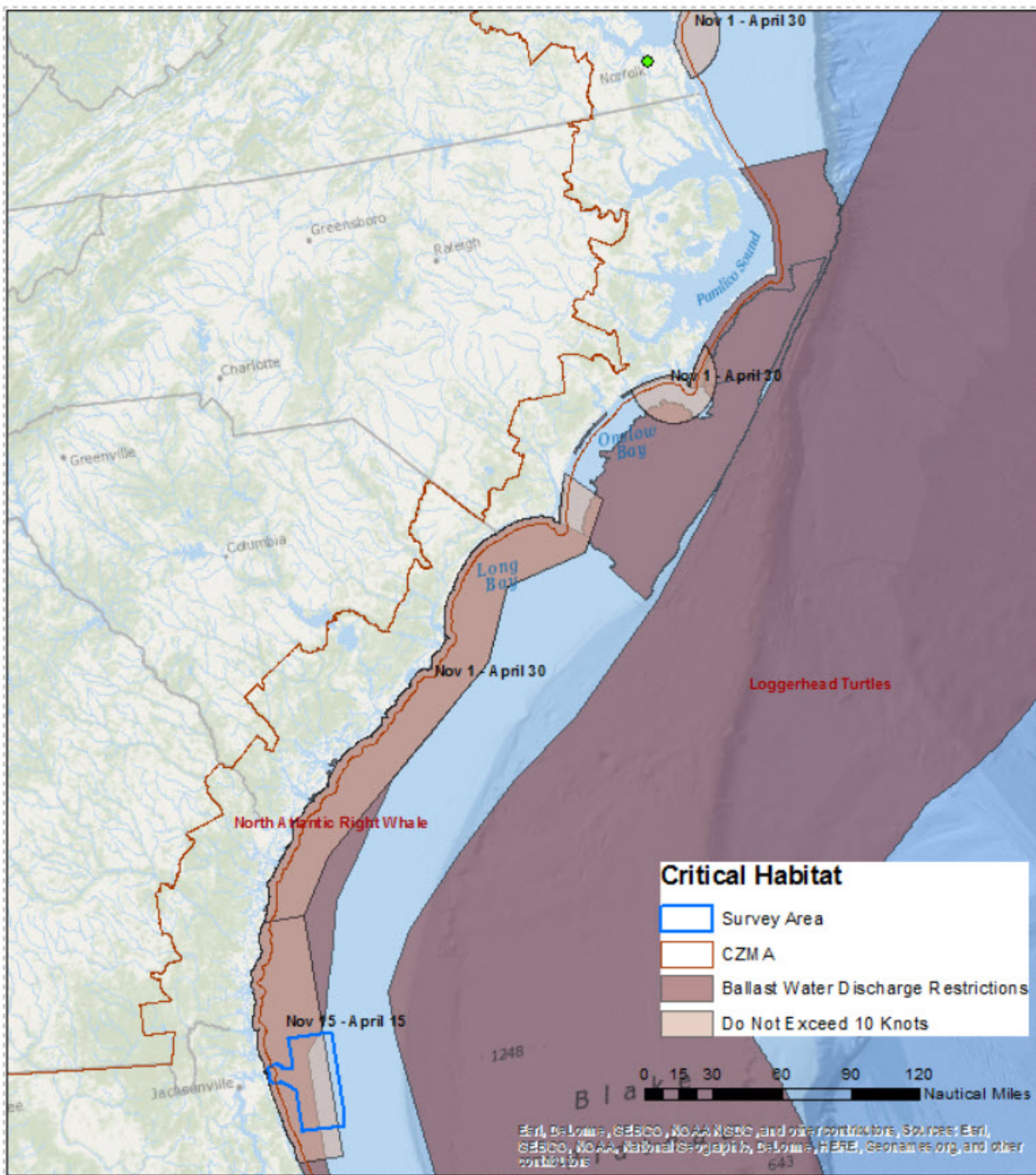
Preliminary and verified six minute water level time series data may be retrieved from the CO-OPS database via the Fetchtides application. Fetchtides provides a mechanism to store imported data locally and combines multiple days of data into one CARIS readable tide (.tid) file. Fetchtides is available for download at Hydrosoft Online (<https://inside.nos.noaa.gov/hydrosoft/hydrosoftware.html>). For more information, please see the Fetchtides User Manual in the FPM chapter 3 appendix.

1.6 Water Level Records

This section is not applicable for this project.

OPR-G343-FH-17 Critical Habitat Map
"Approaches to Jacksonville, FL"
Survey Date: Approx. Jan 24, 2017

Total SNM: 721



Erl, DeLorme, SESCO, NOAA, NSIC, and other contributors. Sources: Erl, SESCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org and other contributors.

PROPOSED BEST MANAGEMENT PRACTICES (BMPS) FOR HYDROGRAPHIC SURVEYS

The following BMPs are based on the ESA mitigation and monitoring measures agreed to between the OCS Hydrographic Services Division (HSD) and the NMFS Office of Protected Resources (OPR-ESA) and documented in the April 30, 2013 Biological Opinion. They were adopted in the context of the ESA, but include BMPs for marine mammals listed in the ESA (“depleted” under MMPA). OCS proposes that these BMPs be applied to all OCS hydro work while MMPA compliance is underway. In all cases BMPs will be communicated to ship and boat crews via project instructions. Contractors will additionally be made aware of BMPs via contract RFPs.

Universal BMPs (those to be included in *all* OCS project instructions):

Vessel Speed Limits

- Slow speeds (4 – 8 knots) when mapping
- Reduced speeds (<13 knots) when transiting outside of the Great Lakes (**NOTE:** technically this BMP applies only to transits across the ranges of ESA-listed cetaceans, however these ranges cover all OCS operating areas except the Great Lakes – for example see the Blue Whale range at <http://www.nmfs.noaa.gov/pr/pdfs/rangemaps/bluewhale.pdf>)

Echosounder Restrictions

- Avoid using sonar frequencies < 180 kHz when possible
 - If **multibeam** sonar frequencies < 180 kHz must be employed, use echosounders at ≥ 50 kHz frequencies, with the lowest possible power and ping-rate
 - If **single beam** sonar frequencies < 180 kHz must be employed, use echo sounders at ≥ 30 kHz frequencies, with the lowest possible power and ping-rate and a 12° beam angle.
 - If **single beam** sonar frequencies < 30 kHz must be employed, suspend transmissions of 30 kHz or lower when ESA-listed cetacean species (whales, dolphins, and porpoises) are within hearing range (i.e., the 4.2 meter beam width).

Vessel Maintenance Requirements

- Meet all EPA Vessel General Permits and Coast Guard requirements
- Use anti-fouling coatings
- Clean hull regularly to remove aquatic nuisance species
- Avoid cleaners with nonylphenols
- Rinse anchor with high-powered hose after retrieval

Anchoring Restrictions

- Use designated anchorage area when available
- Use mapping data to anchor in mud or sand, to avoid anchoring on corals

- Minimize anchor drag

Visual Monitoring Requirements

- Maintain trained observers aboard all vessels; 100% observer coverage
- Make species identification keys (for marine mammals, sea turtles, corals, abalone, and seagrasses) available on all vessels

Animal Approach Restrictions

- Avoid approaching within 200 yards of cetaceans (whales, dolphins, and porpoises), 500 yards for right whales
- Suspend single beam sonar transmissions of 30 kHz when ESA-listed cetaceans (whales, dolphins, and porpoises) are within hearing range (i.e., within the 4.2 meter beam width).
- Avoid approaching within 100 yards of in-water seals and walrus
- When possible, suspend single beam sonar transmissions when ESA-listed seals and walruses are within hearing range (i.e., within the 4.2 meter beam width).
- Avoid approaching within 50 yards of sea turtles

Survey-specific BMPs (those to be included in project instructions only when the project meets the conditions listed after each restriction):

Vessel Speed Limits

- As required by 50 CFR 224.105, no vessel of 65 feet or greater in overall length may exceed a speed of 10 knots in designated seasonal management areas for the Right whale.

Discharge Restrictions

- Avoid discharge of ballast water and hull cleaning in designated critical habitat

END