

H13155

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H13155

LOCALITY

State(s): Florida

General Locality: Cape San Blas, Florida

Sub-locality: West Cape San Blas Shoals

2018

CHIEF OF PARTY
Dean R. Moyles

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

H13155

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(s): **Florida**

General Locality: **Cape San Blas, Florida**

Sub-Locality: **West Cape San Blas Shoals**

Scale: **40000**

Dates of Survey: **09/19/2018 to ~~09/26/2018~~ 02/23/2019**

Instructions Dated: **07/11/2018**

Project Number: **OPR-J359-KR-18**

Field Unit: **Fugro Pelagos, Inc.**

Chief of Party: **Dean R. Moyles**

Soundings by: **Multibeam Echo Sounder Multibeam**

Imagery by: **Echo Sounder Backscatter**

Verification by: **Atlantic Hydrographic Branch meters**

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

Remarks:

Any revisions to the Descriptive Report (DR) applied during office processing are shown in red italic text. The DR is maintained as a field unit product, therefore all information and recommendations within this report are considered preliminary unless otherwise noted. The final disposition of survey data is represented in the NOAA nautical chart products. All pertinent records for this survey are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <https://www.ncei.noaa.gov/>. Products created during office processing were generated in NAD83 UTM 16N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.

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Descriptive Report to Accompany Survey H13155

Project: OPR-J359-KR-18

Locality: Cape San Blas, Florida

Sublocality: West Cape San Blas Shoals

Scale: 1:40000

September 2018 - September 2018

Fugro Pelagos, Inc.

Chief of Party: Dean R. Moyles

A. Area Surveyed

Survey H13155 (Table 1) is located approximately 17 linear nautical miles southwest of the southern end of Cape San Blas, Florida. The R/V Acadiana acquired full coverage multibeam echosounder (MBES) and multibeam echosounder acoustic backscatter within the assigned survey limits from 19 September 2018 to 26 September 2018.

All sounding data in this survey predates the arrival of Hurricane Michael. The storm, a high-end Category 4 hurricane, made landfall on October 10, 2018 in Mexico Beach, FL approximately 43 linear nautical miles North of the center of OPR-J359-KR-18.

Fugro was forced to evacuate the area and abandon further operations until post-storm assessments could be made and the area reopened by local and federal authorities. With sustained winds of 155 mph, the area experienced severe damage to infrastructure and utilities.

Given the significance of this weather event, a post-hurricane crossline data set was acquired by a new vessel (M/V Pelagos) on Julian Days: 322, 323, 338, and 340. The vessel used to acquire the reported soundings herein was unavailable post-storm. These new crosslines spanned the entire data set acquired prior to the hurricane within the sheet limits of H13153, H13154, H13155, and H13156. Due to the significant changes in surveyed depths, NOAA directed no further acquisition in these areas. This mandate directly affected crossline percentage to mainscheme acquisition quotas (Section B.2.1) and small data gaps that would have been achieved otherwise (Section A.4). For further reference, refer to Appendix II of this report.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 33' 7.62" N 85° 43' 0.59" W	29° 23' 29.55" N 85° 29' 52.3" W

Table 1: Survey Limits

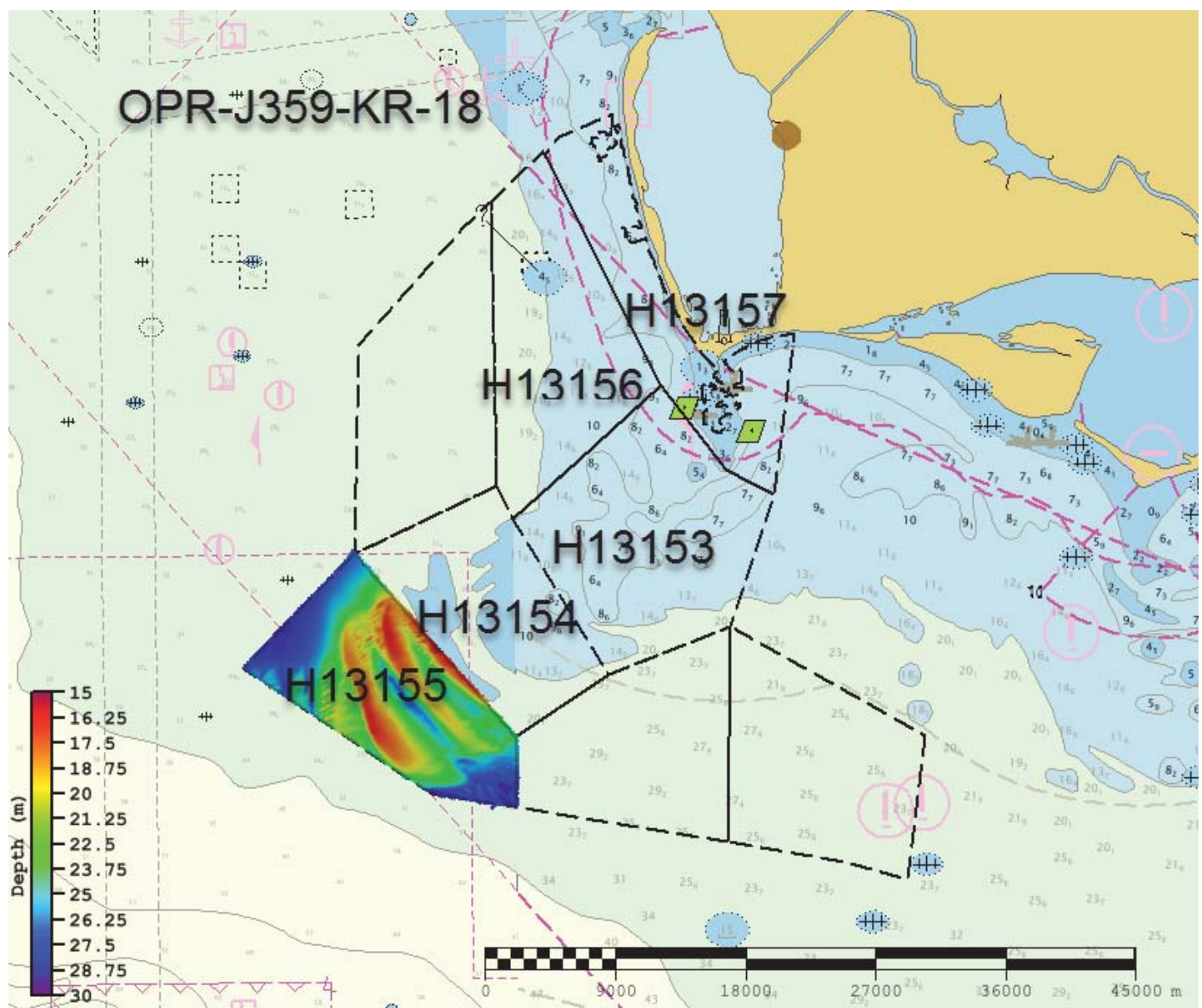


Figure 1: Survey H13155 location relative to overall sheet limits of OPR-J359-KR-18

Survey limits were acquired in accordance with the requirements in the Project Instructions and the HSSD.

A.2 Survey Purpose

The Vicinity of Apalachicola project will provide contemporary surveys to update National Ocean Service (NOS) nautical charting products. It is offshore of Apalachicola Bay and Joseph Bay, FL. The survey will provide updated bathymetry and feature data to address concerns of migrating shoals, thus reducing the risk to navigation within the project area.

The Apalachicola Surveys delineate the western extent of the Big Bend Mapping project, a Florida Coastal Mapping Program (FCMaP) priority. This multi-year, multi-agency mapping project will fill in an area in which only 2% of the seafloor is mapped to modern standards. Improving the understanding of the bathymetry, geomorphology, bio-diversity and distribution of habitats in this region will support Floridian fisheries, coastal modeling, and resource management.

The project will cover approximately 323 square nautical miles of high priority survey area identified in the latest iteration of NOAA HSD's risk based prioritization model. Data from this project will supersede all prior survey data providing modern hydrographic survey data for this area and updating the local charting products.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

The following table lists the coverage requirements for this survey as assigned in the project instructions:

Water Depth	Coverage Required
All waters in survey area	Complete coverage MBES with acoustic backscatter

Table 2: Survey Coverage

Three coverage holidays exist within the sheet limits of H13155:

29-27-39.402N 085-31-32.142W - Coverage Edge (covered by H13154 MBES)

29-32-34.800N 085-36-24.732W - Coverage Edge

29-30-33.948N 085-38-31.038W - Data gap

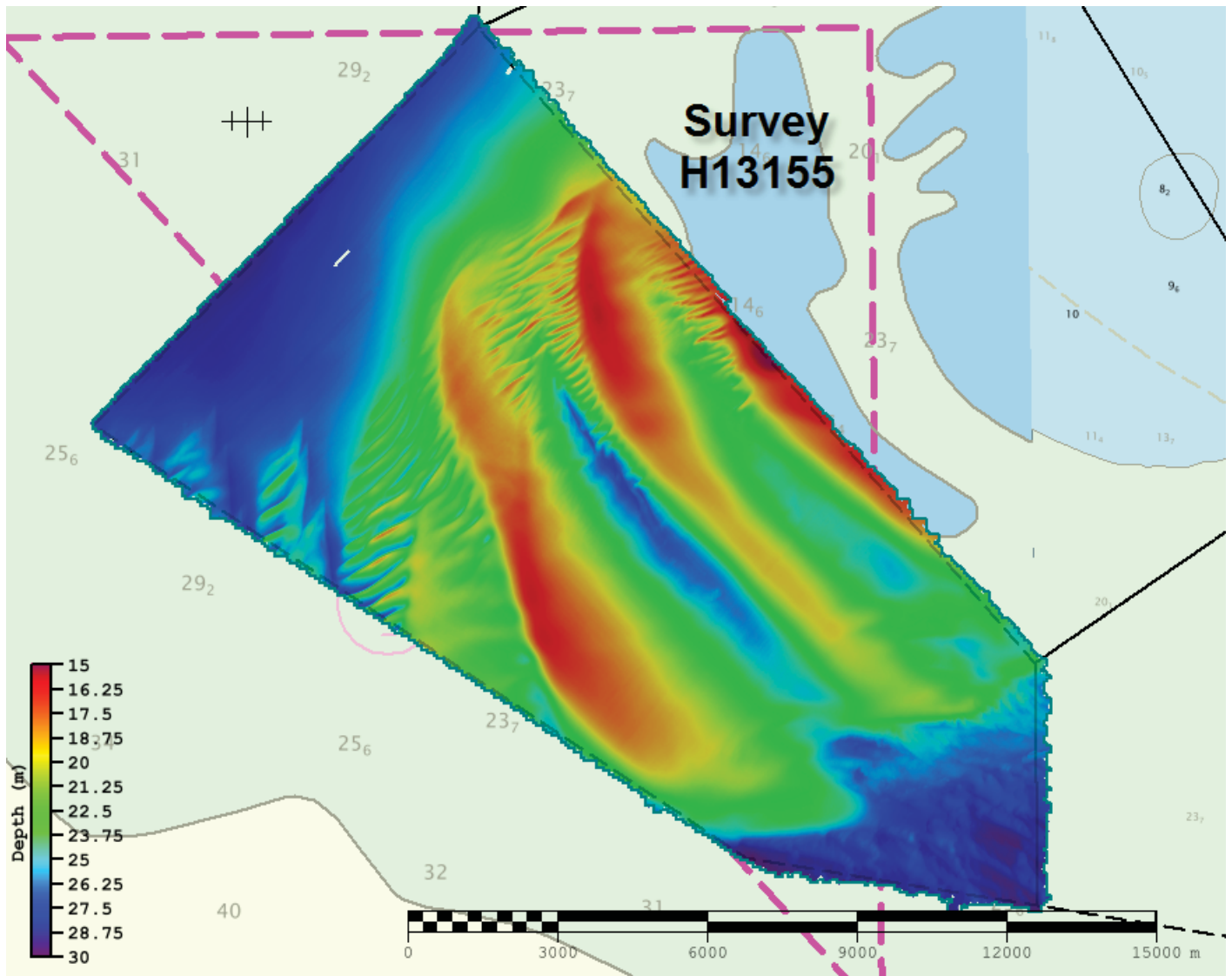


Figure 2: Survey H13155 full coverage MBES

A.5 Survey Statistics

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

	HULL ID	<i>R/V Acadiana</i>	<i>Total</i>
LNM	SBES Mainscheme	0	0
	MBES Mainscheme	980.01	980.01
	Lidar Mainscheme	0	0
	SSS Mainscheme	0	0
	SBES/SSS Mainscheme	0	0
	MBES/SSS Mainscheme	0	0
	SBES/MBES Crosslines	9.51	9.51
	Lidar Crosslines	0	0
Number of Bottom Samples			7
Number Maritime Boundary Points Investigated			0
Number of DPs			0
Number of Items Investigated by Dive Ops			0
Total SNM			48.26 48.014

Table 3: Hydrographic Survey Statistics

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

Survey Dates	Day of the Year
09/19/2018	262

Survey Dates	Day of the Year
09/20/2018	263
09/21/2018	264
09/22/2018	265
09/23/2018	266
09/24/2018	267
09/25/2018	268
09/26/2018	269
12/06/2018	340

02/23/2019

054*

***Day of bottom sample acquisition.**

Table 4: Dates of Hydrography

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	R/V Acadiana
LOA	57 feet
Draft	4.5 feet

Table 5: Vessels Used

R/V Acadiana acquired multibeam echosounder, acoustic backscatter, surface sound velocity, sound velocity profiles, attitude and positioning data within the survey limits of H13155. For a detailed listing of equipment used to acquire survey data, refer to the DAPR submitted with this report under Project Reports.

B.1.2 Equipment

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

Manufacturer	Model	Type
Teledyne RESON	SeaBat 7125 SV2	MBES
Teledyne RESON	SVP 70	Sound Speed System
AML Oceanographic	SV&P	Sound Velocity and Pressure Sensor
Teledyne Oceanscience	Underway CTD	Conductivity, Temperature, and Depth Sensor
Applanix	POS MV 320 v5	Positioning and Attitude System

Table 6: Major Systems Used

For a detailed listing of equipment, refer to the DAPR submitted with this report.

B.2 Quality Control

B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 0.97% of mainscheme acquisition.

Crosslines for survey H13155 were acquired in accordance with sections 5.2.4.2 of the HSSD 2018, but percentage of mainscheme acquisition was low due to survey interruptions by Hurricane Michael.

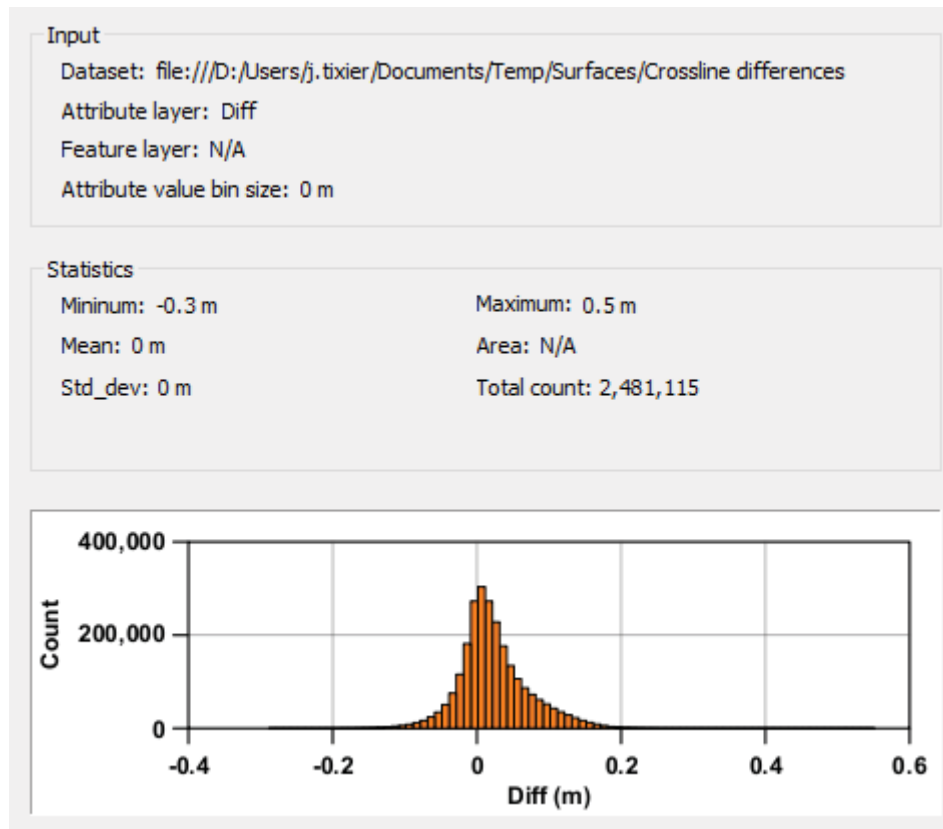


Figure 3: H13155 crossline to mainscheme difference output

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Method	Measured	Zoning
ERS via VDATUM	0.1 meters	0.101 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
Acadiana	0.593 meters/second	N/A meters/second	0.25 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

Survey H13155 uncertainty values were evaluated both in CARIS HIPS and SIPS and via Pydro QC tools v2.7.5. Both the 1m (Figure 4) and 2m (Figure 5) finalized grids meet uncertainty standards with 99.5% of nodes exceeding minimum requirements.

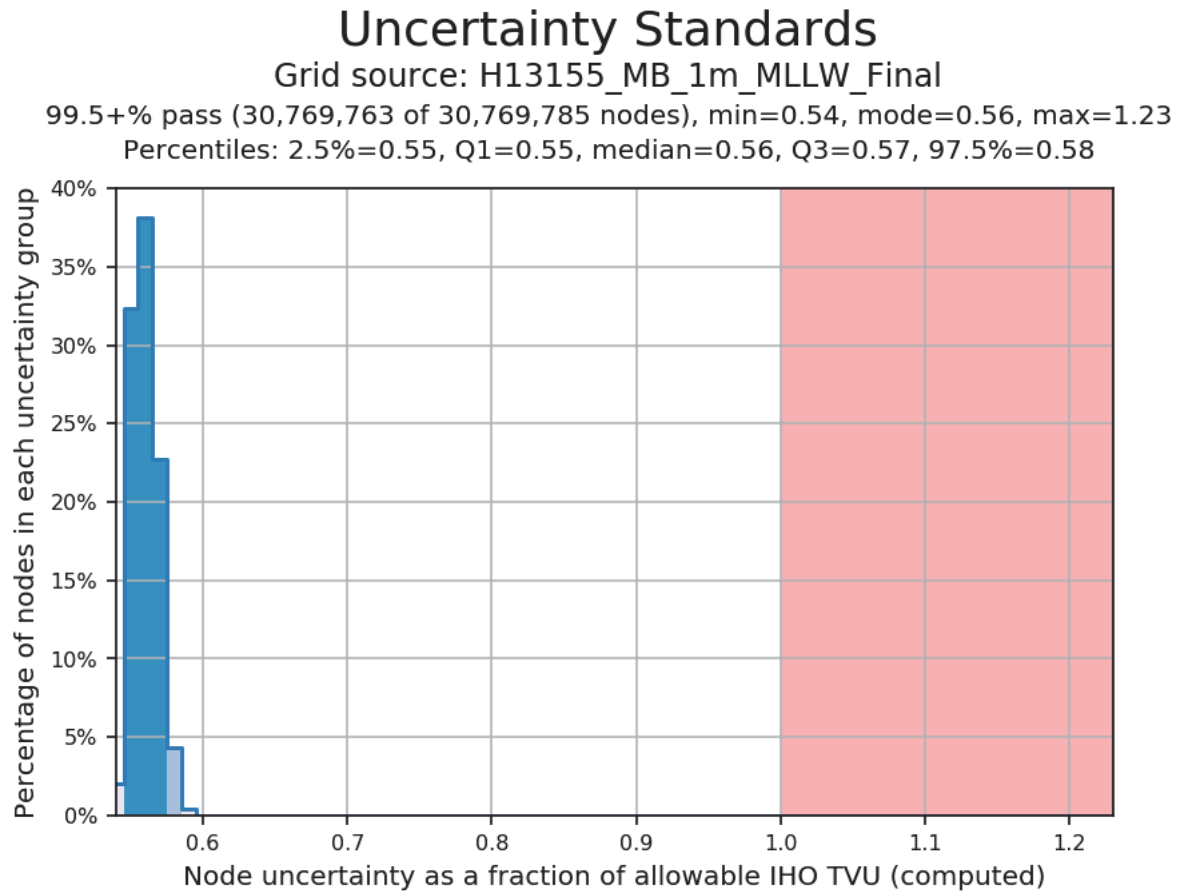


Figure 4: H13155 1m finalized grid TPU QC

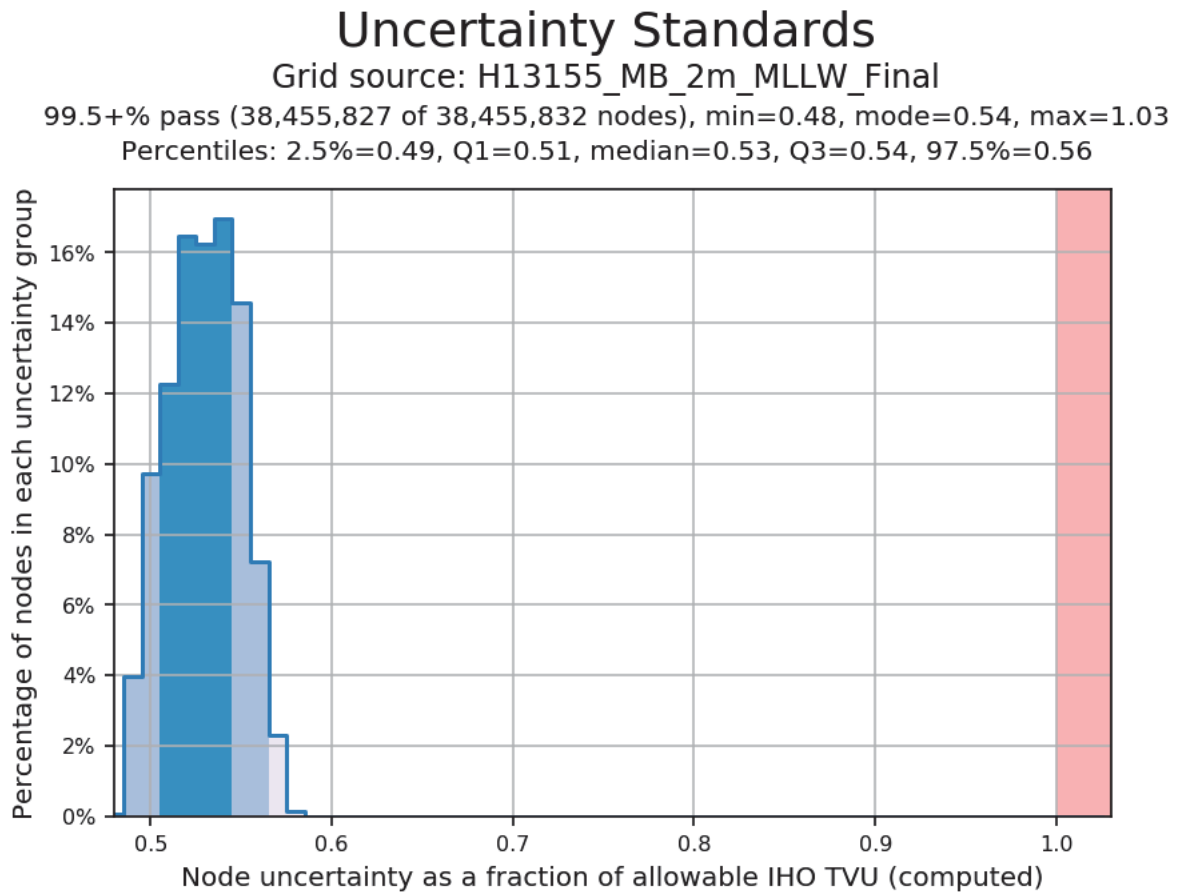


Figure 5: H13155 2m finalized grid TPU QC

B.2.3 Junctions

Data from contemporary junction survey H13154, located northeast of survey H13155, were compared by running a difference surface in CARIS HIPS and SIPS on finalized 1m surfaces for each survey (Figure 6).

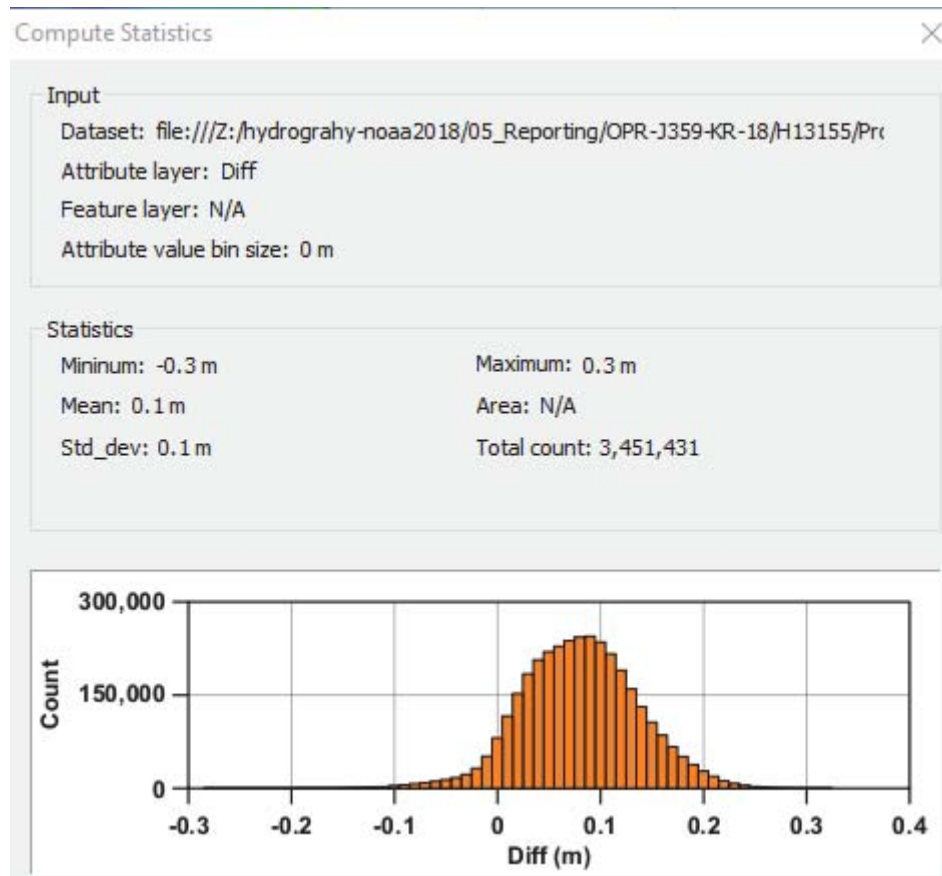


Figure 7: H13154 differenced to H13155 statistics output

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

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

B.2.6 Factors Affecting Soundings

There were no other factors that affected corrections to soundings.

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Sound velocity profiles were acquired every two hours from the R/V Acadiana using either a Teledyne Oceanscience underway CTD, or an AML Sound Velocity & Pressure (AML SV&P) sensor.

Refer to the DAPR for additional information.



Figure 8: Temporal and geographic distribution of SVP casts within survey H13155

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

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

B.5 Data Processing

B.5.1 Primary Data Processing Software

The following software program was the primary program used for bathymetric data processing:

Manufacturer	Name	Version
Teledyne CARIS	HIPS & SIPS	9.1.9

Table 10: Primary bathymetric data processing software

The following software program was the primary program used for imagery data processing:

Manufacturer	Name	Version
QPS	FMGT	7.8.7

Table 11: Primary imagery data processing software

The following Feature Object Catalog was used: NOAA Extended Attribute Files V5_7.

B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13155_MB_1m_MLLW.csar	CARIS Raster Surface (CUBE)	1 meters	14.35 meters - 31.57 meters	NOAA_1m	Complete MBES
H13155_MB_1m_MLLW_Final.csar	CARIS Raster Surface (CUBE)	1 meters	14.35 meters - 20 meters	NOAA_1m	Complete MBES
H13155_MB_2m_MLLW.csar	CARIS Raster Surface (CUBE)	2 meters	14.37 meters - 31.56 meters	NOAA_2m	Complete MBES
H13155_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	18 meters - 31.56 meters	NOAA_2m	Complete MBES
H13155_MBAB_2m_400kHz	MB Backscatter Mosaic	2 meters	0 N/A - 0 N/A	N/A	Complete MBES

Table 12: Submitted Surfaces

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.

ERS Methods Used:

ERS via VDATUM

Ellipsoid to Chart Datum Separation File:

J359_Buffer1mi_xyNAD83-MLLW_geoid12b.csar

C.2 Horizontal Control

The horizontal datum for this project is North American Datum 1983.

The projection used for this project is Projected UTM 16.

D. Results and Recommendations

D.1 Chart Comparison

A selected sounding set was made from both the finalized 1m and 2m grids with the following characteristics: shoal biased; 1 to 10,000mm at map scale; defined radius of 5. An overall sounding selection was created from charted soundings from ENC's US3GC05M and US3GC06M. The two were then compared with a minimum threshold of 1m survey sounding shoal to charted soundings using the Chart Review feature within Pydro QC tools (Figures 8 and 9). Changes most frequently occur along the tops of sandwaves and shoals as they shift throughout the area. Surveyed soundings deeper than charted soundings were not analyzed.

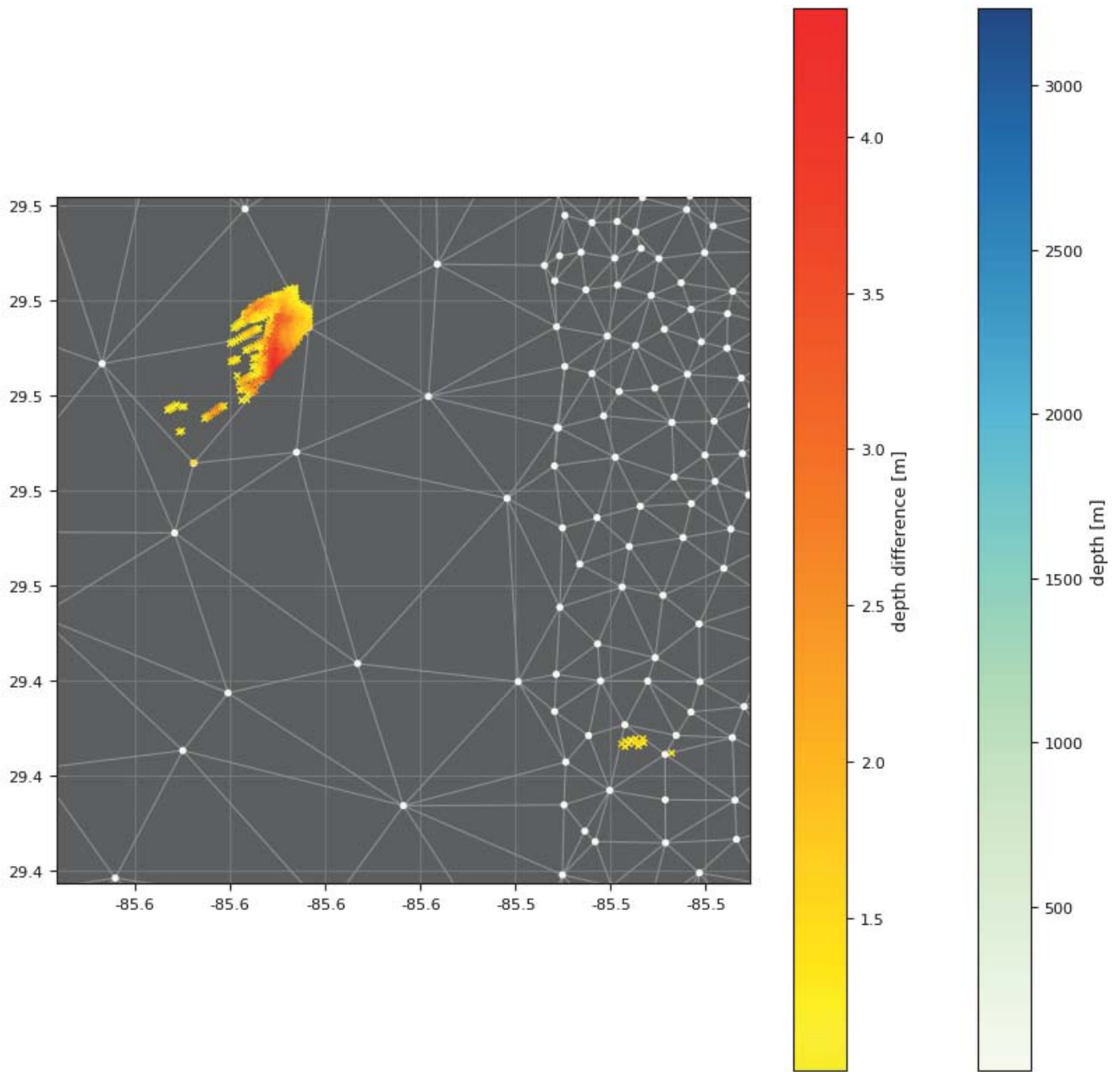


Figure 9: QC tools output instances of surveyed soundings shoal to charted soundings >1m.

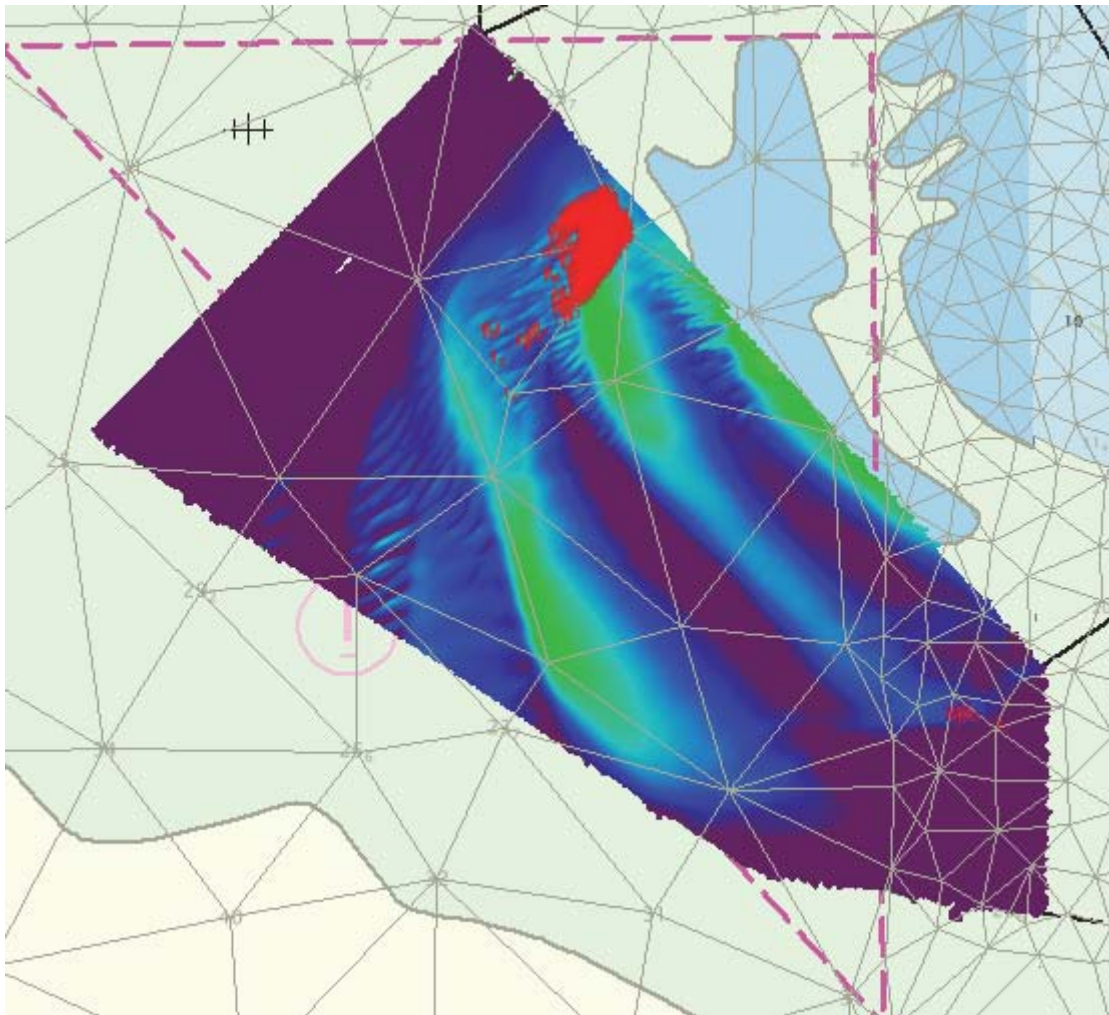


Figure 10: QC tools output instances of surveyed soundings shoal to charted soundings >1m over survey H13155 area with ENC soundings TIN.

D.1.1 Electronic Navigational Charts

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

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US3GC05M	1:456394	47	09/13/2018	09/13/2018	NO
US3GC06M	1:456394	23	05/23/2018	12/10/2018	NO

Table 13: Largest Scale ENCs

US3GC05M

US3GC06M

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

No charted features exist for this survey.

D.1.4 Uncharted Features

No uncharted features exist for this survey.

D.1.5 Shoal and Hazardous Features

No shoals or potentially hazardous features exist for this survey.

D.1.6 Channels

No channels exist for this survey. There are no designated anchorages, precautionary areas, safety fairways, traffic separation schemes, pilot boarding areas, or channel and range lines within the survey limits.

D.1.7 Bottom Samples

A total of 7 bottom samples were acquired within the sheet limits of survey H13155 per appendix H of the HSSD 2018. For a complete discussion, refer to the final feature file submitted with this report.

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

No prior survey comparisons exist for this survey.

D.2.3 Aids to Navigation

No Aids to navigation (ATONs) exist for this survey.

D.2.4 Overhead Features

No overhead features exist for this survey.

D.2.5 Submarine Features

No submarine features exist for this survey.

D.2.6 Platforms

No platforms exist for this survey.

D.2.7 Ferry Routes and Terminals

No ferry routes or terminals exist for this survey.

D.2.8 Abnormal Seafloor and/or Environmental Conditions

Large shifting sandwaves and moving shoals exist in the survey area. These were investigated with respect to the relevance of the survey purpose noted in Section A.2.

D.2.9 Construction and Dredging

No present or planned construction or dredging exist within the survey limits.

D.2.10 New Survey Recommendation

No new surveys or further investigations are recommended for this area.

D.2.11 Inset Recommendation

No new insets are recommended for this area.

F. Table of Acronyms

Acronym	Definition
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
FFF	Final Feature File
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
HSSD	Hydrographic Survey Specifications and Deliverables

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	Linear Nautical Miles
MBAB	Multibeam Echosounder Acoustic Backscatter
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
SSSAB	Side Scan Sonar Acoustic Backscatter
ST	Survey Technician
SVP	Sound Velocity Profiler
TCARI	Tidal Constituent And Residual Interpolation
TPE	Total Propagated Error
TPU	Topside Processing Unit
USACE	United States Army Corps of Engineers
USCG	United Stated Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positioning System timing message
ZDF	Zone Definition File

From: [Brian Mohr - NOAA Federal](#)
To: [Moyles, Dean](#)
Subject: Re: Survey Outlines (Pre-Hurricane) OPR-J359-KR-18 Apalachicola
Date: Wednesday, March 27, 2019 10:37:44 AM
Attachments: [image001.png](#)

Got it, thank you Dean, I'll get H13153, H13154 and H13155 updated in SURDEX shortly.

Brian Mohr
Physical Scientist - Data Manager
Hydrographic Surveys Division
brian.mohr@noaa.gov

On Thu, Feb 21, 2019 at 6:51 AM 'Moyles, Dean' via _NOS OCS Survey Outlines
<survey.outlines@noaa.gov> wrote:

Here are the survey outlines for the work completed prior to Hurricane Michael. Please let me know if you have any questions or comments.

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

6100 Hillcroft Street, Houston, TX 77081, USA



From: Moyles, Dean
To: ["OCS.NDB@noaa.gov"](mailto:OCS.NDB@noaa.gov); ["Coast.Pilot@NOAA.GOV"](mailto:Coast.Pilot@NOAA.GOV)
Cc: [Starla Robinson - NOAA Federal](#)
Subject: Coast Pilot Review Report
Date: Monday, April 08, 2019 10:49:00 AM
Attachments: [OPR-J359-KR-18_CoastPilotReviewReport.pdf](#)
[OPR-J359-KR-18CoastPilotReport.pdf](#)
[image001.png](#)

Please find the attached Coast Pilot Review Report, please let me know if you have any questions.

Kind regards,

Dean Moyles
Marine Hydrographic Manager (NSPS/THSOA cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378
email: dmoyles@fugro.com

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From: [Martha Herzog - NOAA Federal](#)
To: [Moyles, Dean](#)
Cc: [Starla Robinson](#); [Corey Allen](#); [Kathryn Pridgen - NOAA Federal](#)
Subject: Re: FW: Post Hurricane Crosslines - OPR-J359-KR-18 Apalachicola (EA-133C-14-CO-0032)
Date: Wednesday, November 07, 2018 4:27:02 PM

Hi Dean,

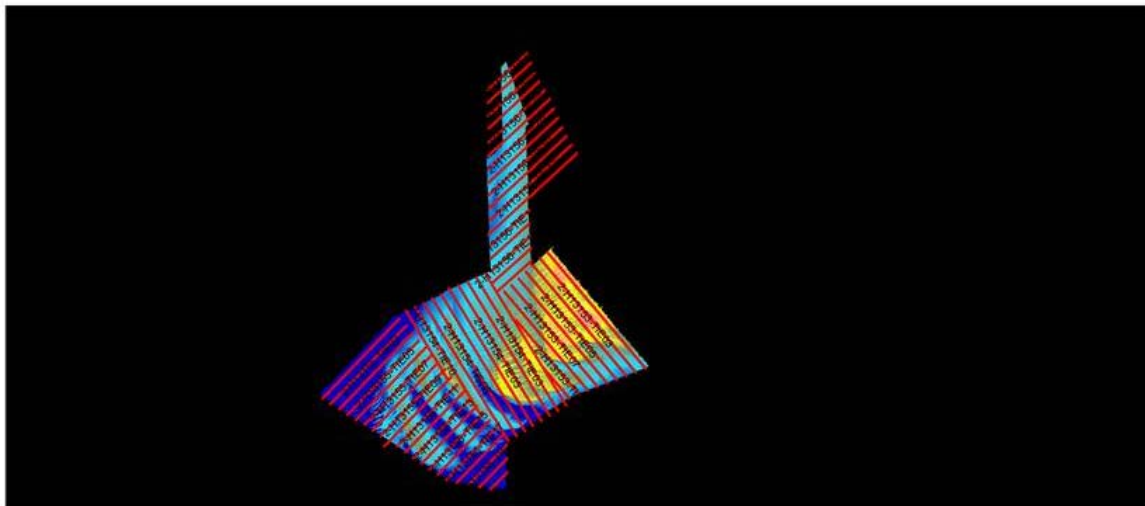
As long as it meets the agreed upon requirements such as the 1km line spacing, perpendicular to the contour, etc. then I believe it should be good to go.

Starla, please chime in if I have missed anything.

Martha

On Wed, Nov 7, 2018 at 12:53 PM, Moyles, Dean <dmoyles@fugro.com> wrote:

This is an old coverage, that's why some of the line extend pass it.



Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

[6100 Hillcroft Street, Houston, TX 77081, USA](#)

From: Martha Herzog - NOAA Federal <martha.herzog@noaa.gov>
Sent: Wednesday, November 07, 2018 2:21 PM
To: Moyles, Dean <dmoyles@fugro.com>; Starla Robinson <Starla.Robinson@noaa.gov>
Cc: Corey Allen <corey.allen@noaa.gov>; Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Subject: Re: FW: Post Hurricane Crosslines - OPR-J359-KR-18 Apalachicola (EA-133C-14-CQ-0032)

Hi Dean,

Yep, looks like I'm it. I'm not exactly sure of the progression or where crossline discussion ended. Do you mind just providing a quick graphic of the crossline plan?

Thanks,
Martha

On Wed, Nov 7, 2018 at 12:31 PM, Moyles, Dean <dmoyles@fugro.com> wrote:

Since Corey and Starla are out, I guess tag your it. See my question below.

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

[6100 Hillcroft Street, Houston, TX 77081, USA](#)

From: Moyles, Dean
Sent: Wednesday, November 07, 2018 2:00 PM
To: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>; Corey Allen (corey.allen@noaa.gov)
<corey.allen@noaa.gov>
Subject: RE: Post Hurricane Crosslines - OPR-J359-KR-18 Apalachicola (EA-133C-14-CQ-0032)

I have a line plan created for the verification crosslines, do you guys need to approve them?

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

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email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

[6100 Hillcroft Street, Houston, TX 77081, USA](#)

From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>

Sent: Friday, October 19, 2018 5:33 PM

To: Moyles, Dean <dmoyles@fugro.com>

Cc: Stacy Fullerton - NOAA Federal <stacy.fullerton@noaa.gov>; Corey Allen - NOAA Federal <corey.allen@noaa.gov>;

Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>; Martha Herzog - NOAA Federal <martha.herzog@noaa.gov>

Subject: Post Hurricane Crosslines - OPR-J359-KR-18 Apalachicola (EA-133C-14-CQ-0032)

Hello Dean,

Attached is a draft change request to address measuring the hydrographic changes from the survey. Please take a look and let me know what you think. If we both agree on the plan we could sign this to address the change in priority.

How are things going? Is the plan to remobilize coming together?

Best of Luck,

Starla

--

Starla D. Robinson, Physical Scientist

NOS - OCS - Hydrographic Survey Division - Operations Branch

National Oceanic Atmospheric Administration

Office: 240-533-0034 (Updated 6/13/17)

Cell: 360-689-1431

Website Acquisition: [HSD Planned Hydrographic Surveys](#)

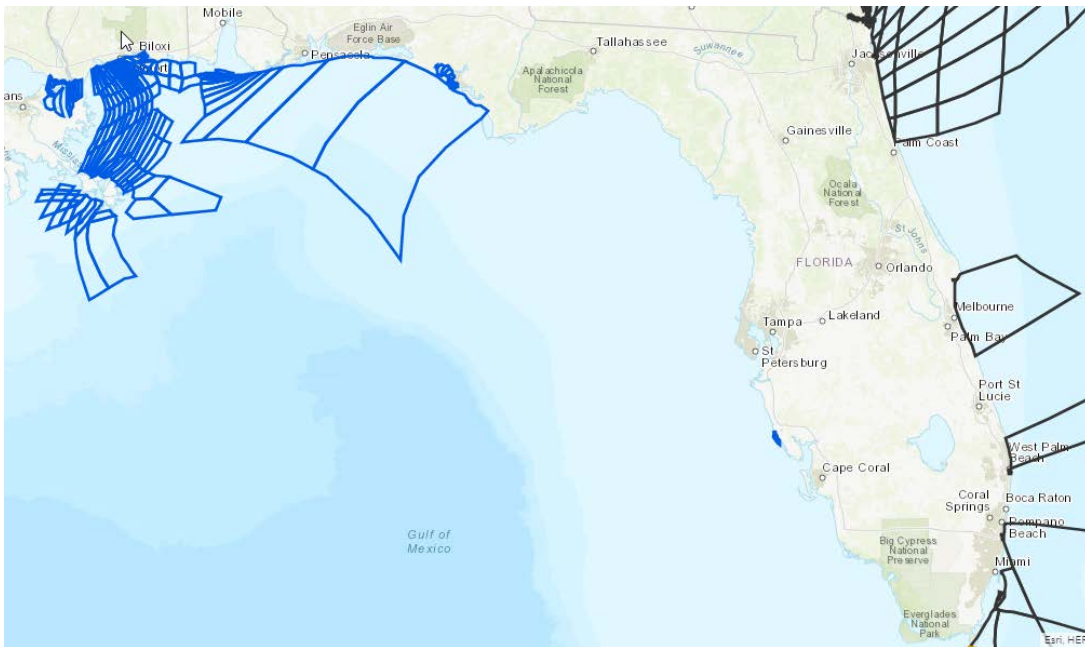
Website Planning: [OCS Survey Plans](#)

From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#); [Corey Allen - NOAA Federal](#); [Martha Herzog - NOAA Federal](#); [Stacy Fullerton - NOAA Federal](#)
Subject: Apalachicola - Tide Zones
Date: Sunday, September 09, 2018 7:46:50 PM
Attachments: [image.png](#)

Hello Dean,

In regards to tide zones, the [CO-OPS Discrete Tidal Zoning Map page](#) has some zones for the approach to Port Joseph that you could use to do a comparison test. However this is for information only and not required work per the contract. There are no zones built for the Apalachicola project area.

Thanks,
Starla



--
Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
National Oceanic Atmospheric Administration
Office: **240-533-0034** (Updated 6/13/17)
Cell: 360-689-1431
Website Acquisition: [HSD Planned Hydrographic Surveys](#)
Website Planning: [OCS Survey Plans](#)

From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#)
Cc: [Corey Allen - NOAA Federal](#); [Stacy Fullerton - NOAA Federal](#); [Martha Herzog - NOAA Federal](#)
Subject: Apalachicola Trip - Thank you for having me!
Date: Wednesday, September 05, 2018 2:08:38 AM

Thanks Dean,

I had a great time on the *Acadiana*, and meeting the team! It was good to see Melony again, and to meet Hansa. It truly felt like a day of geeking out over hydrography, innovations, and ideas of how we can make things better. I live for days like this, and I believe the productive conversation was well worth the trip!

Actions taken:

- I looked into getting zoned tides, and because CO-OPS has to produce them for each project we cannot readily get them. I am waiting for a followup email.
- The cloud computing email has been sent and seems to be stirring interest.
- Our conversation about VDATUM shed some light on some confusing discussions in the office regarding the separation surface and field units making new separation surfaces. I sent out a request that people make the loading procedure more clear.

Outstanding Actions:

- Follow up on RTX smoothing. I will look into this.
- We talked about having an acquisition post brief meeting to give Fugro an opportunity to discuss project issues and wins after acquisition. It could be like the Pre-Brief with the navigation manager, processing branch, and project manager in attendance. If you want to do set a meeting up, I will support it.
- If you would like to pass on tools and have them incorporated into Pydro, you may be able to do that through the HydrOffice group. There is a contact option on the HydrOffice website. More information is available at: <http://ccom.unh.edu/project/hydroffice>.

I hope all is well with the storm going through.

Sincerely,
Starla

--
Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
National Oceanic Atmospheric Administration
Office: 240-533-0034 (Updated 6/13/17)
Cell: 360-689-1431
Website Acquisition: [HSD Planned Hydrographic Surveys](#)
Website Planning: [OCS Survey Plans](#)

From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#); [MacDonald, Mark](#)
Cc: [Stacy Fullerton - NOAA Federal](#); [Corey Allen - NOAA Federal](#); [Martha Herzog - NOAA Federal](#)
Subject: Final Project Files - OPR-J359-KR-18 Apalachicola (EA133C-14-CQ-0032)
Date: Wednesday, July 18, 2018 7:09:31 PM

Congratulations on the award for OPR-J359-KR-18 Vicinity of Apalachicola, FL. Attached is the final data package. Included in the package are: the Coast Pilot, Consults, Environmental Compliance, GIS Files, Junction Survey, Marine Mammal Report template, Monthly Report Template, Project Instructions, and Vertical Control file. Below are some other notes worth passing on.

GIS Files

Composite Source File: No changes have been made since the draft.

Project Reference File: Sheet 7 and a buffer around are included but unassigned.

SDB Reconnaissance: This data is not for navigation, but may be useful for identifying possible shoals. The final SDB layer for Apalachicola had some cloud cover in Sheet 6. This area is out of the extinction depth and on inspection of other images analyzed is not obscuring any possible features.

DOD Points Of Contact

The consults files include the following contact information. I decided not to put these in the PI's.

Mr. Tom Bonifay
Public Support and Communications, AFB Tyndall
850-283-4500
thomas.bonifay@us.af.mil

Mr. Jeffrey Willows
Navy Operations, AOR
850-230-7174
jeffrey.willows@navy.mil

Please contact Martha and I if you have any questions. I look forward to working with you on this project!

Sincerely,
Starla Robinson



--
Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
National Oceanic Atmospheric Administration
Office: **240-533-0034** (Updated 6/13/17)
Cell: 360-689-1431
Website: [HSD Planned Hydrographic Surveys](#)

--
Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
National Oceanic Atmospheric Administration
Office: **240-533-0034** (Updated 6/13/17)
Cell: 360-689-1431
Website: [HSD Planned Hydrographic Surveys](#)

From: [Starla Robinson - NOAA Federal](#)
To: [Stacy Fullerton - NOAA Federal](#); [Moyles, Dean](#)
Cc: [Kathryn Pridgen - NOAA Federal](#); [Corey Allen - NOAA Federal](#)
Subject: Guidance on Post Hurricane Data
Date: Friday, December 14, 2018 7:45:59 PM

Hello Dean,

I got your phone call. I recommend submitting the pre-hurricane data and post hurricane data as separate grids, for all the surveys. The crossline percentages and changes should be discussed in the DR, as well as the holidays.

As discussed, we are working out how to administratively address the crosslines and holidays. Holidays have little value to us given the changes in sheets 1 through 3. I shall be able to follow up on this later next week.

Thanks,

Starla

--

Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
National Oceanic Atmospheric Administration
Office: 240-533-0034 (Updated 6/13/17)
Cell: 360-689-1431
Website Acquisition: [HSD Planned Hydrographic Surveys](#)
Website Planning: [OCS Survey Plans](#)

From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#)
Cc: [Matthew Forrest - NOAA Federal](#); [Corey Allen - NOAA Federal](#)
Subject: JHC-UNH Drop Camera
Date: Friday, July 13, 2018 9:17:39 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Hello Dean,

Sure. What would you like to know? I can try to answer.

The drop camera was developed by JHC-UNH. Andy McLeod, I believe, was one of the originators of this design. JHC-UNH has been testing the design since 2014 on NOAA Ships. The fleet is currently testing it and a new workflow, with their system configurations. Once the pipeline for the data is established, it is likely that we will look at expanding their use in projects that have a habitat priority.

Thanks,
Starla

On Wed, Jul 11, 2018 at 2:33 PM, Moyles, Dean <dmoyles@fugro.com> wrote:

Starla,

I have a side question unrelated to this contract. I saw at the last FPW the new bottom sample setup NOAA are using in the field, could you provide some additional details on this or point my in the direct direction?

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

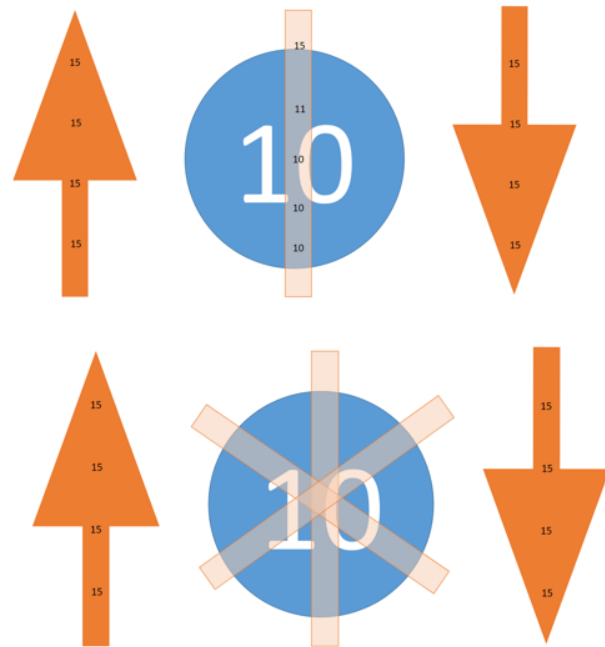
[6100 Hillcroft Street, Houston, TX 77081, USA](#)

From: [Starla Robinson - NOAA Federal](#)
To: [MacDonald, Mark](#)
Cc: [Moyles, Dean](#); [Stacy Fullerton - NOAA Federal](#); [Corey Allen - NOAA Federal](#); [Martha Herzog - NOAA Federal](#)
Subject: Re: Apalachicola Proposal - General Review (EA133C-14-CQ-0032)
Date: Thursday, June 21, 2018 3:08:05 PM
Attachments: [image.png](#)

Here is the disproof of shoal sounding guidance for set line spacing surveys that I mentioned in the meeting.

Disproof of Shoal Sounding

- All charted depths falling between sounding lines and **shallower by two feet or greater** than adjacent water-level corrected surveyed soundings shall be addressed.
- Verification by splits .
- Disproof by a star-like pattern using three lines centered on the charted depth and each extending 1 mm at chart scale.
- Sourced from:
"Depths varying by more than 2 ft from general surrounding depths must be developed in existing or potentially navigable areas"
(1976 Hydrographic Manual page 4-9)



Office of Coast Survey
National Oceanic and Atmospheric Administration

5

On Thu, Jun 21, 2018 at 1:04 PM, Starla Robinson - NOAA Federal <starla.robinson@noaa.gov> wrote:
Thank you for the call in today.

My response to the general review answers is attached. Please review before updating your estimates.

Below are the notes from today's call. Please review and reply with any clarifications and additions.

Discussion

- HSSD Section 5.2.2.3 Complete Coverage Option B 100% Sidescan with concurrent MBES will be more efficient for sheets 1 through 6.
- Towfish Height (Section 6.1.2.3 Towfish Height) should be used for determining range scale and line spacing.
- Typically people add a percentage for reruns and developments.
- Robinson and Pridgen asked for a hybrid approach with 100% SSS for sheets 1 through 5, and MBES for 6-7.

- Robinson also mentioned that her expectations for survey speed are different depending on the scenario and requested that the estimates be run with speeds that better reflect the vessel capacities seen in actuals. Please see the response in the attached word document.

Action Items

- Fugro will provide an updated estimate Friday. (If you need more time let us know.)
- PM Robinson will send a guidance on sounding disprovals.

Thank you,
Starla

On Wed, Jun 20, 2018 at 6:56 PM, Starla Robinson - NOAA Federal <starla.robinson@noaa.gov> wrote:

One more try! This one has the unloaded capacity and cost for each vessel. The other one deflated your vessel capacity with wx and feature time.

Please use this as the new base template.

Thanks,

From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#)
Subject: Re: Bathy Splits
Date: Friday, February 08, 2019 3:45:57 PM
Attachments: [image001.png](#)
[image003.png](#)
[image.png](#)

The official guidance is:

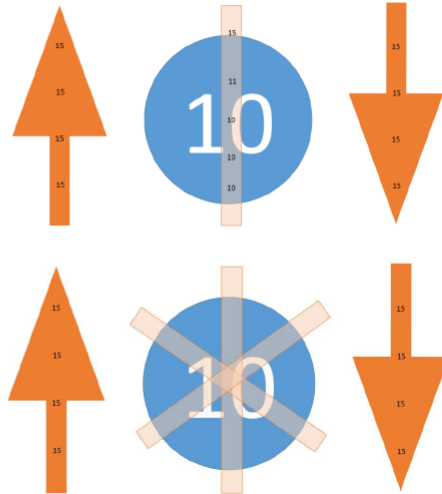
All charted depths falling between sounding lines and shallower by two feet (or greater) than adjacent water-level corrected surveyed soundings shall be verified or disproved. Verification and disproval of shoal charted depths that fall between set line spacing shall be accomplished by acquiring a star-like pattern using three lines centered on the charted depth and each extending 1 mm at chart scale. All significant shoals or features found in waters less than 20 m deep shall be developed to complete coverage standards.

A 40-meter will radius star-like pattern at the centroid of the sounding will cover a 1mm footprint at chart scale. This will be sufficient to disprove the sounding.

Disproval of Shoal Sounding

- All charted depths falling between sounding lines and shallower by **two feet or greater** than adjacent water-level corrected surveyed soundings shall be addressed.
- Verification by splits .
- Disproval by a star-like pattern using three lines centered on the charted depth and each extending 1 mm at chart scale.

Sourced from: "Depths varying by more than 2 ft from general surrounding depths must be developed in existing or potentially navigable areas"
(1976 Hydrographic Manual page 4-9)



On Fri, Feb 8, 2019 at 1:23 PM Moyles, Dean <dmoyles@fugro.com> wrote:

Should we keep in mind that due to the Michael, that the charted soundings may also be off to some degree.

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

6100 Hillcroft Street, Houston, TX 77081, USA



From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>
Sent: Friday, February 08, 2019 2:47 PM
To: Moyles, Dean <dmoyles@fugro.com>
Subject: Re: Bathy Splits

Click on the ENC in the layers window. In the properties window there is the option to change the ENC's Symbolization Scale. Change that from fixed to the scale of the underlying chart (Ex: 20000, or 40000). It will show the ENC at the chart's scale.

Cheers!

Starla

On Fri, Feb 8, 2019 at 1:08 PM Moyles, Dean <dmoyles@fugro.com> wrote:

How do I set that in CARIS?

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

6100 Hillcroft Street, Houston, TX 77081, USA



From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>

Sent: Friday, February 08, 2019 2:18 PM
To: Moyles, Dean <dmoyles@fugro.com>
Subject: Re: Bathy Splits

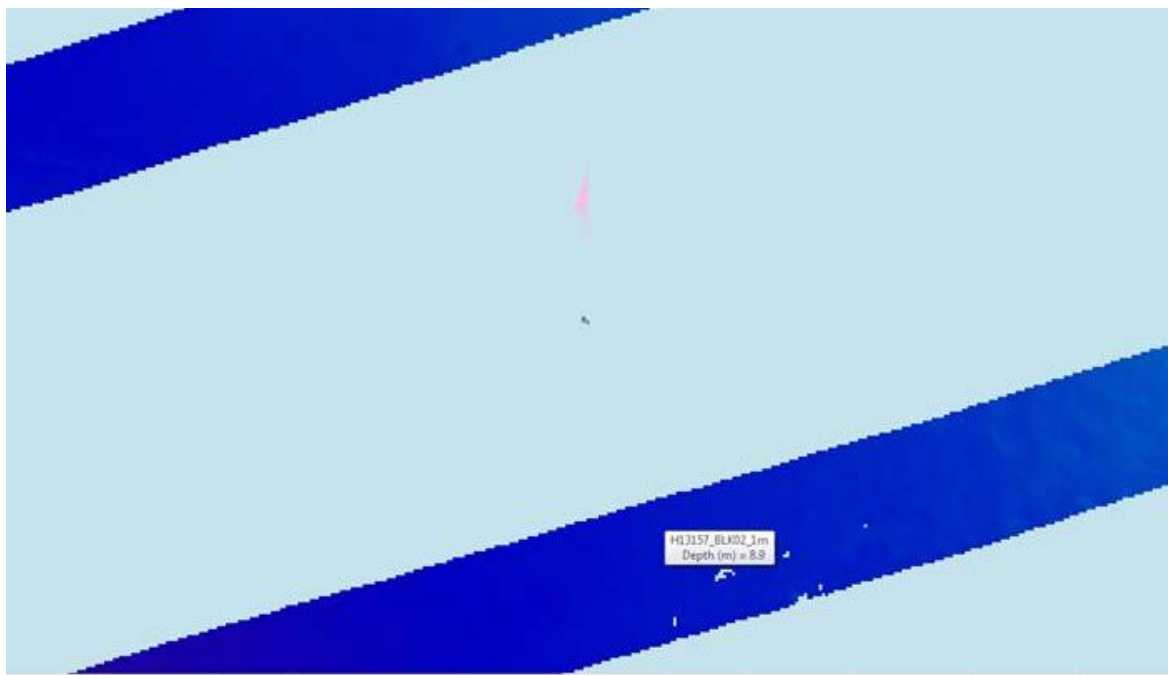
Could you set the soundings to display at chart scale? That will help us. I may have some previous guidance I can send.

On Fri, Feb 8, 2019 at 12:12 PM Moyles, Dean <dmoyles@fugro.com> wrote:

That works I will send a meeting request here shortly or do you want to send it?

Really looking for any guidance you can provide on when and how to conduct the bathy split, for example:

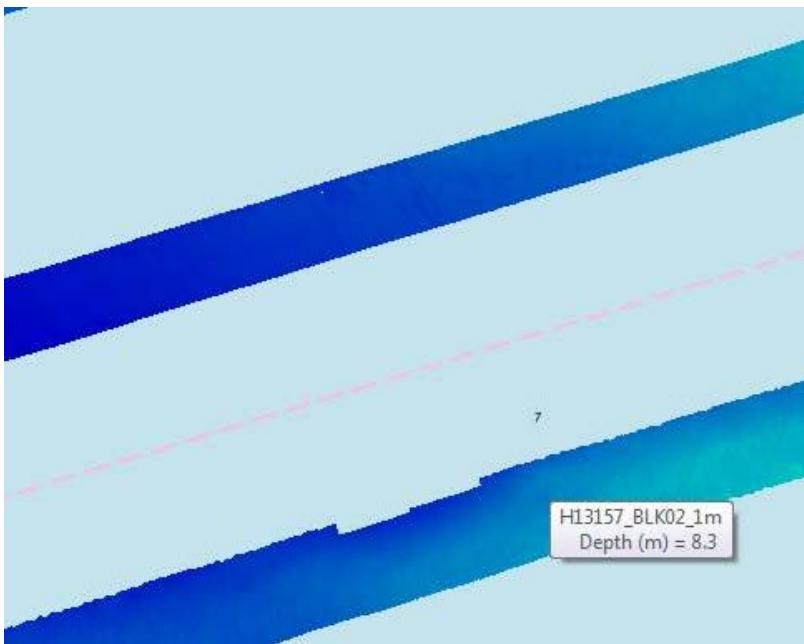
- Here I would not conduct a split; since the sounding is not shoaler.



- Here the bathy is 9.1m and the charted sounding is 8.5. I would not do a split, but guidance here would be good.



- Here the bathy is 8.3 and chart sounding 7, would do a split, but do we do it in the middle of our lines or over the charted sounding?



Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

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email: dmoyles@fugro.com

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6100 Hillcroft Street, Houston, TX 77081, USA



From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>

Sent: Friday, February 08, 2019 12:59 PM

To: Moyles, Dean <dmoyles@fugro.com>

Subject: Re: Bathy Splits

Excellent! How about 2pm? If you can send me screen grabs and questions I can come to the meeting with a head start on the review.

On Fri, Feb 8, 2019 at 11:27 AM Moyles, Dean <dmoyles@fugro.com> wrote:

This can wait until Monday, just let know a time I will send a meeting request.

Kind regards,

Dean Moyles

Marine Hydrographic Manager (ACSM cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378

email: dmoyles@fugro.com

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6100 Hillcroft Street, Houston, TX 77081, USA



From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>
Sent: Friday, February 08, 2019 12:55 PM
To: Moyles, Dean <dmoyles@fugro.com>
Subject: Re: Bathy Splits

I am sorry, I had something come up today. Is this something we could schedule for Monday afternoon or maybe send by screen grab? How soon do you need it?

Thanks,

Starla

On Fri, Feb 8, 2019 at 10:46 AM Moyles, Dean <dmoyles@fugro.com> wrote:

When are you available to review the Bathy Splits?

Sent from my iPhone

--

Starla D. Robinson, Physical Scientist

NOS - OCS - Hydrographic Survey Division - Operations Branch

National Oceanic Atmospheric Administration

Office: 240-533-0034 (Updated 6/13/17)

Cell: 360-689-1431

Website Acquisition: [HSD Planned Hydrographic Surveys](#)

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From: [Starla Robinson - NOAA Federal](#)
To: [Moyles, Dean](#)
Subject: Re: Bathy Splits
Date: Friday, February 08, 2019 3:45:57 PM
Attachments: [image001.png](#)
[image003.png](#)
[image.png](#)

The official guidance is:

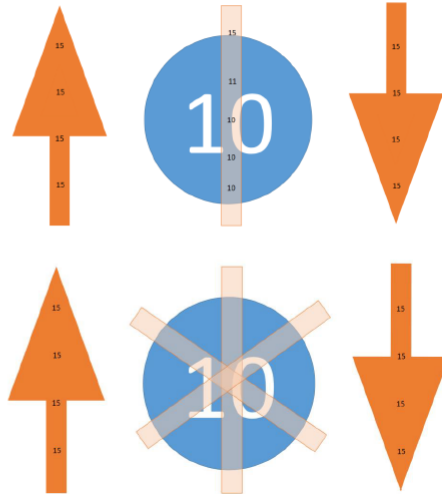
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Sourced from: "Depths varying by more than 2 ft from general surrounding depths must be developed in existing or potentially navigable areas"
(1976 Hydrographic Manual page 4-9)



On Fri, Feb 8, 2019 at 1:23 PM Moyles, Dean <dmoyles@fugro.com> wrote:

Should we keep in mind that due to the Michael, that the charted soundings may also be off to some degree.

Kind regards,

Dean Moyles

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email: dmoyles@fugro.com

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

Date: 4/9/2019

MEMORANDUM FOR: Corey Allen
Chief, Hydrographic Surveys Division Operations Branch

FROM: Starla Robinson
Project Manager, OPR-J359-KR-18
Hydrographic Surveys Division Operations Branch


SUBJECT: Waiver request – Check Sum MD-5 Hash
OPR-J359-KR-18
Contract # EA133C-14-CQ-0032
Project: OPR-J359-KR-18
Task Order: 04

Fugro is granted a waiver from the requirement of performing a check sum per 2018 HSSD Section 8.3.1 *Media*. The contractor remains responsible for ensuring that all files are present and have not become corrupt during transfer. How the field unit chooses to accomplish this left to their professional discretion.

Justification

It is the intent of HSD to ensure that quality data is delivered in a timely and responsible fashion. In this case, the check sums is producing excessive delays, impacting the contractors ability to deliver the data.

Decision

 2019.04.09
15:14:44 -04'00'

Waiver is: Granted

Denied

cc: Chief, HSD OPS
Fugro Pelagos
Stacy Dohse, Contract Specialist
Emily Clark, Contract Officer



From: [Moyles, Dean](#)
To: pop.information@noaa.gov; ocs.ecc@noaa.gov
Cc: [Starla Robinson - NOAA Federal](#)
Subject: Marine Mammal Sightings (OPR-J359-KR-18)
Date: Wednesday, April 10, 2019 9:00:00 AM
Attachments: [Marine Mammal Sightings \(OPR-J359-KR-18\).pdf](#)
[image001.png](#)

This project is still ongoing, there could be more forms to follow. Please let me know if you have any questions or comments.

Kind regards,

Dean Moyles
Marine Hydrographic Manager (NSPS/THSOA cert. No. 226)

T +1 713 369-5400 | C +1 858 945-6378
email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>
6100 Hillcroft Street, Houston, TX 77081, USA



From: [Brian Mohr - NOAA Federal](#)
To: [Moyles, Dean](#)
Subject: Re: Survey Outlines (Pre-Hurricane) OPR-J359-KR-18 Apalachicola
Date: Wednesday, March 27, 2019 10:37:44 AM
Attachments: [image001.png](#)

Got it, thank you Dean, I'll get H13153, H13154 and H13155 updated in SURDEX shortly.

Brian Mohr
Physical Scientist - Data Manager
Hydrographic Surveys Division
brian.mohr@noaa.gov

On Thu, Feb 21, 2019 at 6:51 AM 'Moyles, Dean' via _NOS OCS Survey Outlines
<survey.outlines@noaa.gov> wrote:

Here are the survey outlines for the work completed prior to Hurricane Michael. Please let me know if you have any questions or comments.

Kind regards,

Dean Moyles

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email: dmoyles@fugro.com

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

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OPR J359-KR-18 MMO Training

Name	Date of Completion
Dean Moyles	8/15/2018
Honza Rokyta	8/15/2018
Kevin Kline	8/15/2018
Ross Turlington	8/15/2018
Blair Bouttle	8/15/2018
Gavin Goolsby	8/15/2018
Clay Walker	8/16/2018
Skyler Lebeof	8/26/2018
Tom Fitzpatrick	9/17/2018
Max Wike	10/2/2018
Dirk Wakker	10/2/2018
Riley Jones	12/4/2018
Allison Stone	12/4/2018
Chris Turner	12/4/2018
Reed Cody	1/9/2019
Sam Cody	1/17/2019
Roy Cain	1/17/2019
Mike Minton	3/9/2019
Patrick Keilen	4/2/2019
Jenny Tixier	4/7/2019
Josiah Latthitham	4/7/2019
Zach Jacobson	4/17/2019

APPROVAL PAGE

H13155

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

The following products will be sent to NCEI for archive

- Descriptive Report
- Data Acquisition and Processing Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Processed survey data and records
- GeoPDF of survey products
- Backscatter mosaic

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

Approved: _____

Commander Meghan McGovern , NOAA
Chief, Atlantic Hydrographic Branch