H13153

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	H13153

LOCALITY

State(s):	Florida
General Locality:	Cape San Blas, Florida
Sub-locality:	East Cape San Blas Shoals

2018

CHIEF OF PARTY
Dean R. Moyles

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H13153**

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:	**East Cape San Blas Shoals**
Scale:	**20000**
Dates of Survey:	**08/21/2018 to 09/28/2018**
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**
Imagery by:	**Multibeam Echo Sounder Backscatter**
Verification by:	**Atlantic Hydrographic Branch**
Soundings Acquired in:	**meters 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 H13153

Project: OPR-J359-KR-18

Locality: Cape San Blas, Florida

Sublocality: East Cape San Blas Shoals

Scale: 1:20000

August 2018 - September 2018

Fugro Pelagos, Inc.

Chief of Party: Dean R. Moyles

A. Area Surveyed

Survey H13153 (Table 1) is located approximately 8 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 21 August 2018 to 28 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. The new crosslines spanned the entire data set acquired prior to the hurricane within the sheet limits of H13153, H13154, H13155, and H13156. Due to 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 data gaps that would have been achieved otherwise (Section A.4). Upon hurricane landfall the R/V Acadiana had collected approximately half of the sheet. Due to the location of the remaining half it was decided to combine the outstanding portion with Sheet H13157 (Figure 2). For further information, refer to Appendix II of this report.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 36' 40.17" N 85° 30' 29.5" W	29° 28' 32.75" N 85° 20' 33" W

Table 1: Survey Limits

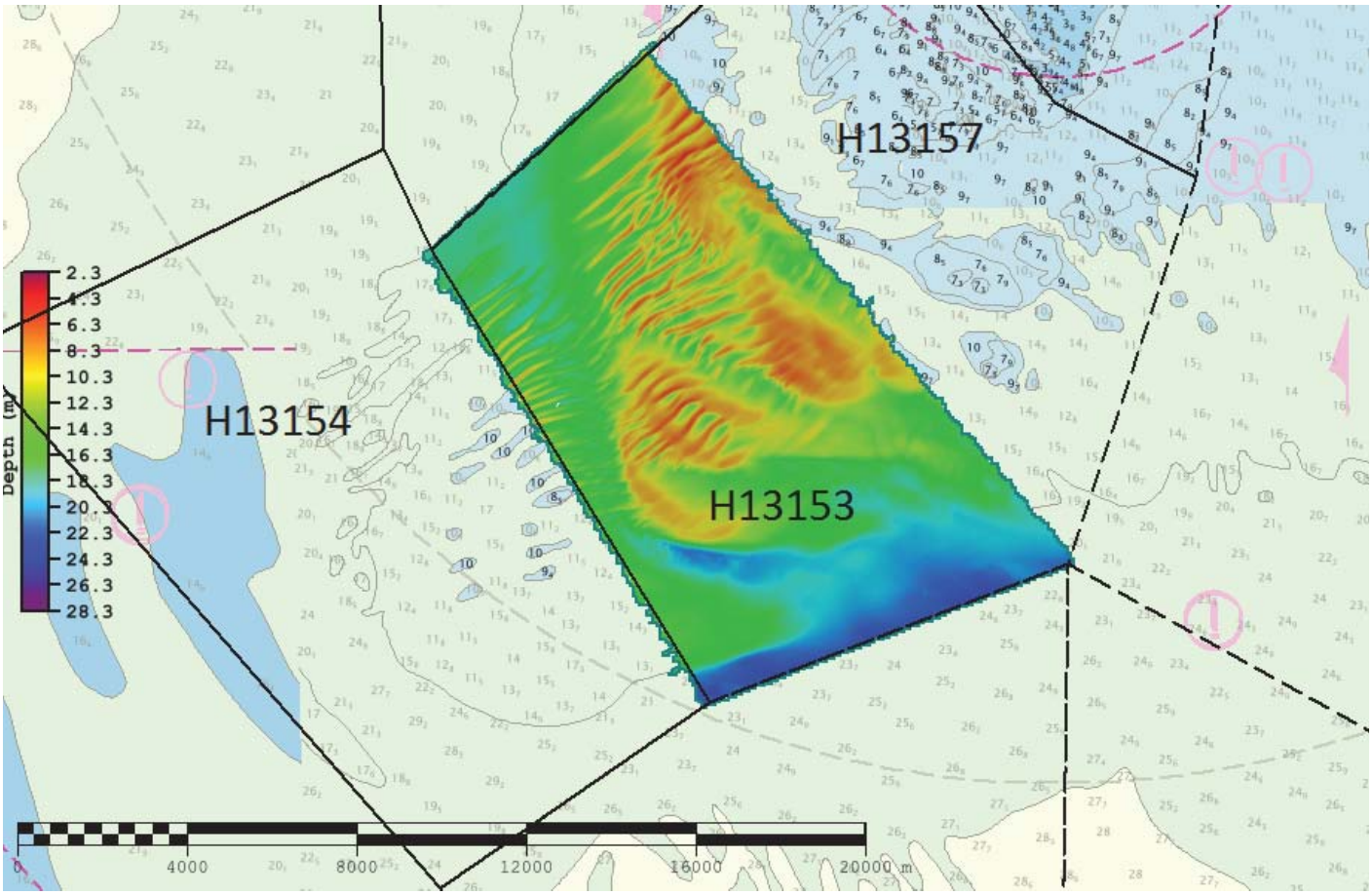

Figure 1: Survey H13153 location relative to overall sheet limits of OPR-J359-KR-18

Prior to the arrival of Hurricane Michael, the R/V Acadiana was able to acquire approximately half of the assigned area of H13153, priority 1 of OPR-J359-KR-18.

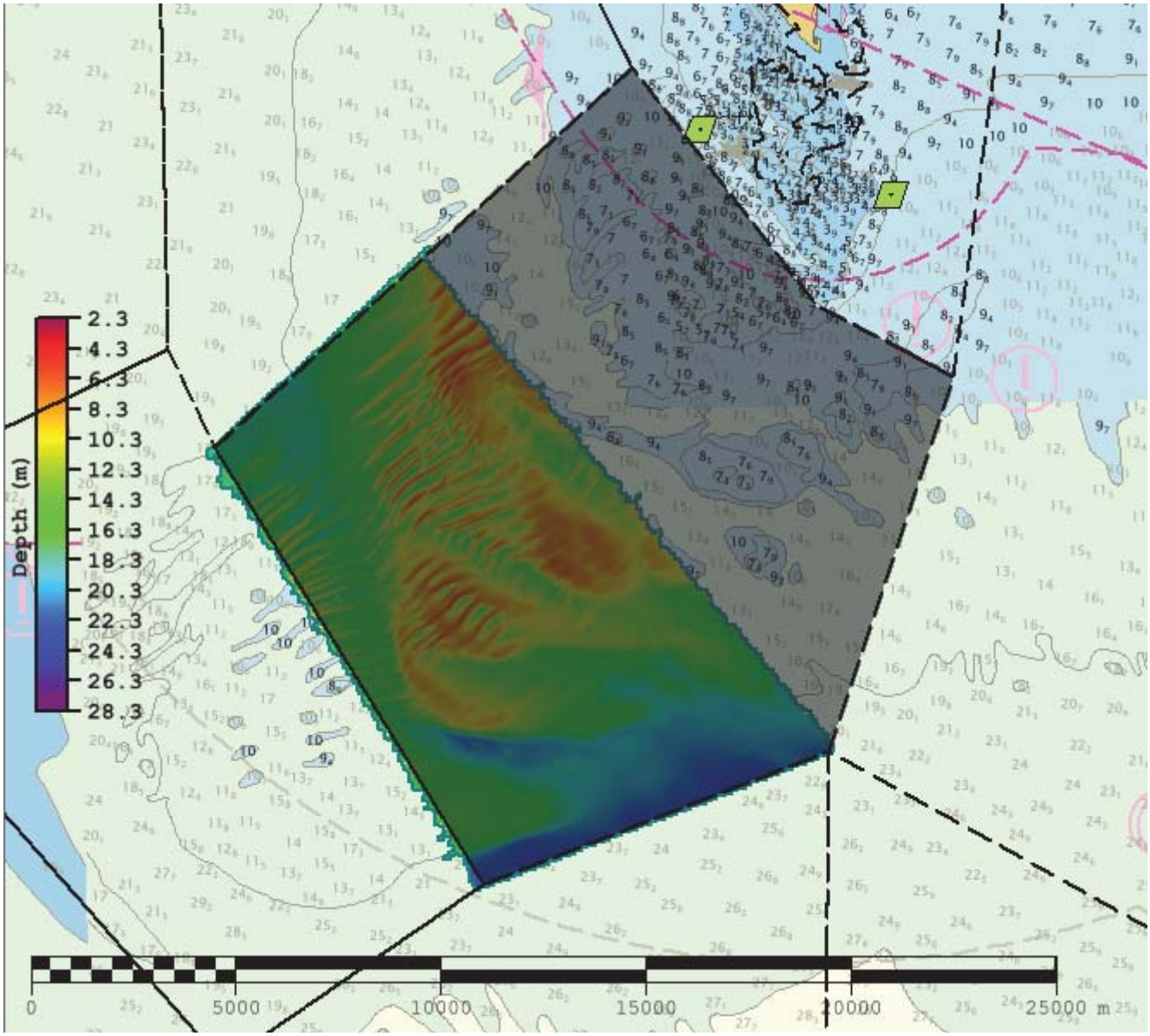

Figure 2: H13153 original assigned sheet limits highlighted in gray; eastern portion to be absorbed into H13157

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

A total of 15 full coverage data gaps exist within the modified sheet limits of H13153:

29-35-33.5148N 085-26-22.9668W
29-35-34.6012N 085-26-18.6759W
29-36-11.7187N 085-26-36.9873W
29-32-44.1182N 085-23-08.0793W
29-33-08.3599N 085-29-18.7422W
29-33-00.5346N 085-23-25.0940W
29-33-15.9436N 085-27-10.2243W
29-33-25.9624N 085-25-20.9103W
29-34-46.1305N 085-26-12.8074W
29-35-08.4019N 085-25-22.2909W
29-30-59.9313N 085-26-00.9859W
29-32-00.7843N 085-28-24.1388W
29-32-11.9727N 085-28-11.1921W
29-32-42.2782N 085-23-06.3625W
29-30-12.3721N 085-20-44.3641W

These gaps persist in direct correlation with a mandate from NOAA with regard to not returning to pre-hurricane data. Refer to Appendix II of this report for further information.

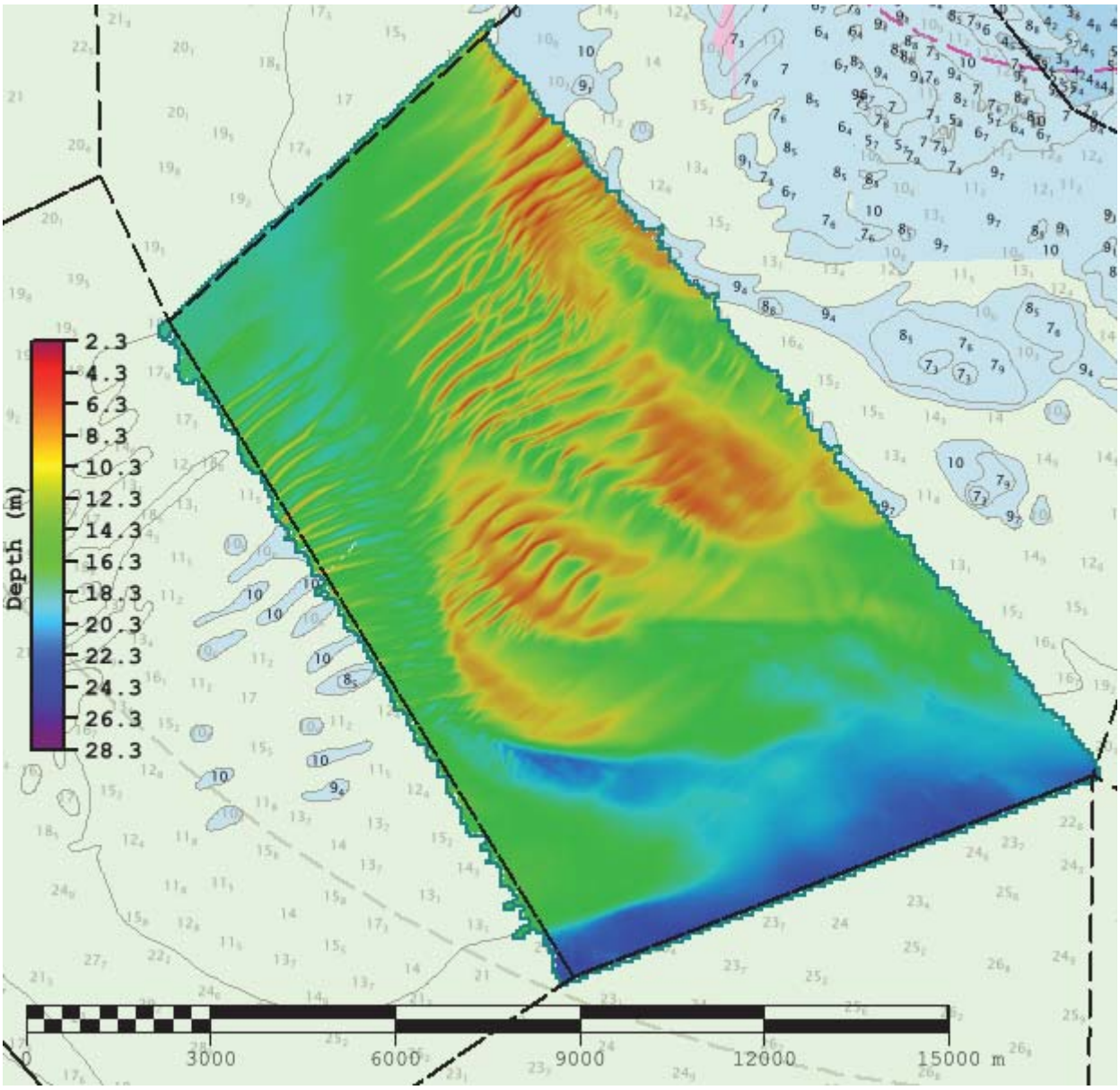

Figure 3: Survey H13153 full coverage MBES

A.5 Survey Statistics

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

	HULL ID	*R/V Acadiana*	*Total*
LNM	**SBES Mainscheme**	0	0
	MBES Mainscheme	1246.86	1246.86
	Lidar Mainscheme	0	0
	SSS Mainscheme	0	0
	SBES/SSS Mainscheme	0	0
	MBES/SSS Mainscheme	0	0
	SBES/MBES Crosslines	7.02	7.02
	Lidar Crosslines	0	0
Number of Bottom Samples			5
Number Maritime Boundary Points Investigated			0
Number of DPs			0
Number of Items Investigated by Dive Ops			0
Total SNM			33.~~21~~ ***035***

Table 3: Hydrographic Survey Statistics

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

Survey Dates	Day of the Year
08/21/2018	233

Survey Dates	Day of the Year
08/22/2018	234
08/23/2018	235
08/24/2018	236
08/25/2018	237
08/26/2018	238
08/27/2018	239
08/28/2018	240
08/29/2018	241
08/30/2018	242
08/31/2018	243
09/01/2018	244
09/02/2018	245
09/03/2018	246
09/10/2018	253
09/27/2018	270
09/28/2018	271
~~11/19/2018~~	~~323~~*

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.

** The survey data has the last survey day as DN271, SEP 28, 2018, and the title sheet has the last day as 9/28/2018. Post-hurricane cross lines were acquired on Julian day 323. Date of hydrography 11/19/2018 or Julian day 323 was crossed out to preserve the initial survey dates as the post hurricane crosslines are not included in the H13153 source grids.*

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 H13153. 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 0.56% of mainscheme acquisition.

Crosslines for survey H13153 were acquired in accordance with section 5.2.5.2 of the HSSD 2018, but percentage of mainscheme acquisition was low due to survey interruptions by Hurricane Michael.

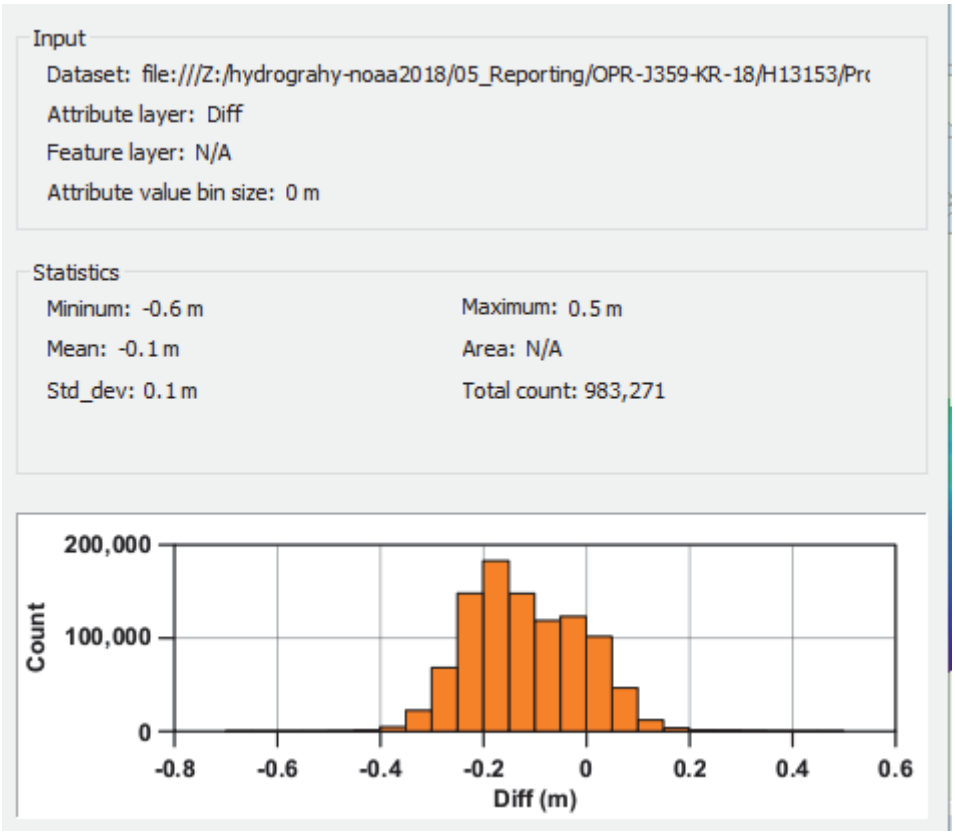

Figure 4: H13153 crossline to mainscheme difference output

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	1.173 meters/second	N/A meters/second	0.25 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

Survey H13153 uncertainty values were evaluated both in CARIS HIPS and SIPS and via Pydro QC tools v2.7.6. Both the 1m (Figure 5) and 2m (Figure 6) finalized grids meet uncertainty standards with 99.5% of nodes exceeding minimum requirements.

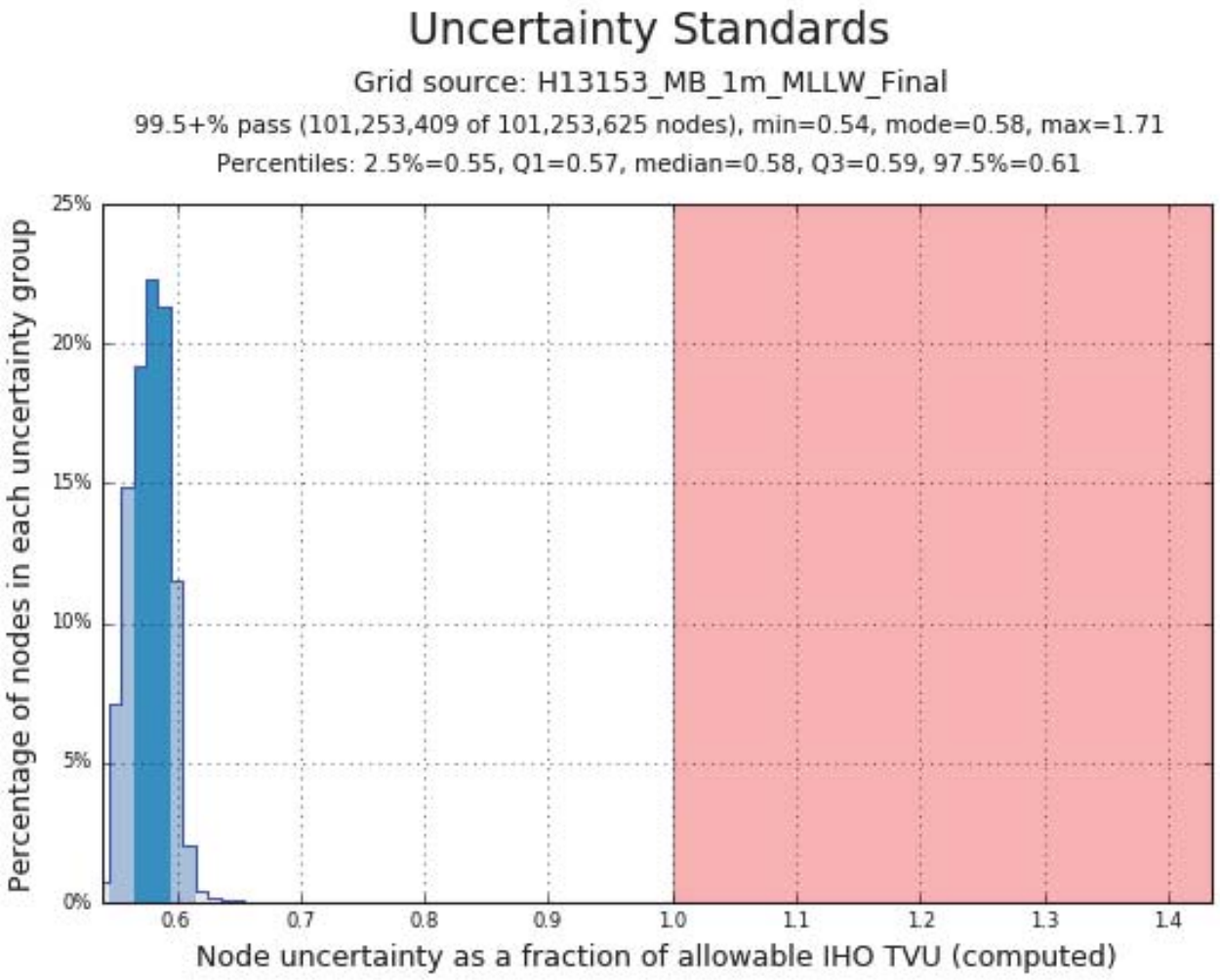

Figure 5: H13153 1m finalized grid TPU QC

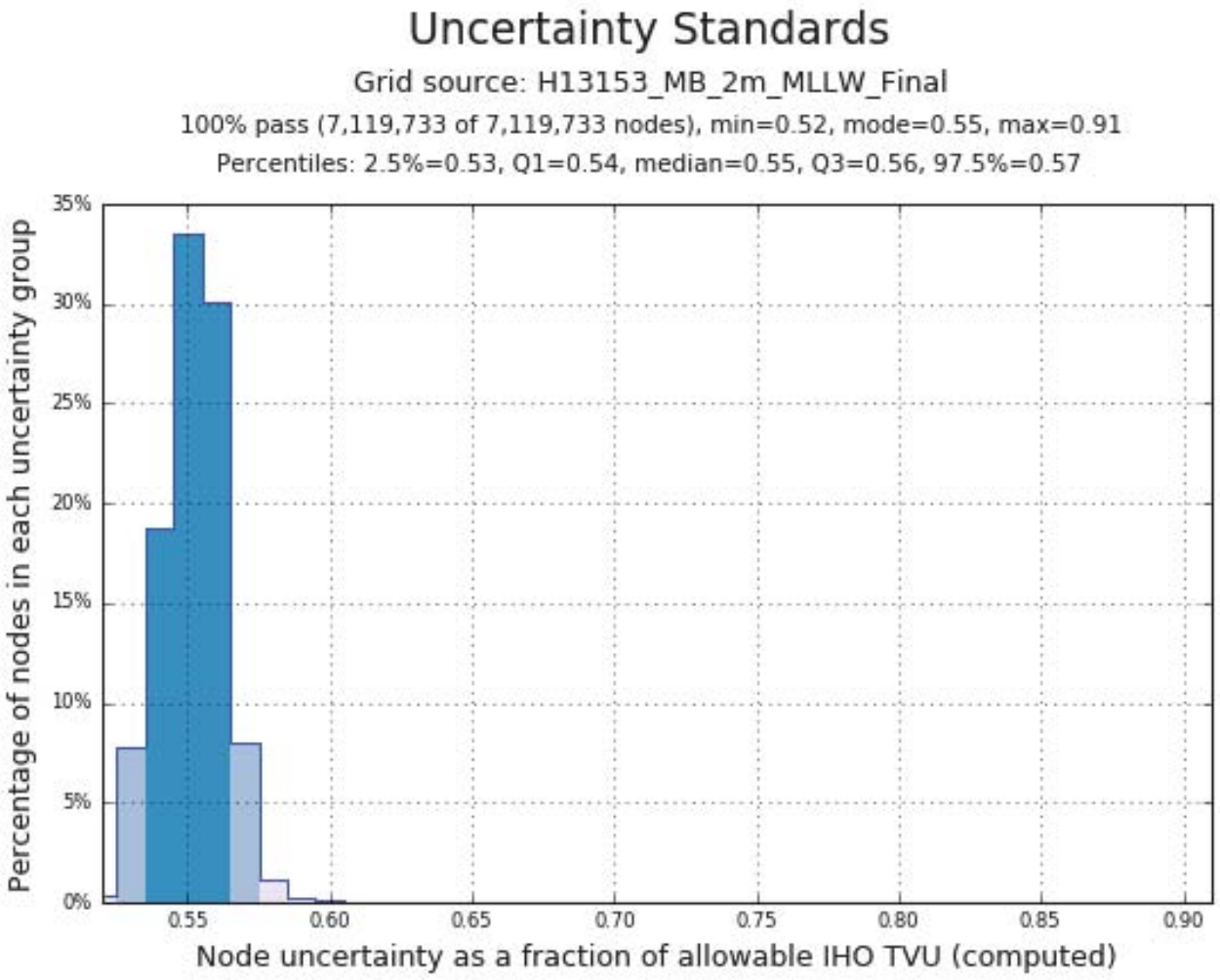

Figure 6: H13153 2m finalized grid TPU QC

B.2.3 Junctions

Data from contemporary junction surveys H13154, H13156, and H13157, were compared by running a difference surface in CARIS HIPS and SIPS on finalized 1m surfaces for each survey (Figure 7).

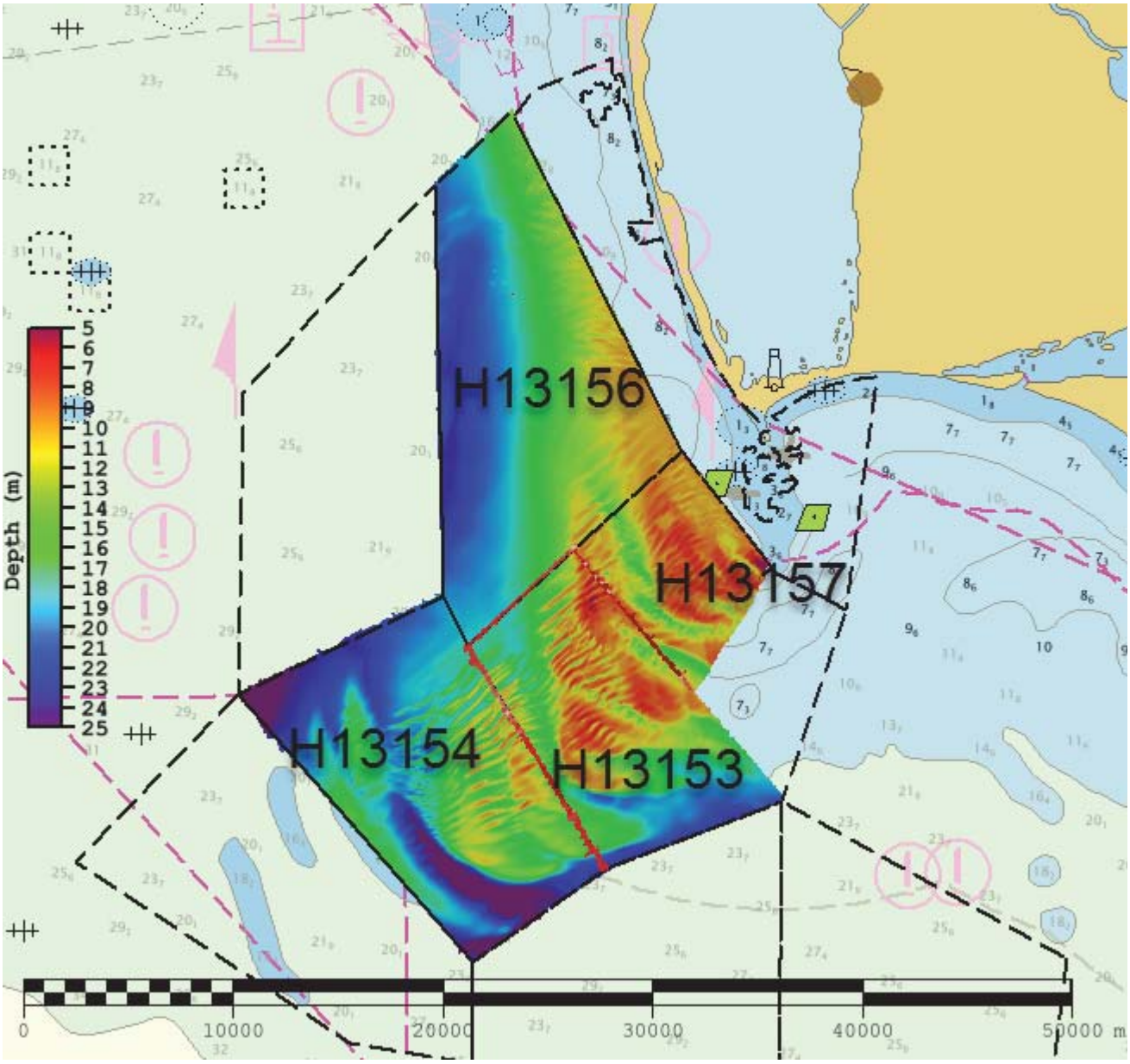

Figure 7: Contemporary junction surveys to survey H13153

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13154	1:40000	2018	Fugro Pelagos, Inc.	W
H13156	1:40000	2019	Fugro Pelagos, Inc.	NE
H13157	1:20000	2019	Fugro Pelagos, Inc.	E

Table 9: Junctioning Surveys

H13154

Of the 2,870,078 nodes compared between survey H13153 and H13154, the mean difference was 0m with a minimum difference of -1.6m and a maximum difference of 1.7m.

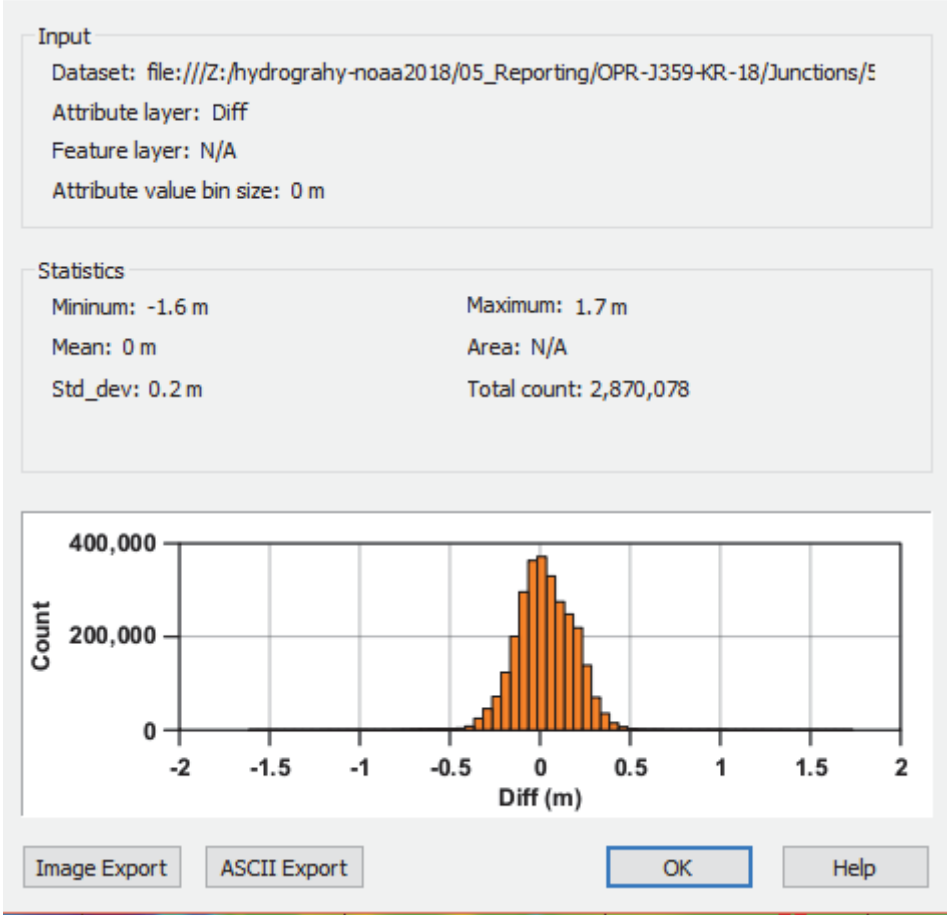

Figure 8: Survey H13153 differenced to junction survey H13154 statistics output

H13156

Of the1,055,947 nodes compared between survey H13153 and H13156, the mean difference was -0.1m with a minimum difference of -1.3m and a maximum difference of 1m.

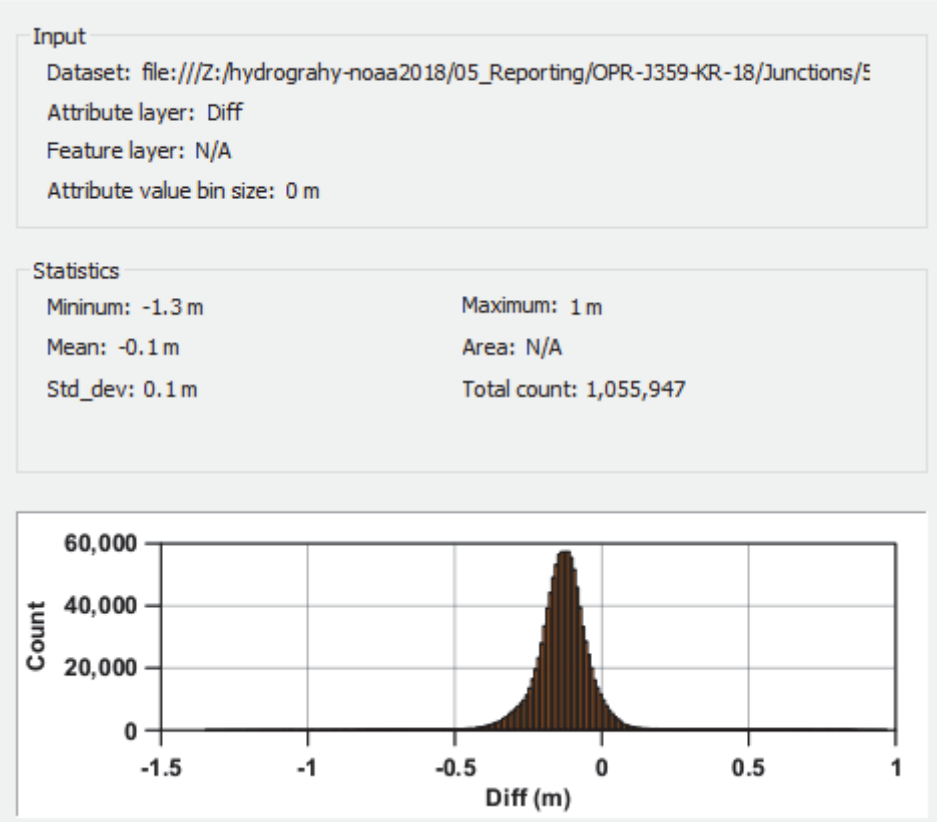

Figure 9: Survey H13153 differenced to junction survey H13156 statistics output

H13157

Of the1,980,252 nodes compared between survey H13153 and H13157, the mean difference was -0.0m with a minimum difference of -4m and a maximum difference of 3.4m.

Data within Survey H13157 are actively being acquired at the time of this report. The large outliers are indicative of a general trend of post-hurricane sand wave shift and collapse in the area.

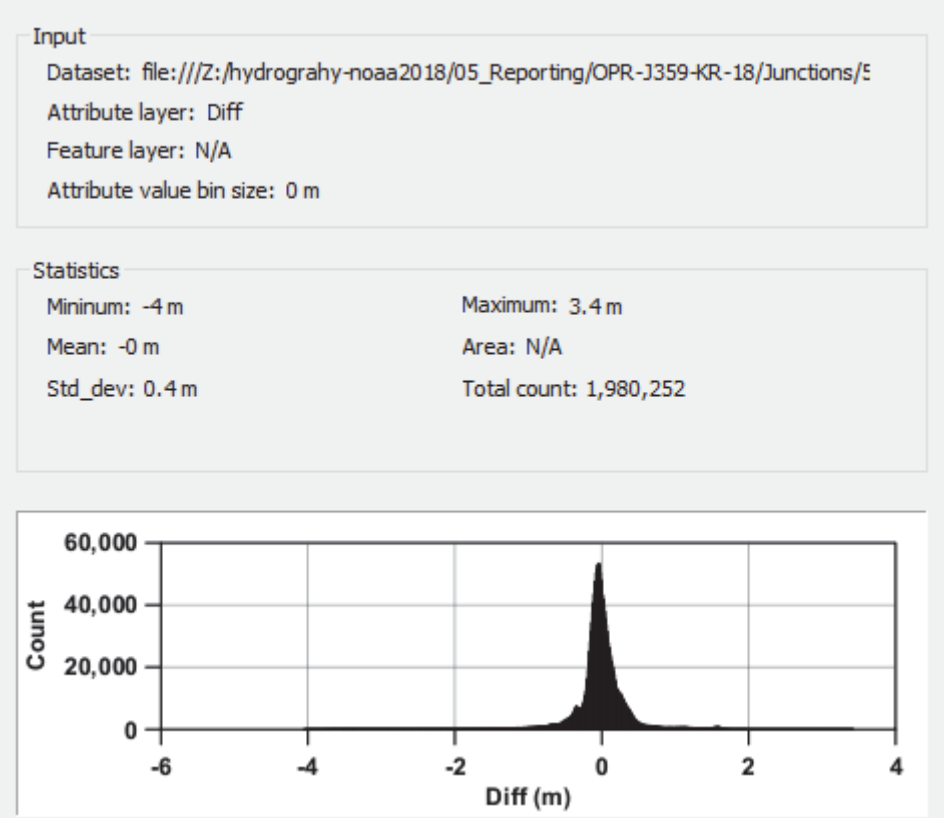

Figure 10: Survey H13153 differenced to junction survey H13157 statistics output

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

ERS abnormality 2018-253

An ERS post processed positioning failure occurred on Day 253. This anomaly presents in the the finalized grids as sounding data approximately 0.3m to 0.5m shoal to the surrounding data.

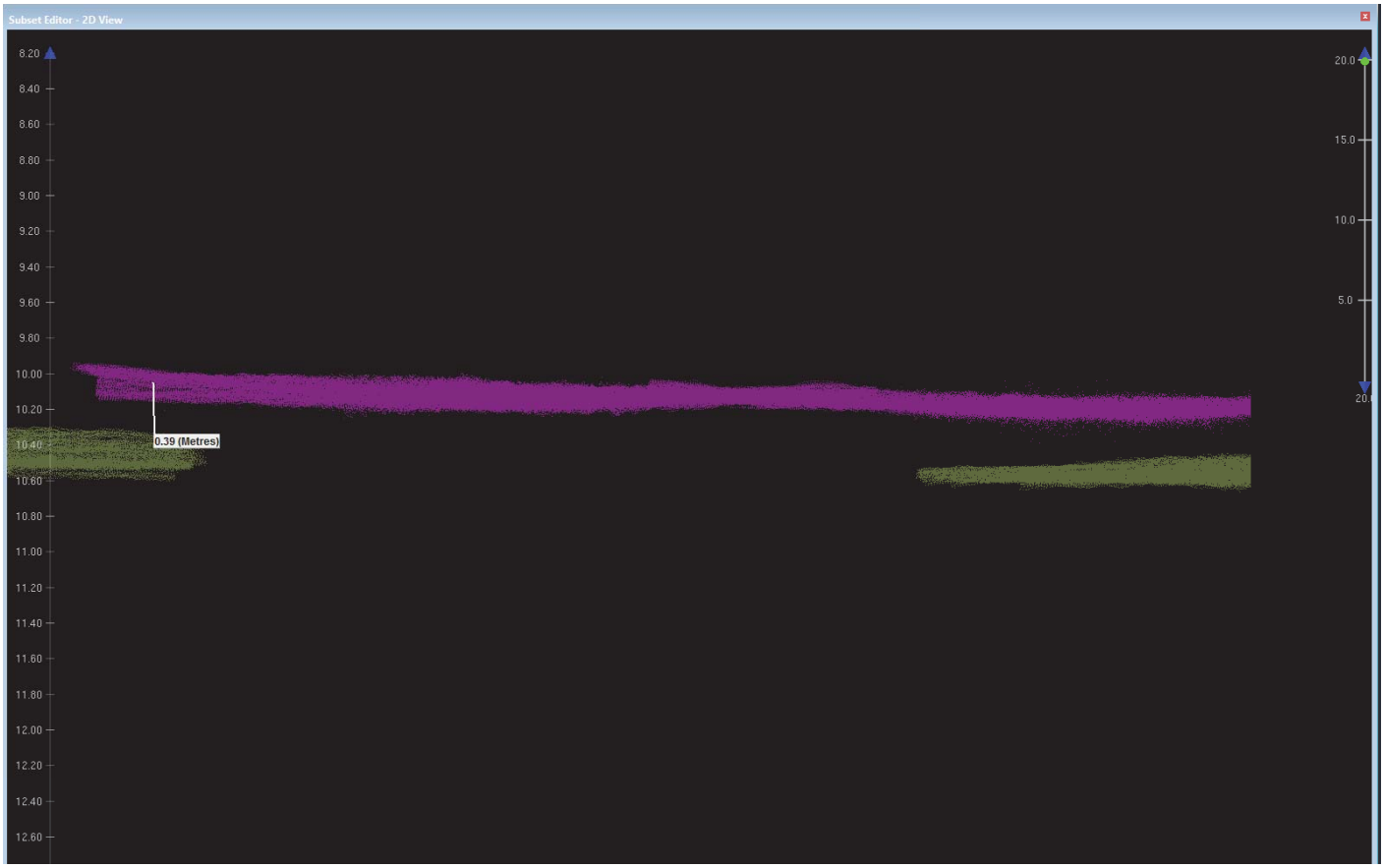

Figure 11: Data from Day 253 (magenta) represents as being shoal to surrounding data due to complications of post-processed ERS data

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 SV&P sensor.

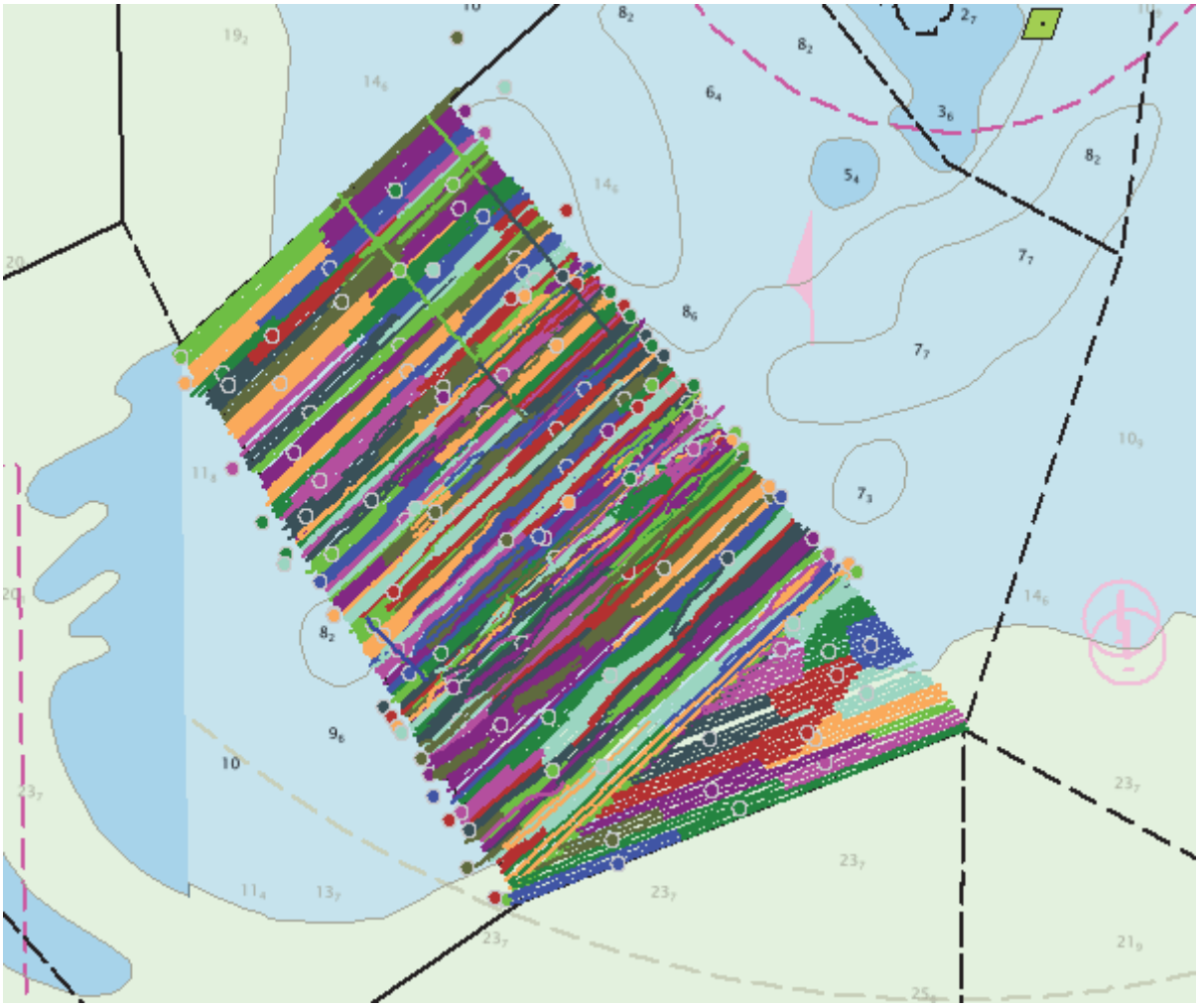

Figure 12: Temporal and geographic distribution of SVP casts within survey H13153

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 File 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
H13153_MB_1m_MLLW.csar	CARIS Raster Surface (CUBE)	1 meters	5.01 meters - 23.99 meters	NOAA_1m	Complete MBES
H13153_MB_1m_MLLW_Final.csar	CARIS Raster Surface (CUBE)	1 meters	5.01 meters - 20 meters	NOAA_1m	Complete MBES

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13153_MB_2m_MLLW.csar	CARIS Raster Surface (CUBE)	2 meters	5.03 meters - 23.99 meters	NOAA_2m	Complete MBES
H13153_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	18 meters - 23.99 meters	NOAA_2m	Complete MBES
H13153_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 16N.

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 ENCs US4FL60M, US4FL68M, US3GC05M and US3GC06M. The two sounding sets 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 14 and 15). Changes most frequently occur along the tops of the sandwaves as they shift throughout the area (Figure 16). Surveyed soundings deeper than charted soundings were not analyzed.

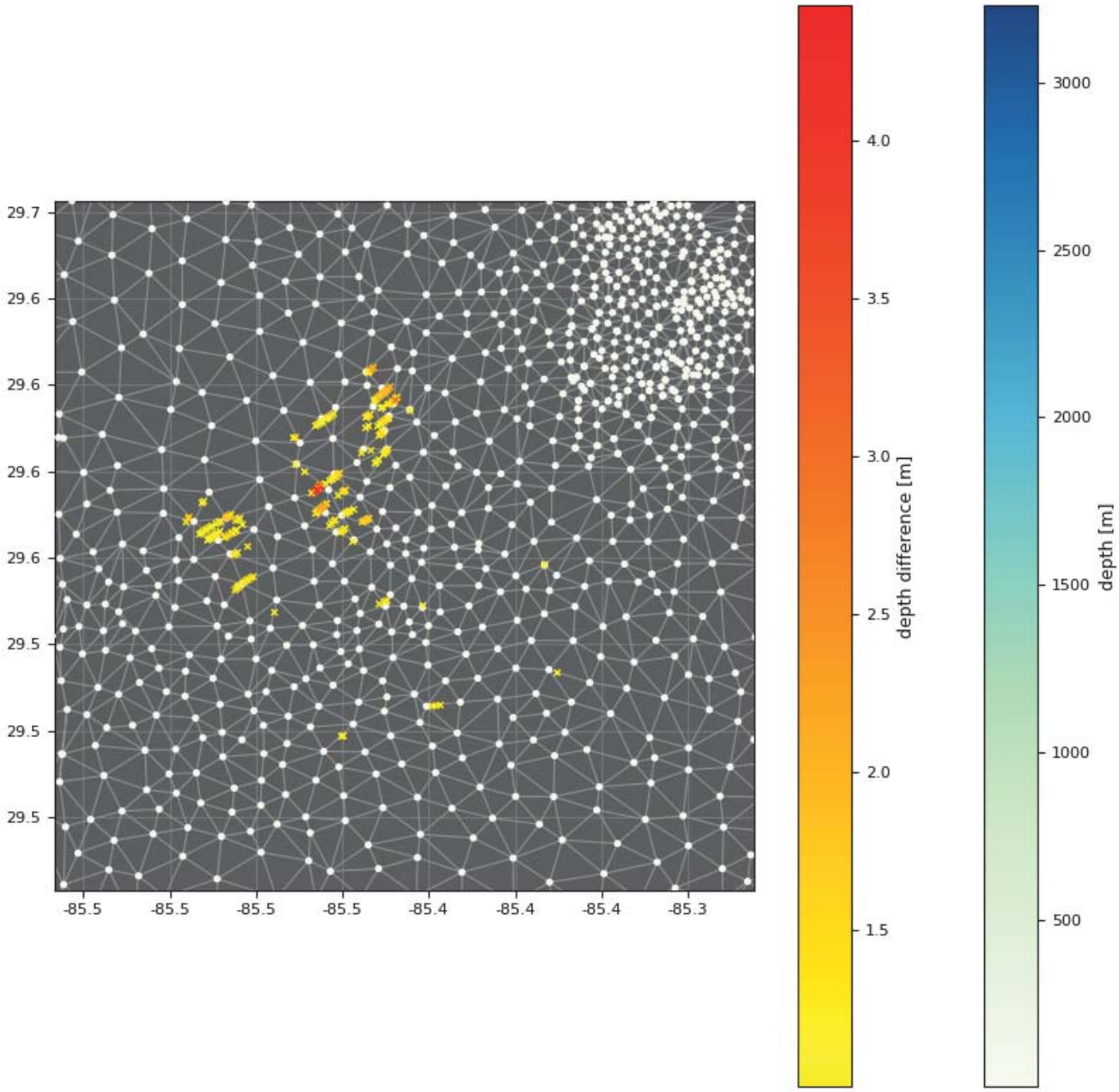

Figure 13: QC tools output instances of surveyed soundings shoal to charted soundings >1m.

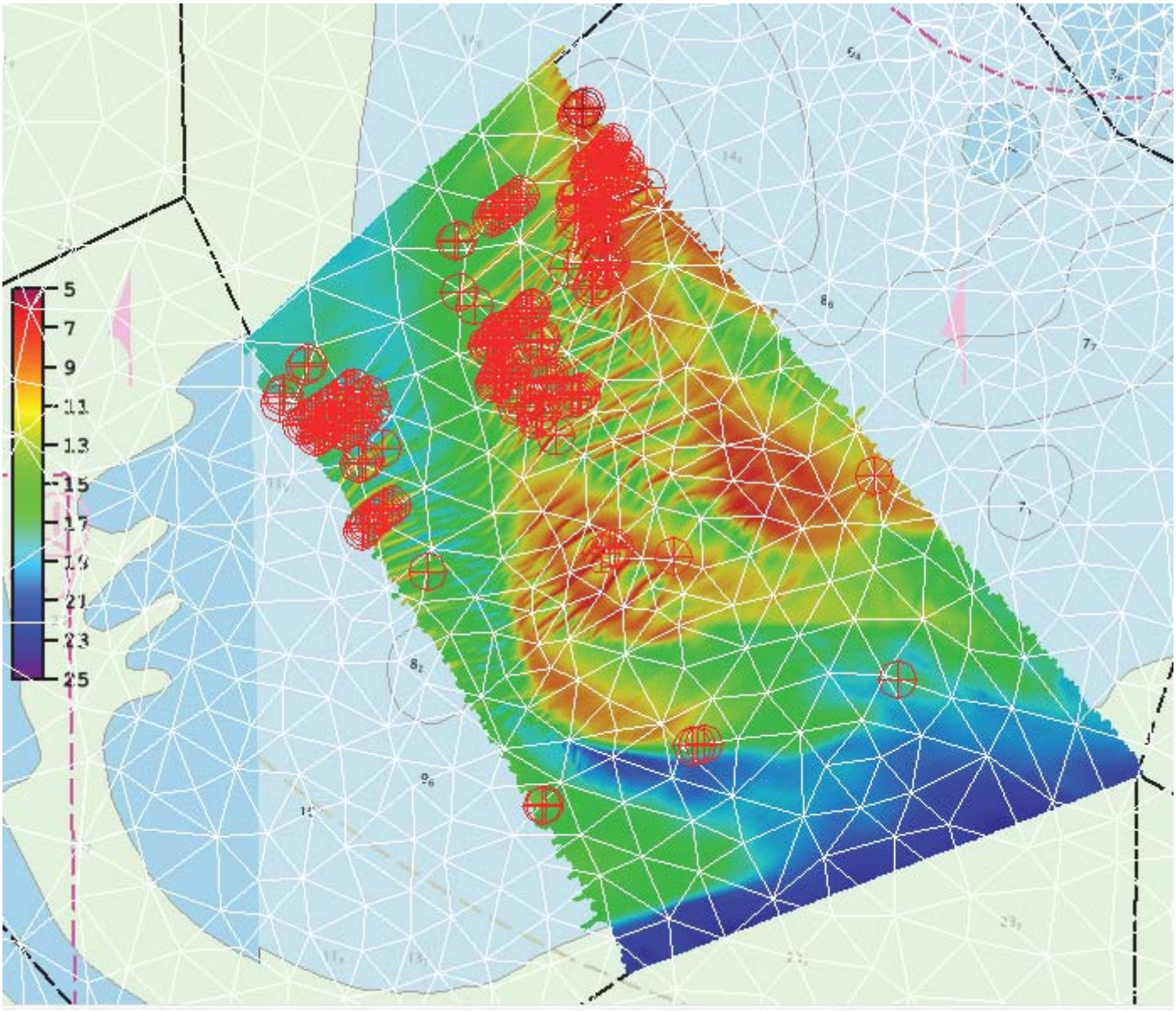

Figure 14: QC tools output instances of surveyed soundings shoal to charted soundings >1m over survey H13153 area with ENC soundings TIN.

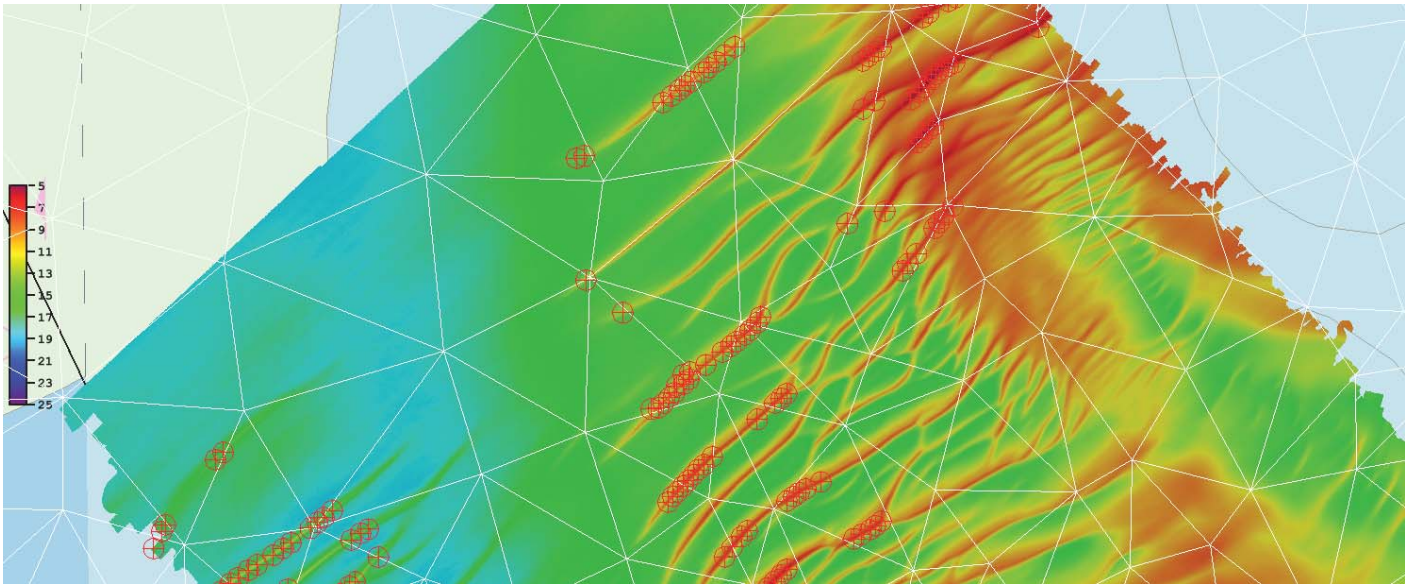

Figure 15: Changes between charted versus surveyed depths most frequently occurring along the crests of large sandwaves in the area.

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 5 bottom samples were acquired within the sheet limits of survey H13153 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 sand waves 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.

E. Approval Sheet

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

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

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

Approver Name	Approver Title	Approval Date	Signature
Dean R. Moyles	Chief of Party	04/08/2019	Moyles, Dean Digitally signed by Moyles, Dean DN: dc=com, dc=fugro, l=america, ou=fpi, ou=people, fpi, 0.9.2342.19200300.100.1.1=rmoyled, cn=Moyles, Dean, email=dmoyles@fugro.com Date: 2019.04.08 11:22:03 -02'30'

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 Staiton
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 Positiong 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"; "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

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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

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

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

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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

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN 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: Castle Parker - NOAA Federal
To: Starla Robinson - NOAA Federal
Cc: Briana Hillstrom - NOAA Federal; James Miller - NOAA Federal; Corey Allen - NOAA Federal; Edward Owens - NOAA Federal
Subject: RE: Weekly Report
Date: Monday, February 4, 2019 3:42:00 PM
Attachments: image001.png

Hello Starla,
I like your idea of submitting with the individual surveys, but keep separate in each survey in a directory named Post Hurricane XLN, and not merged in the final grid. If the post hurricane XLN were run over all the sheets and not acquired per individual sheets, the submission should be outside the individual surveys, and submitted in a separate directory.
Thanks for the opportunity to respond,
Gene

Castle Eugene Parker
NOAA Office of Coast Survey
Atlantic Hydrographic Branch
Hydrographic Team Lead / Physical Scientist
castle.e.parker@noaa.gov
office (757) 364-7472

From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>
Sent: Monday, February 4, 2019 2:26 PM
To: Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>
Cc: Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>; James Miller - NOAA Federal <james.j.miller@noaa.gov>; Corey Allen - NOAA Federal <corey.allen@noaa.gov>; Edward Owens - NOAA Federal <edward.owens@noaa.gov>
Subject: Re: Weekly Report

Hello Gene,

One last question on the submittal of the Hurricane Check lines: Would it be better to send them as separate crosslines in each project that are not merged in the final surface; or as a F#### Survey. They are currently the former.

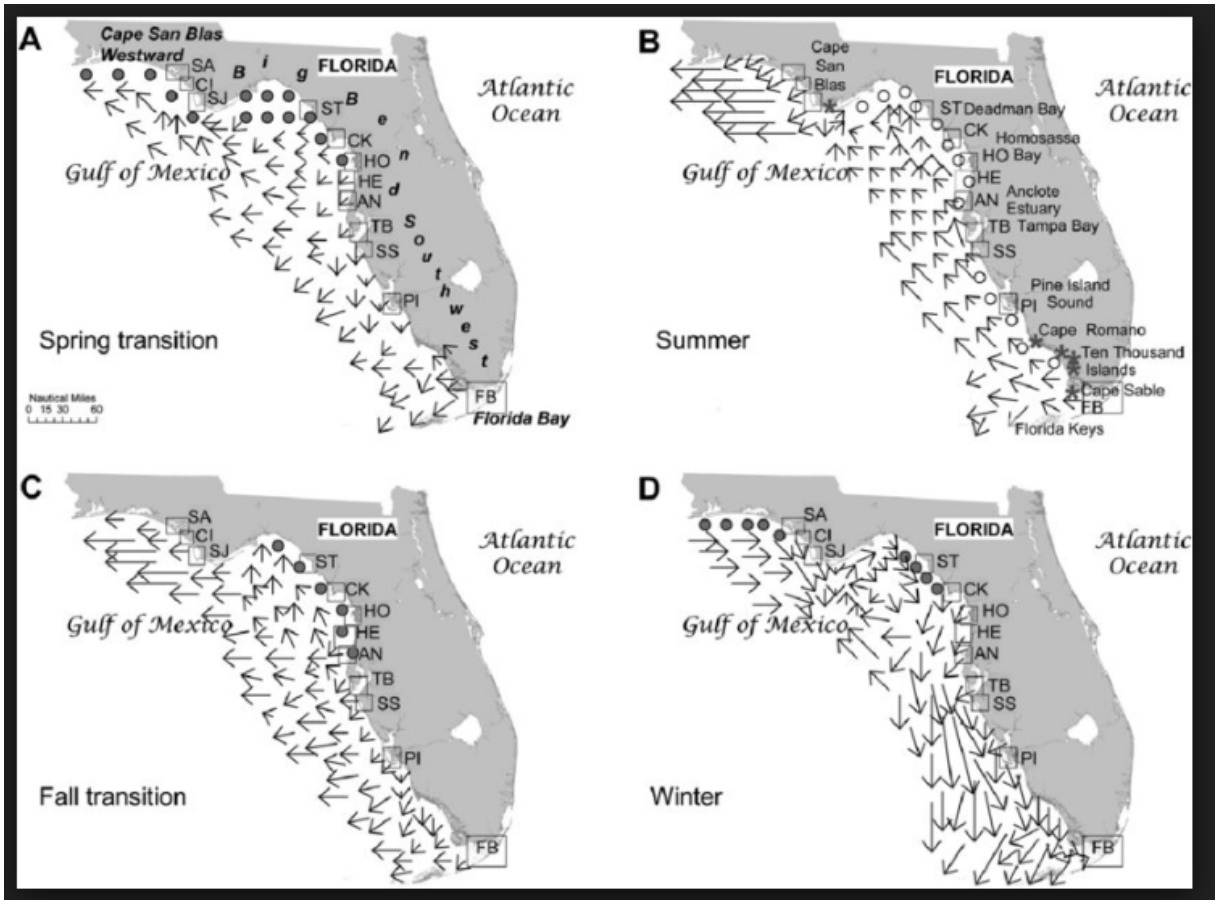
Thanks,
Starla

On Fri, Dec 7, 2018 at 11:19 AM Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> wrote:

> Hello Starla,
> I think the 5k XLN should give us confidence in the change of the sea floor. In most all the examples that we've seen, the post Michael effects reduced the amplitude of the peaks. Therefore the pre-storm data would be shoaler and that would be better with providing the mariner with the least amount of water, than the other way around if the post storm data was shoaler. Bearing in mind the natural occurrence of sand waves have tendency to migrate, the survey is only as good as it was the day the data was acquired. It is important for the DR to document the changes and define the changeable area. AHB will add sand wave polygons and caution areas during the SAR. I'm not sure that it would be prudent to res-survey the shoal area south of San Blas.
>
> Based upon the images, it appears that a lot of the grid area has consistency between the lines and trough areas. I don't think the horizontal shift of the sand waves is so great that it would warrant re-surveying the entire shoal area. This would be an extremely expensive survey, and truth be told, the sand waves will continue to migrate, more than likely back and forth due to the local meteorological events, and seasonal tidal flows.
>
> Researching the currents at Cape San Blas, sediment moves both ways, north and south. The bottom image indicates the current flow, and is cyclical. The winter months could very well migrate the peaks of the sand waves once again.
>
> Check out this FSU research: https://www.coaps.fsu.edu/pub/eric/papers_html/Todd_et_al_14.pdf
>
> https://www.doi.gov/sites/doi.gov/files/migrated/deepwaterhorizon/adminrecord/upload/St-Joseph-Bay-Aquatic-

Preserve-Management-Plan-September-2008-August-2018-Sept-2008.pdf

"The gulf coast falls within a moderate energy coastal area (Tanner, 1960), with average breaker heights of 4 to 20 inches. Waves traveling northward through the Gulf of Mexico are refracted clockwise around the Cape San Blas shoals in such a manner as to arrive nearly parallel to the beach. This results in a bidirectional littoral drift system which runs northward along the northern half of the spit and southward along the southern portion (Tanner, 1966)."



S0.02,
gp

Castle Eugene Parker
NOAA Office of Coast Survey
Atlantic Hydrographic Branch
Hydrographic Team Lead / Physical Scientist
castle.e.parker@noaa.gov
office (757) 364-7472

From: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>
Sent: Friday, December 7, 2018 9:49 AM
To: Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>; James Miller - NOAA Federal <james.j.miller@noaa.gov>
Subject: Fwd: Weekly Report

FYI: here is additional information on the sand waves in Apalachicola.

---------- Forwarded message ---------
From: **Moyles, Dean** <dmoyles@fugro.com>
Date: Thu, Dec 6, 2018 at 10:36 AM
Subject: RE: Weekly Report
To: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>
Cc: Corey Allen - NOAA Federal <corey.allen@noaa.gov>, Stacy Fullerton - NOAA Federal <stacy.fullerton@noaa.gov>

Starla, here are some examples of the shifting sand waves that we've seen on other occasions. Not nearly as dramatic as Hurricane Michael, but certain areas have a very dynamic bottom.

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: Monday, December 03, 2018 10:03 AM
To: Moyles, Dean <dmoyles@fugro.com>
Cc: Corey Allen - NOAA Federal <corey.allen@noaa.gov>; Stacy Fullerton - NOAA Federal <stacy.fullerton@noaa.gov>
Subject: Re: Weekly Report

Thank you Dean,

In our last call you mentioned that the field has observed sand wave migration associated with normal storm activity. Could you send an account discussing the horizontal and vertical changes observed over time. We may be able to use it to determine what level of surveying we need to support the chart.

Thanks,
Starla

On Mon, Dec 3, 2018 at 6:30 AM Moyles, Dean <dmoyles@fugro.com> wrote:

> Let me know if you have any questions.
>
> 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

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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

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Starla D. Robinson, Physical Scientist
NOS - OCS - Hydrographic Survey Division - Operations Branch
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Starla D. Robinson, Physical Scientist
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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

APPROVAL PAGE

H13153

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
- Collection of Backscatter mosaics

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: MCGOVERN.MEGHAN.ELIZABETH.1284020495 Digitally signed by MCGOVERN.MEGHAN.ELIZABETH.1284020495 Date: 2020.03.13 17:49:25 -04'00'

Commander Meghan McGovern, NOAA
Chief, Atlantic Hydrographic Branch