F00838

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

DESCRIPTIVE REPORT

Type of Survey:	Natural Disaster Response
Registry Number:	F00838

LOCALITY

State(s):	Louisiana
General Locality:	Port Fourchon
Sub-locality:	Port Fourchon and Belle Pass

2021

CHIEF OF PARTY
LCDR Charles Wisotzkey

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

F00838

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):	**Louisiana**
General Locality:	**Port Fourchon**
Sub-Locality:	**Port Fourchon and Belle Pass**
Scale:	**20000**
Dates of Survey:	**09/01/2021 to 09/04/2021**
Instructions Dated:	**08/31/2021**
Project Number:	**S-K921-NRTST-21**
Field Unit:	**NOAA Navigation Response Team - Stennis**
Chief of Party:	**LCDR Charles Wisotzkey**
Soundings by:	**Kongsberg Maritime EM 2040C (MBES)**
Imagery by:	**EdgeTech 4125 (SSS)**
Verification by:	**Pacific 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 15N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.

DESCRIPTIVE REPORT SUMMARY

A. Area Surveyed

This hydrographic survey was acquired in accordance with the requirements defined in the Project Instruction S-K921-NRRTST-21.

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 8' 44.17" N 90° 13' 19.04" W	29° 5' 13.42" N 90° 13' 30.33" W

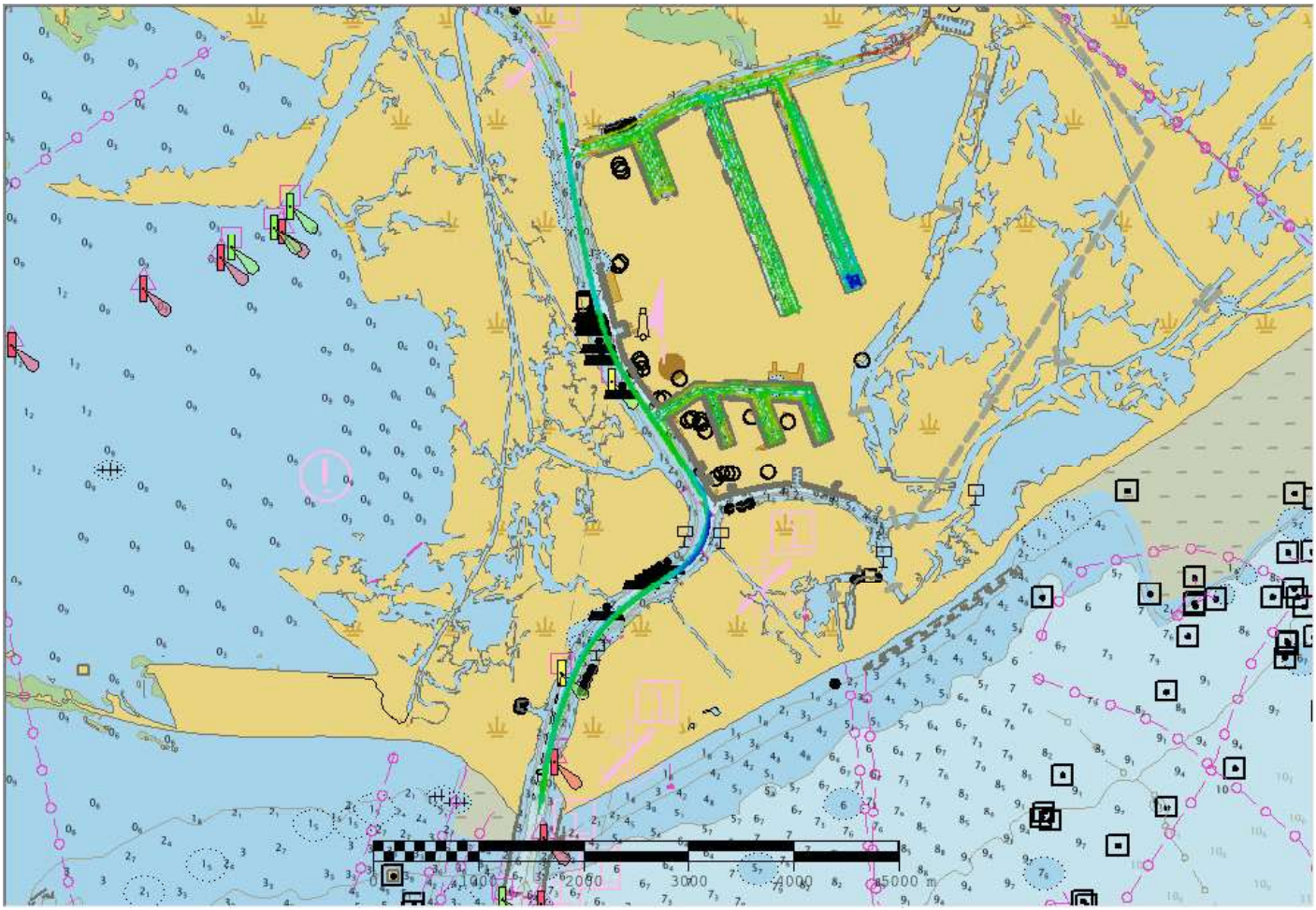

Figure 1: Overview of survey extents.

B. Survey Purpose

The purpose of this survey is in response to a USACE request for an emergency hydrographic surveys for Port Fourchon and Bayou Lafourche, due to the effects of Hurricane Ida. Survey data from this project is intended to supersede all prior survey data in the common area.

C. Intended Use of Survey

The entire survey is adequate to supersede previous data.

Data collected in Bayou Lafourche starting at 29-08-45.619N 090-13-19.968 continuing north, data collected in Havoline Channel, as well as that collected in Old Pass Fourchon, are not appropriate for updating soundings. These channels were run with only 1 to 2 lines of MBES and SSS imagery. The field unit's purpose for data acquisition in these areas was for debris/object detection and reconnaissance. For this reason the survey was split into two new sheets, and new PI's were issued.

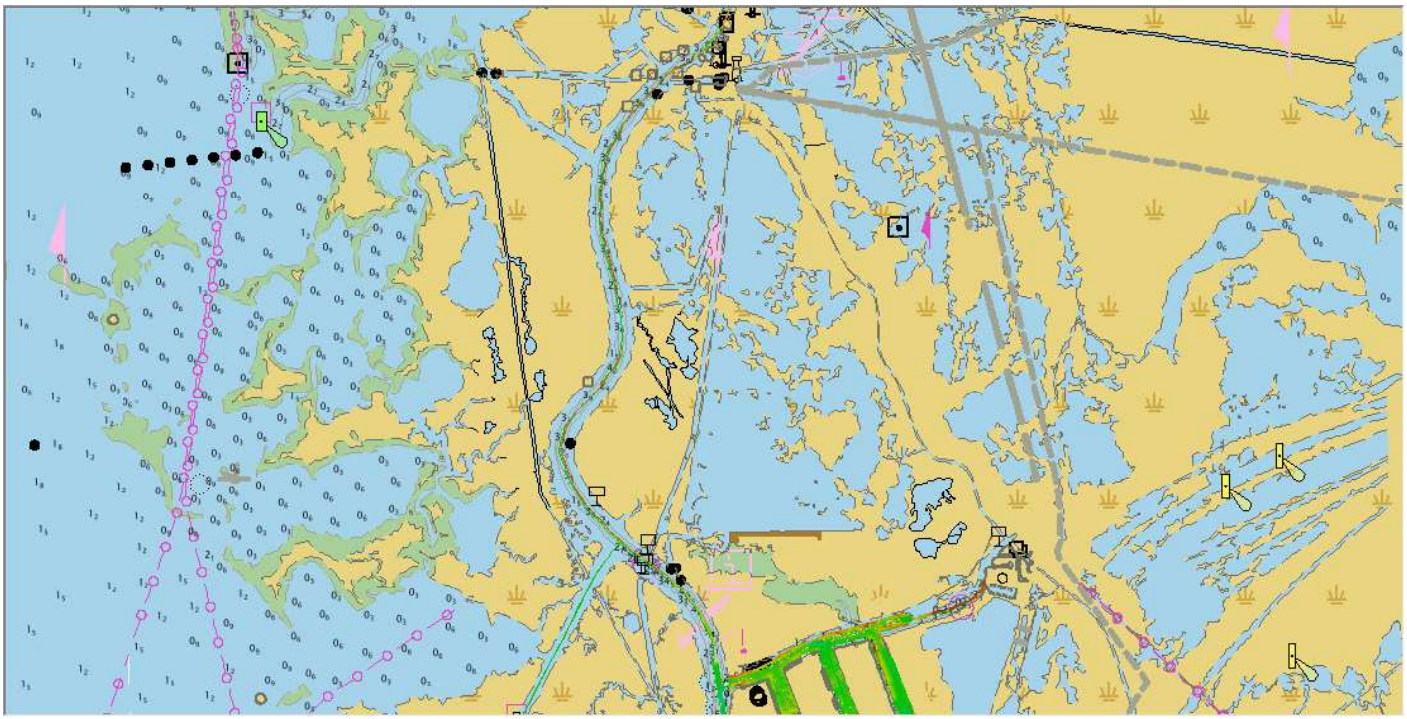

Figure 2: Overview of Bayou Lafourche.

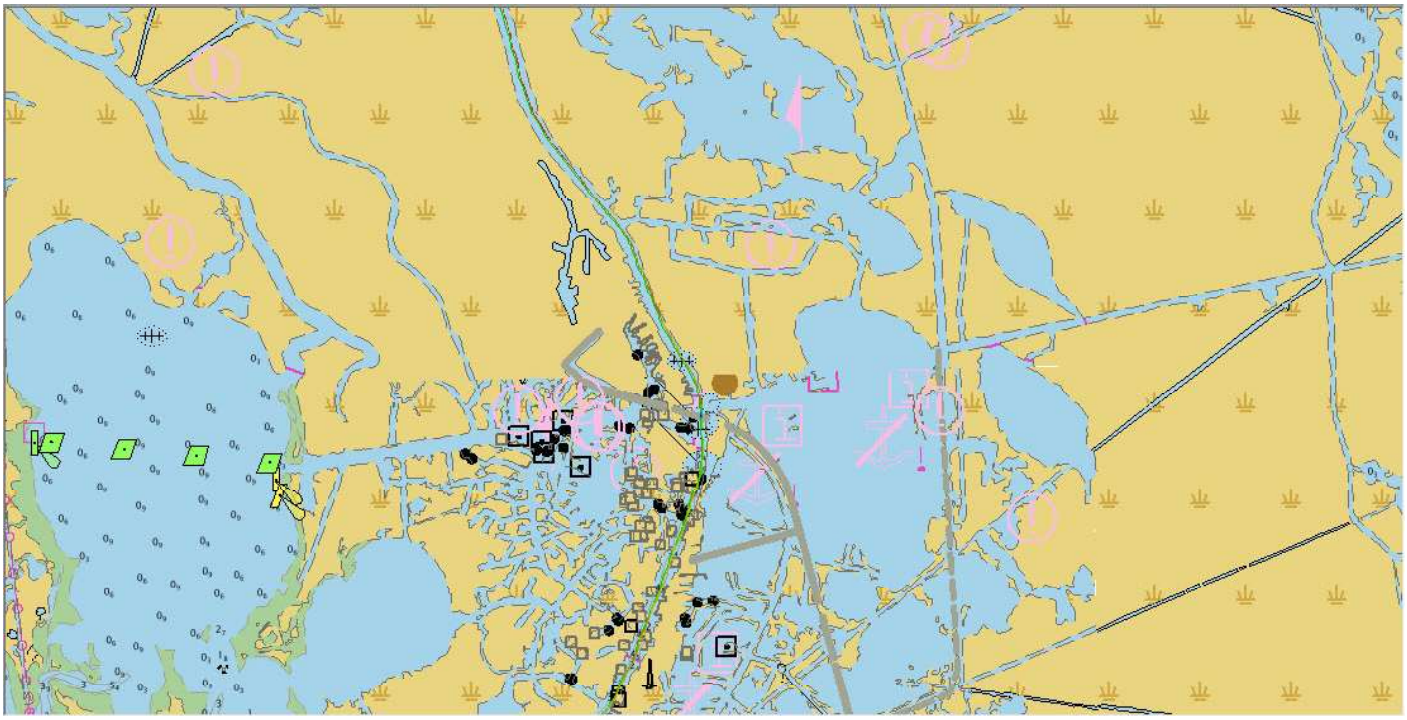

Figure 3: Overview of Bayou Lafourche.

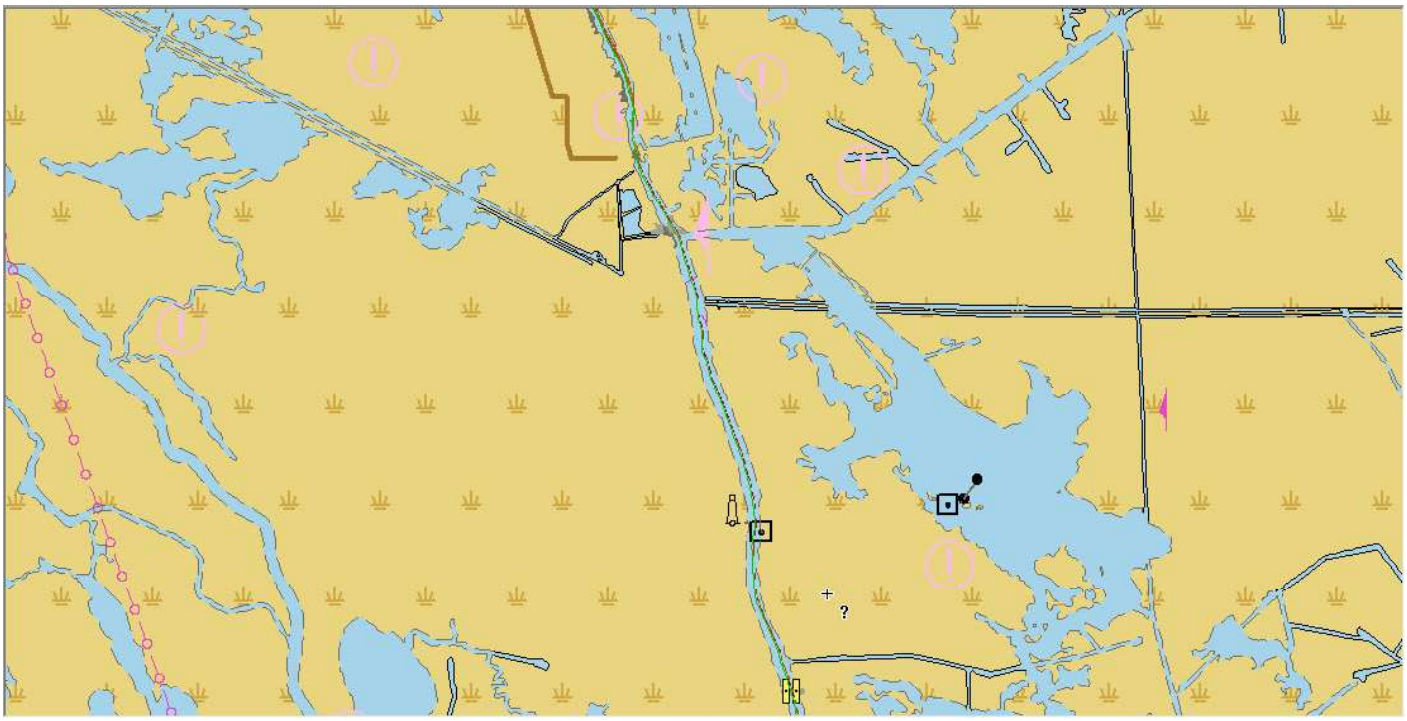

Figure 4: Overview of Bayou Lafourche.

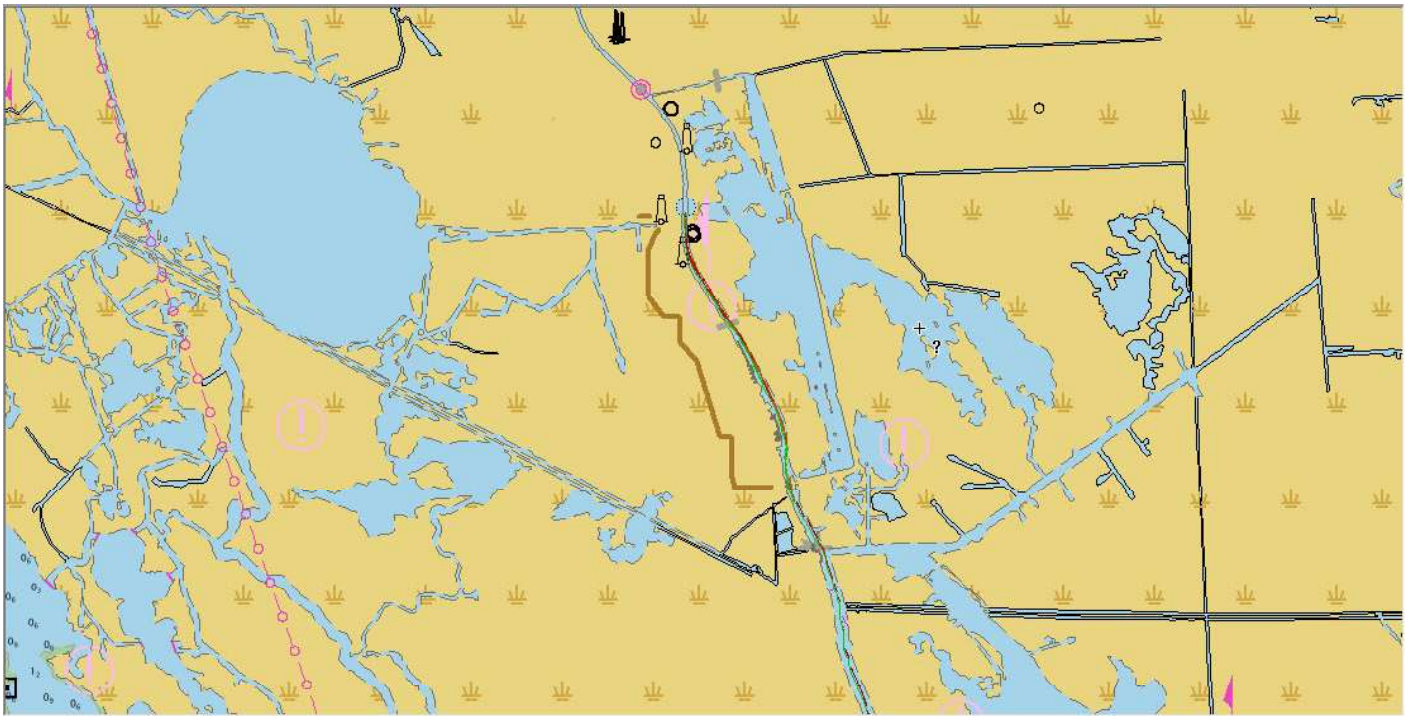

Figure 5: Overview of Bayou Lafourche.

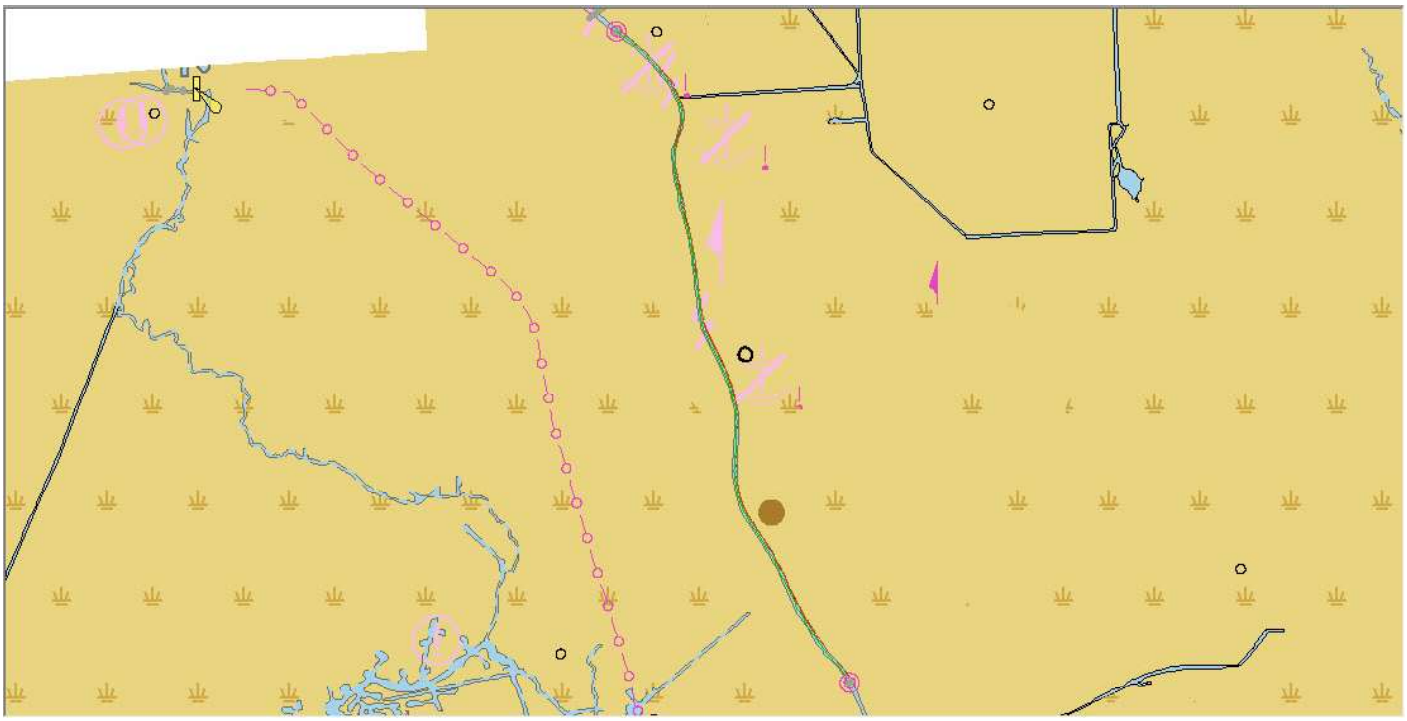

Figure 6: Overview of Bayou Lafourche.

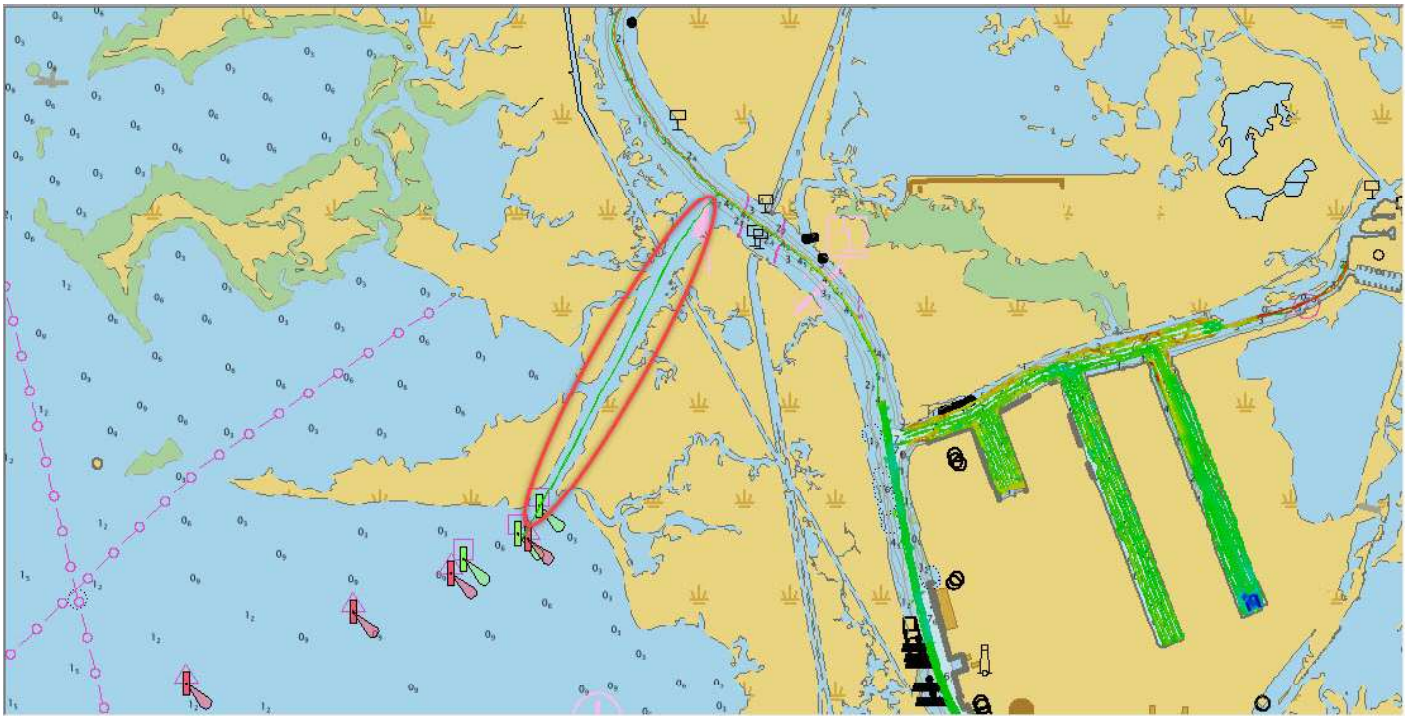

Figure 7: Overview of Havoline Channel.

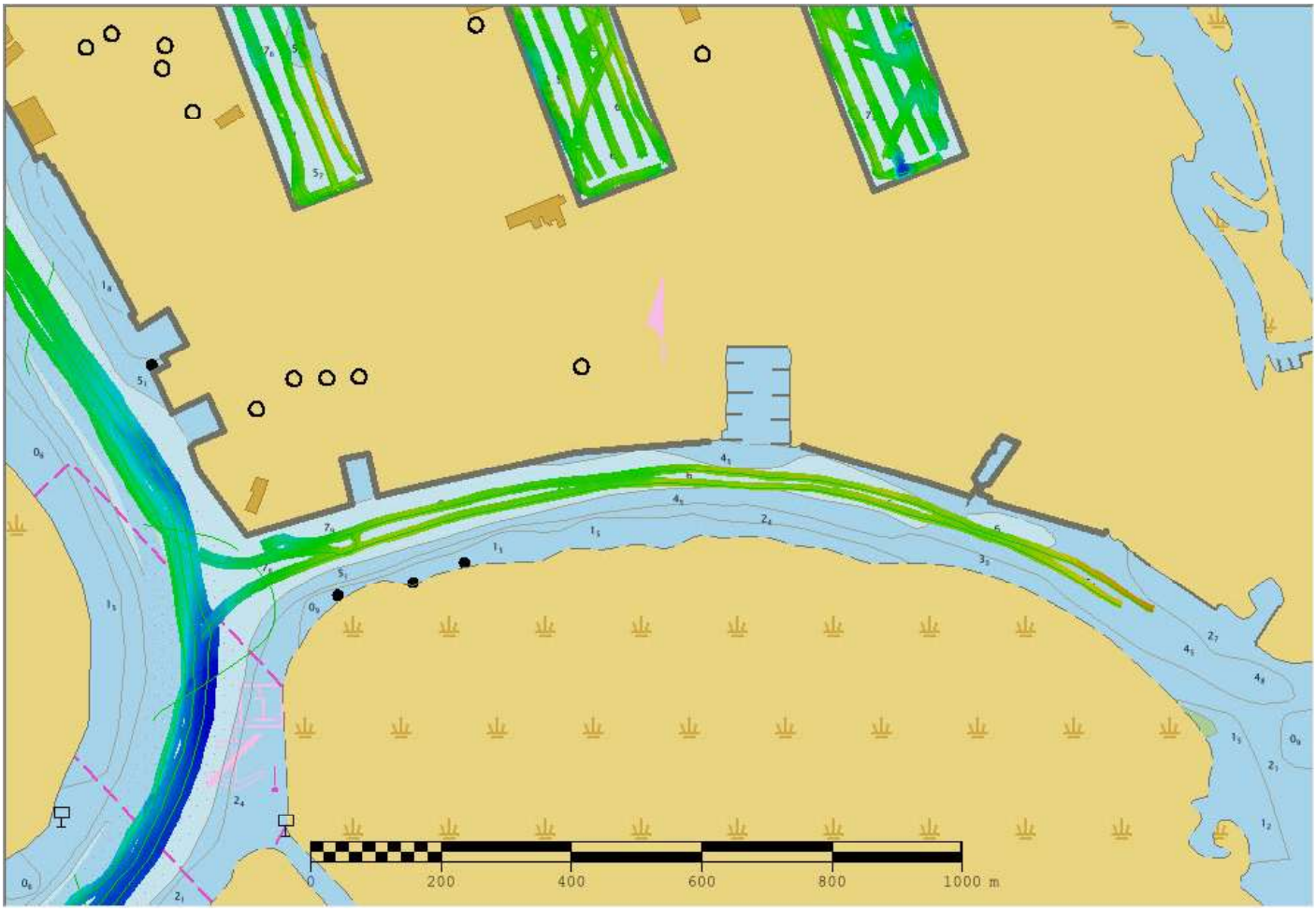

Figure 8: Overview of Old Pass Fourchon.

D. Data Acquisition and Processing

Refer to the S-K921-NRTST-21 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.

E. Uncertainty

In addition to the usual a priori estimates of uncertainty provided via device models for vessel motion, VDatum, real-time and post-processed uncertainty sources were also incorporated into the depth estimates of survey F00838. Real-time uncertainties were provided via MBES data and Applanix Delayed Heave RMS. Following post-processing of the real-time vessel motion, recomputed uncertainties of vessel GPS height and

navigation were applied in CARIS HIPS and SIPS via a Smoothed Best Estimate of Trajectory (SBET) RMS file generated in Applanix POSPac.

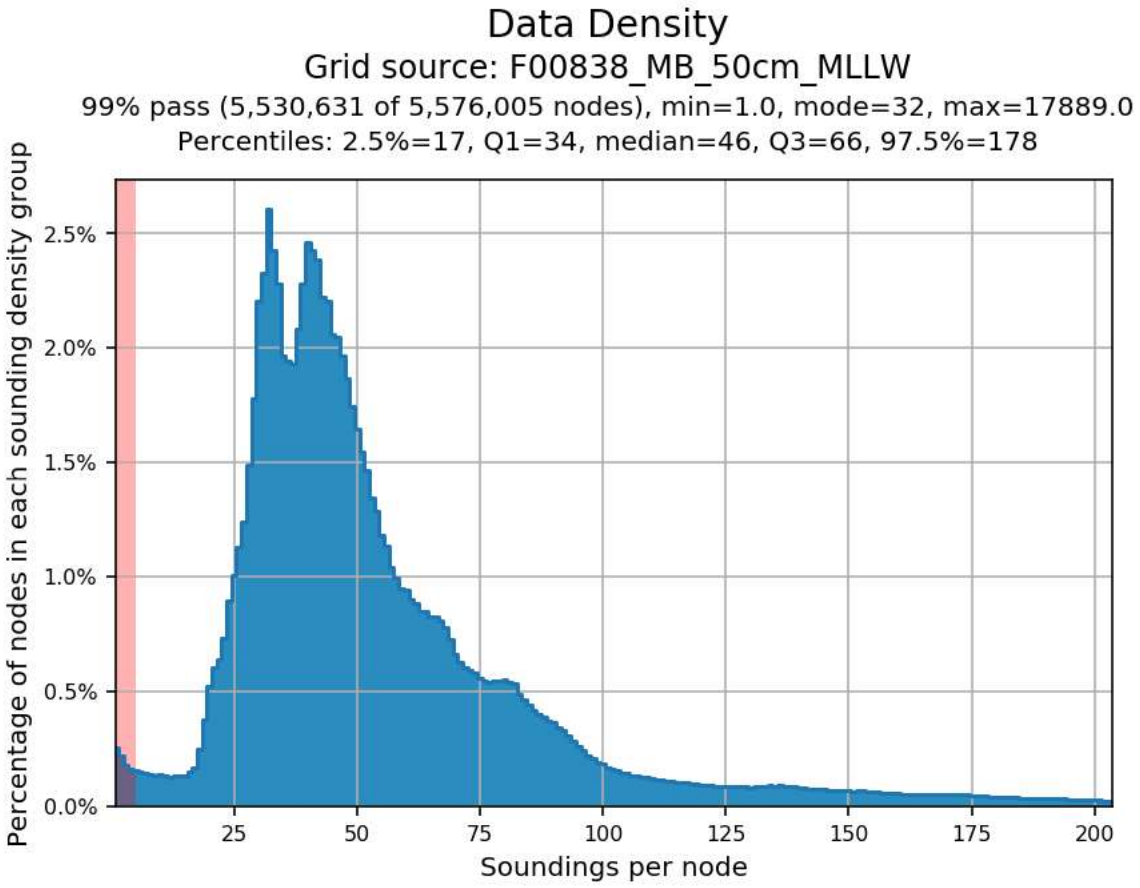

Figure 9: Data density

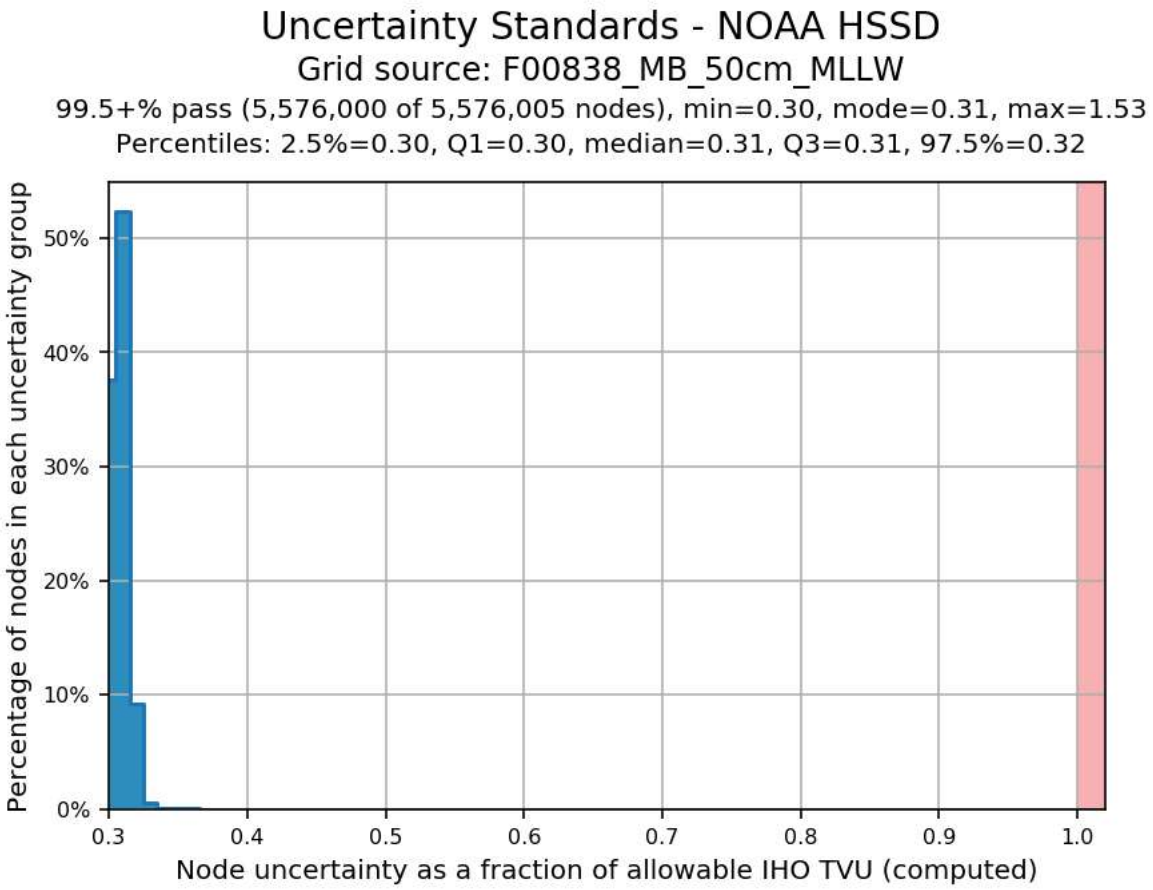

Figure 10: NOAA HSSD TVU

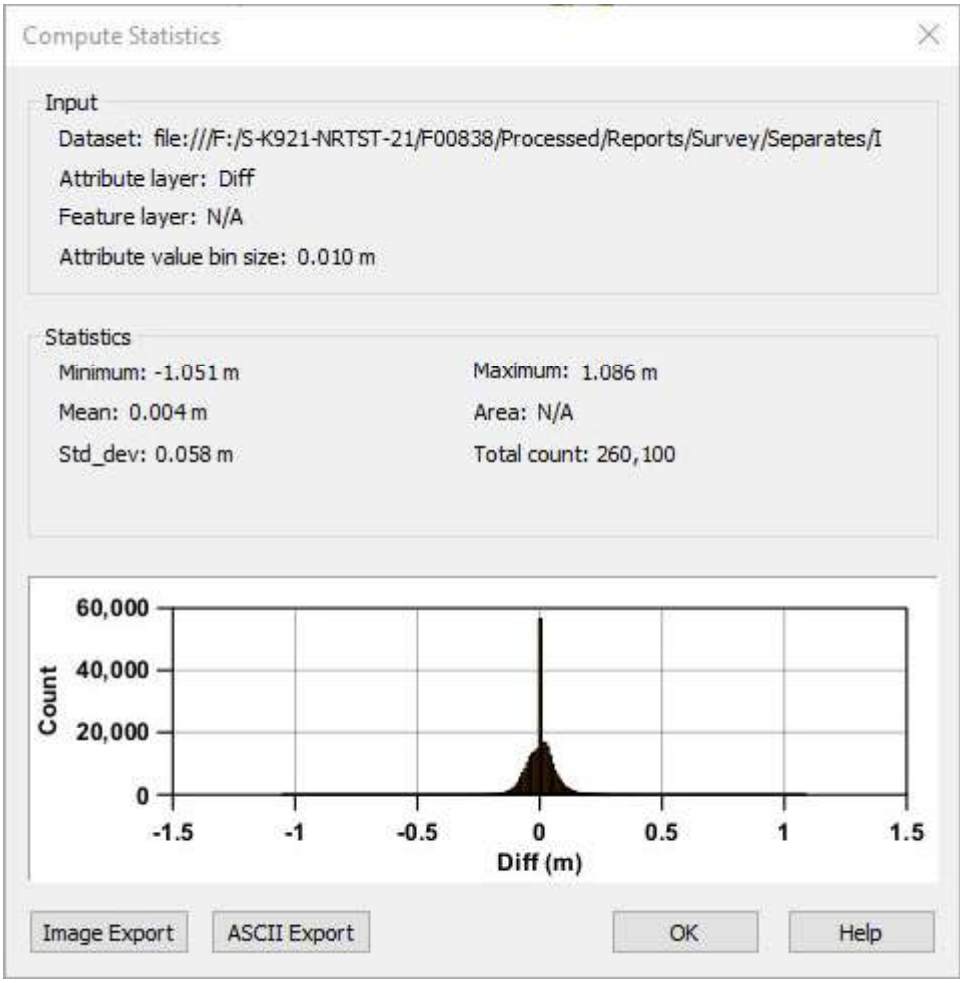

Figure 11: Mainscheme vs. Crossline statistics

F. Results and Recommendations

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

ENC	Scale	Edition	Update Application Date	Issue Date
US5LA26M	1:40000	39	01/04/2022	01/04/2022
US5LA27M	1:40000	18	10/25/2021	11/26/2021
US5LA38M	1:50000	23	02/19/2021	07/06/2021

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

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
F00838_MB_50cm_MLLW	CARIS Raster Surface (CUBE)	0.5 m	0.68 m - 13.401 m	NOAA_0.5m	MBES Set Line Spacing
F00838_SSSAB_1m_400kHz_1of2	SSS Mosaic	1 m	N/A	N/A	100% SSS
F00838_SSSAB_1m_400kHz_2of2	SSS Mosaic	1 m	N/A	N/A	200% SSS

All soundings are adequate to update the chart where applicable. There are no discrepancies or possible DToNs within the main channel of Belle Pass. Existing charted depths within Port Fourchon are a combination of channel depth ranges and averaged individual soundings. All survey soundings are within the depth ranges provided by the ENCs. Where discrepancies arise are with those compared to the individual ENC soundings, differences generally within 1-2 feet of those charted. Possible flagged DToNs have been inspected and are either within the charted depth ranges, only varying against individual soundings, or those over features that have been present to Port Fourchon and Nav Manager via Emergency Response Products.

G. Vertical and Horizontal Control

The vertical datum for this project is Mean Lower Low Water. The vertical control method used was ERZT.

N/A

The horizontal datum for this project is North American Datum of 1983 (NAD 83). The projection used for this project is Universal Transverse Mercator (UTM) Zone 15.

N/A

H. Additional Results

Objects & Features

The purpose of a majority of these surveyed areas was for object detection and reconnaissance. Objects identified were scanned and assigned by SSS Contact attribution and export , compiled into an XYZ ASCII data set and handed to the USACE as well as the Chief of Port Fourchon as part of our daily Emergency Response Products (see Public Relations Constituent Products). Debris located in the field and those after

QC and QA were to be removed by USACE or Port Fourchon as these active commercial areas. None are intended to remain or be charted. Follow up meetings with USACE and Port Fourchon are planned to confirm and verify the state of that process.

I. Approval

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 Survey Summary 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, Standing and Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Survey Summary Report.

Approver Name	Title	Date	Signature
LCDR Charles Wisotzkey	Chief of Party	02/10/2022	WISOTZKEY.CHARLES.JUSTIN.1300819660 Digitally signed by WISOTZKEY.CHARLES.JUSTIN.1300819660 Date: 2022.04.01 14:33:30 -05'00'
Alex C Ligon	Sheet Manager	02/10/2022	Digitally signed by LIGON.ALEX.C.1061008507 Date: 2022.04.18 10:36:18 -05'00'