D00251

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	D00251

LOCALITY

State(s):	South Carolina
General Locality:	Murrells Inlet
Sub-locality:	Murrells Inlet

2018

CHIEF OF PARTY
Alex Ligon

LIBRARY & ARCHIVES

Date:

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

D00251

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):	**South Carolina**
General Locality:	**Murrells Inlet**
Sub-Locality:	**Murrells Inlet**
Scale:	**10000**
Dates of Survey:	**09/17/2018 to 09/17/2018**
Instructions Dated:	**09/17/2018**
Project Number:	**S-G947-NRT1-18**
Field Unit:	**Navigation Response Team 1**
Chief of Party:	**Alex Ligon**
Soundings by:	**Teledyne Odom Hydrographic CV100** (**SBES**)
Imagery by:	**EdgeTech 4125** (**SSS**)
Verification by:	**Pacific Hydrographic Branch**
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

The purpose of this survey is to investigate navigable waterways following a hurricane. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via http://www.ncei.noaa.gov/.

DESCRIPTIVE REPORT MEMO

February 13, 2019

MEMORANDUM FOR: Pacific Hydrographic Branch

FROM: Alex Ligon
Physical Science Technician NRT 1 , NOAA OCS NRB

LIGON.ALEX.C.1061008507 Digitally signed by LIGON.ALEX.C.1061008507 Date: 2019.10.17 09:35:57 -04'00'

SUBJECT: Submission of Survey D00251

The purpose of this survey is to respond to a USCG request for hydrographic survey to reopen the channel at Murrells Inlet, due to the effects of Hurricane Florence.

PDFs containing full SSS mosaic coverage with an overlaid TIN model, as well as a sounding plot overlaid on the TIN model highlighting areas of shoaling, were submitted to Navigation Response Branch.

Soundings were reduced to Mean Lower Low Water (MLLW) using observed tides from stations 8661070 and 8662245. They were applied to TCARI file G948NRT12018.tc. and loaded directly to the HDCS data using Pydro GIS. The TCARI File was provided by HSD Ops as appendices to the Project Instructions

All survey systems and methods utilized during this survey were as described in S-G948-NRT-18_DAPR.

There were no DTONs created for this survey.

All data were acquired by a NOAA or NOAA Contractor field unit

NRB passed these products along with explanations to United States Army Corps of Engineers and NOAA's Marine Charting Division. Shoaling was found in Murrells Inlet in the designated channel at Lat 33-31-55.64N Long 079-02-09.50W, and Lat 33-31-54.98N Lat 079-02-08.58W. Knowledge of this shoal existed locally and to USACE and was not taken up by MCD.

No significant contacts were found in this survey.

This survey does meet charting specifications and is adequate to supersede prior data. In reference to, and to expand on the DAPR submitted with this report, the following are being addressed: Sound Velocity casts, Dynamic Draft Model, and Vessel Offsets. No Sound Velocity casts were taken in realtime due to the field unit not having access to a CTD unit. The MIST's Castaway CTD was out for calibration at the time after having been on loan to another Navigation Response Team. Although the data lacks a sound velocity correction from a real time sample, a model has been applied. The field unit finds this acceptable as data were acquired with a SBES which is highly tolerant of SV anomalies due to the narrow angle of the unit's 8 degree beam angle, and the shallow nature of the survey area. Due to time constraints, and no POS/MV IMU,

a Dynamic Draft model was not acquired. While this may have the greater affect on survey data confidence, vessel speeds were maintained to approximately 4.5-5kts. At this speed the vessel demonstrated very little, to no, squatting characteristics. There was also very little sea state while surveying, with the exception of the mouth of the jetty, which we halted at and did not complete the coverage in this portion of the survey area. Although the team was unable to perform a full vessel and offset survey using NOAA's preferred methods in coordination with NGS, the team's method for verifying the offset measurements was the best option available due to the rapid moving timeline during storm response. Taking these factors into consideration, the field unit suggests to still chart the data, but with a CATZOC A2 value. This section of Murrels Inlet had not been surveyed since 1969. Any data collected should supersede the prior charted information.

Metadata for Survey D00251	
Project	S-G948-NRT1-18
Survey	D00251
State	South Carolina
Locality	Murrells Inlet
Sub-Locality	Murrells Inlet
Scale of Survey	1:10000
Sonars Used	Teledyne Odom Hydrographic CV100 (Singlebeam Echosounder) EdgeTech 4125 (Sidescan Sonar)
Horizontal Datum	North American Datum 1983
Vertical Datum	Mean Lower Low Water
Vertical Datum Correction	TCARI
Projection	Projected UTM 17
Field Unit	Navigation Response Team 1
Survey Dates	09/17/2018
Chief of Party	Alex Ligon
Submission Date	02/14/2019

APPROVAL PAGE

D00251

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
- Collection of Bathymetric Attributed Grids (BAGs)
- Collection of backscatter mosaics
- Processed survey data and records
- GeoPDF of survey products

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:  Digitally signed by HOLMBERG.PETER.SCOTT.1365886101 Date: 2020.01.08 13:21:03 -08'00'

Peter Holmberg
Acting Chief, Pacific Hydrographic Branch