W00579

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	W00579

LOCALITY

State(s):	Louisiana
General Locality:	Weeks Bay
Sub-locality:	South of Bayou Carlin

2013

CHIEF OF PARTY
Nancy T. DeWitt

LIBRARY & ARCHIVES

Date:

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

W00579

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:	**Weeks Bay**
Sub-Locality:	**South of Bayou Carlin**
Scale:	**10000**
Dates of Survey:	**01/14/2013 to 01/18/2013**
Instructions Dated:	**09/20/2021**
Project Number:	**ESD-PHB-21**
Field Unit:	**US Geological Survey**
Chief of Party:	**Nancy T. DeWitt**
Soundings by:	**Knudsen Engineering 320M (SBES)**
Imagery by:	**N/A**
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 MEMO

September 20, 2021

MEMORANDUM FOR: Pacific Hydrographic Branch

FROM: Report prepared by PHB on behalf of field unit
Nancy T. DeWitt
Principle Investigator, United States Geological Survey

SUBJECT: Submission of Survey W00579

The low-lying marshlands along the northern coast of Vermillion Bay and Weeks Bay in southwest Louisiana are expansive, extending 5 to 10 kilometers (km) landward from the coast. Because of the low-relief coastal environment, topographic gradients are generally small, and landforms are susceptible to rapid-water level changes, such as from storm surge, sea-level rise, land subsidence, or any combination of the three. Within this expansive marshland numerous industries could be impacted from any one of these potentially catastrophic events. To further understand how these dynamic environments behave, high-resolution coastal topography and bathymetry are needed to predict inundation, assess coastal vulnerability, and to assist in conservation and restoration efforts. Traditional boat-based bathymetric surveys are required in the highly turbid waters along the coast of southwest Louisiana.

A team of scientists from the U.S. Geological Survey, St. Petersburg Coastal and Marine Science Center collected single-beam bathymetry data in the tidal creeks, bayous, and coastal areas near Weeks Bay, southwest Louisiana. Limited bathymetry data exist for these tidally and meteorologically influenced shallow-water estuarine environments. In order to reduce the present knowledge gap, the objectives of this study were to (1) develop methods for regional inland bathymetry mapping and monitoring, (2) test inland bathymetry mapping system in pilot locations for integrating multiple elevation (aerial and terrestrial lidar) and bathymetry datasets, (3) implement inland bathymetry mapping and monitoring in highly focused sites, and (4) evaluate changes in bathymetry and channel-fill sediment storage using these methods.

A 4-meter grid was created for data archival and charting purposes.

All soundings were reduced to Mean Lower Low Water using VDatum. 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.

All soundings were shifted from NAVD88 to MLLW using a set value of 0.1 meters based on the nearest values VDatum provided as the difference between NAVD88 and MLLW.

All survey systems and methods utilized during this survey are described in the report "13CCT01 Metadata" available at the URL below.

All data were reviewed for DTONs and none were identified in this survey.

United States Geological Survey acquired the data outlined in this report. Data are available at https://dx.doi.org/10.3133/ds835. Additional documentation from the data provider may be attached to this report.

This survey does meet charting specifications and is adequate to supersede prior data.

APPROVAL PAGE

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The survey data meet or exceed the current requirements of the Office of Coast Survey hydrographic data review process and may be used to update NOAA products. The following survey products will be archived at the National Centers for Environmental Information:

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Geospatial PDF of survey products

Approved: 

James Miller
Chief (acting), Pacific Hydrographic Branch