

**W00470**

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

**DESCRIPTIVE REPORT**

Type of Survey: Basic Hydrographic Survey

Registry Number: W00470

**LOCALITY**

State(s): Michigan

General Locality: Lake Huron

Sub-locality: Thunder Bay National Marine Sanctuary

**2019**

CHIEF OF PARTY  
Stephanie Gandulla

LIBRARY & ARCHIVES

Date:

**HYDROGRAPHIC TITLE SHEET**

**W00470**

**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): **Michigan**

General Locality: **Lake Huron**

Sub-Locality: **Thunder Bay National Marine Sanctuary**

Scale: **40000**

Dates of Survey: **05/06/2019 to 05/15/2019**

Instructions Dated: **N/A**

Project Number: **ESD-PHB-19**

Field Unit: **NOAA R/V Storm**

Chief of Party: **Stephanie Gandulla**

Soundings by: **Kongsberg Maritime EM 2040C (MBES)**

Imagery by: **Kongsberg Maritime EM 2040C (MBES Backscatter)**

Verification by: **Pacific Hydrographic Branch**

Soundings Acquired in: **meters at Low Water Datum IGLD-1985**

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 WGS84 UTM 17N, LWD [IGLD85]. 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

June 04, 2019

**MEMORANDUM FOR:** Pacific Hydrographic Branch

**THROUGH:** Stephanie Gandulla  
Lead Scientist, Thunder Bay National Marine Sanctuary

**FROM:** Clinton Marcus  
Physical Scientist, Atlantic Hydrographic Branch

**SUBJECT:** Submission of Survey W00470

The project will map priority areas of the 4,300 square mile Thunder Bay National Marine Sanctuary (TBNMS) with multibeam sonar on the R/V Storm from TBNMS. The acquired baseline information will support ongoing exploration and management of this important area.

Processed data and bathymetric grids were provided to the Office of Coast Survey (OCS) to be reviewed for chart application and archived at the National Centers for Environmental Information (NCEI). Backscatter data were provided to the National Centers for Coastal Ocean Science (NCCOS) for interpretation and analysis.

All soundings were reduced to Low Water Datum IGLD-1985 using VDatum. The horizontal datum for this project is World Geodetic System (WGS) 1984. The projection used for this project is Universal Transverse Mercator (UTM) Zone 17.

Soundings were reduced to the Low Water Datum-IGLD 1985 using a VDATUM separation model provided by NOAA Hydrographic Systems and Technology Branch (HSTB).

The NOAA research vessel Storm was the platform for this survey. MBES data was logged in Kongsberg .all format. Sound velocity casts were conducted approximately every 4 hours during survey operations using a SonTek CastAway-CTD device. Efforts were taken to distribute the casts evenly throughout the survey area. The MBES data was processed and evaluated using CARIS HIPS and SIPS and Fledermaus FMGT and the Hydro Office QC Tools suite. For more information, reference the EM2040C RV Storm Installation Memorandum included with this survey.

There were no DTONs created for this survey.

Thunder Bay National Marine Sanctuary acquired the data outlined in this report. 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.