

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT LA1502G-CM-T

Houma Navigation Canal, Bayou Provost to Houma, Louisiana

Introduction

NOAA Coastal Mapping Program (CMP) Project LA1502G-CM-T provides accurate digital shoreline data for a portion of the Houma Navigation Canal, extending from Bayou Provost northward to Houma, Louisiana. Project LA1502G-CM-T is a sub-project of a larger acquisition project, LA1502-CM-T, which includes the majority of Terrebonne and Timbalier Bays as well as several key bayous extending northwards toward Houma. The Geographic Cell (GC) can be used to complement the Nautical Charting Program (NCP) as well as geographic information systems (GIS) for a variety of coastal zone management applications.

Project Design

Project LA1502-CM-T was designed per a request from the Office of Coast Survey, NOAA, for general update of charted shorelines in the vicinity of Terrebonne and Timbalier Bays, Louisiana. Based on an analysis of project requirements and results of a source data search, it was determined that CMP procedures for multiple source projects would apply for this project. Available source data deemed adequate for successful completion of this project included sources acquired from October and November of 2015.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project source data.

Aerotriangulation

The aerotriangulation (AT) task was initiated by Remote Sensing Division (RSD) personnel in April 2016 utilizing a Digital Photogrammetric Workstation (DPW), which is a configuration of computer hardware, modular software components and other associated peripheral devices. The image files were imported into SOCET SET (SS, version 5.6) using the DataThruWay (version 5.6) software extension. The import process converted the stored compressed files to the National Imagery Transmission Format (NITF version 2.1) with headers and metadata. AT procedures were accomplished using the Multi-Sensor Triangulation (MST) module of SS. The Automatic Point Measurement algorithm within MST was used to collect tie points, and a simultaneous solve adjustment was then performed. The predicted horizontal circular error, using all measured image points, was computed to be 5.8 meters at the 95% confidence level. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was initiated by RSD in August of 2018. The digital mapping was performed using a DPW in conjunction with the SOCET SET Feature Extraction software module. Feature attribution was assigned in compliance with the Coastal Cartographic Object Attribute Source

Table (C-COAST), which provides the definition and attribution scheme for the full range of cartographic features pertinent to the CMP. Selected features were further modified with additional descriptive information to refine general classification

Cartographic features were compiled to meet a horizontal accuracy of 8.8 meters at the 95% confidence level. Tidal information for this project was not available.

Quality Control / Final Review

Quality control tasks were conducted during all phases of project completion by a senior member of the Applications Branch of RSD. The final QC review was completed in September 2018. The review process included analysis of the AT and image ortho-rectification results, and assessment of the identification and attribution of digital feature data within the GC according to image analysis and criteria defined in C-COAST. The quality control process concluded with an inspection of topological connectivity within the GC using ESRI's ArcGIS (ver. 10.5) desktop GIS software. All project data was evaluated for compliance to CMP requirements.

Comparisons of the largest scale NOAA nautical charts with source imagery and compiled project data resulted in creation of the Chart Evaluation File (CEF). The following nautical charts were used in the comparison process:

- 11352, Intracoastal Waterway, New Orleans to Calcasieu River, 42nd Ed., Jul. 2012
- 11355, Intracoastal Waterway, Catahoula Bay to Wax Lake Outlet, 31st Ed., Jul. 2016

End Products and Deliverables

The following specifies the location and identification of end products generated during the completion of this project:

Remote Sensing Division Electronic Data Library

- Project database
- GC11444 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

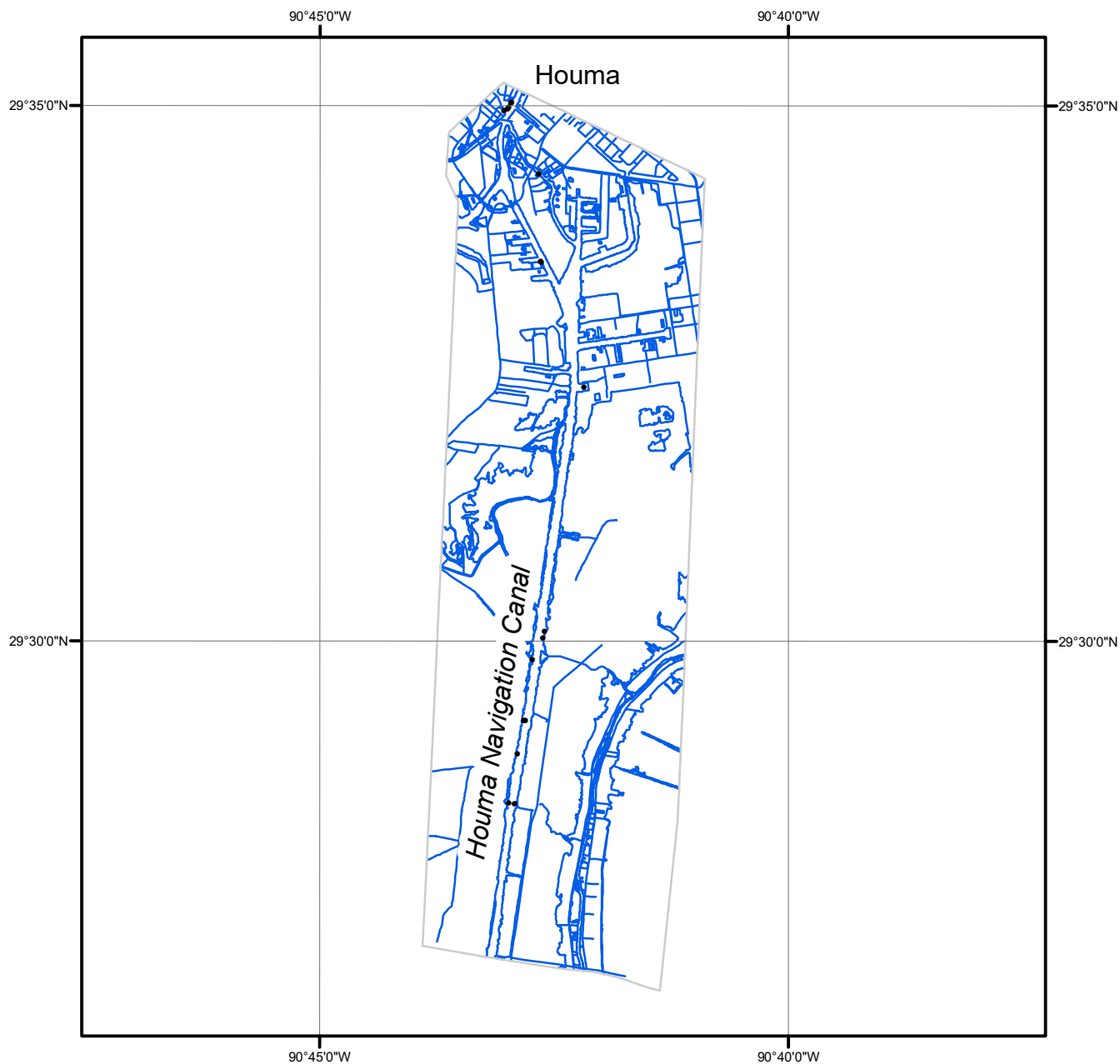
NOAA Shoreline Data Explorer

- GC11444 in shapefile format
- Metadata file for GC11444
- PCR in Adobe PDF format

End of Report

HOUMA NAVIGATION CANAL, BAYOU PROVOST TO HOUMA

LOUISIANA



Overview



LA1502G-CM-T

GC11444