NOAA COASTAL MAPPING PROGRAM
PROJECT COMPLETION REPORT

PROJECT LA2212-CS-T

Port of Lake Charles/Cameron, Louisiana

Introduction

Coastal Mapping Program (CMP) Project LA2212-CS-T provides highly accurate digital shoreline data for key areas of change in the port of Lake Charles/Cameron, Louisiana. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) as well as geographic information systems (GIS) for a variety of coastal zone management applications.

Project Design

The design of Project LA2212-CS-T was accomplished by the Systems and Quality Assurance Branch (SQAB) of the Remote Sensing Division (RSD) in response to the need for updates to the NOAA Electronic Navigational Chart (ENC) series. Project requirements were formulated as a result of analysis conducted within the Coast and Shoreline Change Analysis Program (CSCAP), in which NOAA nautical chart products are compared to contemporary high-resolution digital imagery in order to ascertain the need for more current shoreline data. Mosaicked color orthoimagery from the National Agriculture Imagery Program (NAIP) was used for this analysis. A Chart Evaluation File (CEF) was forwarded to the Applications Branch (AB) of RSD once the change analysis was complete. Refer to the CSCAP Memorandum for Project LA2212-CS-T for details of the chart comparison process.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project imagery, which was obtained from external sources.

Georeferencing

Metadata which accompanied the NAIP imagery fully describes the photogrammetric processing and orthorectification of the imagery. Further georeferencing tasks were deemed unnecessary for this imagery since it compared well with sources used to assess spatial accuracy, and the image provider conducted an acceptable accuracy assessment. For further information on the collection and processing of the orthoimagery, including horizontal accuracy, refer to the NAIP metadata on file within the RSD Electronic Data Library. All positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was accomplished by a member of AB in May 2022. Using Esri's ArcGIS desktop GIS software (ver. 10.8.1), digital feature data was compiled in shapefile format from the orthoimagery. 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.

Spatial data accuracies for LA2212-CS-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features extracted from the NAIP imagery were compiled to meet a horizontal accuracy of 4.0 meters at a 95% confidence level, a figure representing the level of accuracy claimed by the image provider. The table below provides information on imagery used in the completion of this project.

Image Source	Source File Name	GSD	Acquisition Date/Time (local)	Tide Level*
NAIP orthomosaic (ADS100)	2022_NAIP_ORI_la023.jp2	0.3 m	01-13-2022 / 13:12 – 13:17	+0.5 m
NAIP orthomosaic (ADS100)	2022_NAIP_ORI_la019.jp2	0.3 m	01-16-2022 / 13:05 – 13:26	-0.9 m
			01-16-2022 / 13:53 – 14:13	-0.8 m

* Tide levels are given in meters above MLLW and are based on verified observations recorded by two NOS gauges in the project area. The tide level for Image "la023" was observed at the Calcasieu Pass gauge (#8768094), where the elevation of the MHW datum is 0.520 meters above MLLW. The tide levels for Image "la019" were observed at the Bulk Terminal gauge (#8767961), where the elevation of MHW is 0.381 meters above MLLW.

Quality Control / Final Review

Final review tasks were completed in May 2022. The review process included analysis of image georeferencing 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 ArcGIS. The entire suite of project products was evaluated for compliance to CMP requirements.

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

- CSCAP evaluation memorandum
- Project database
- GC11782 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

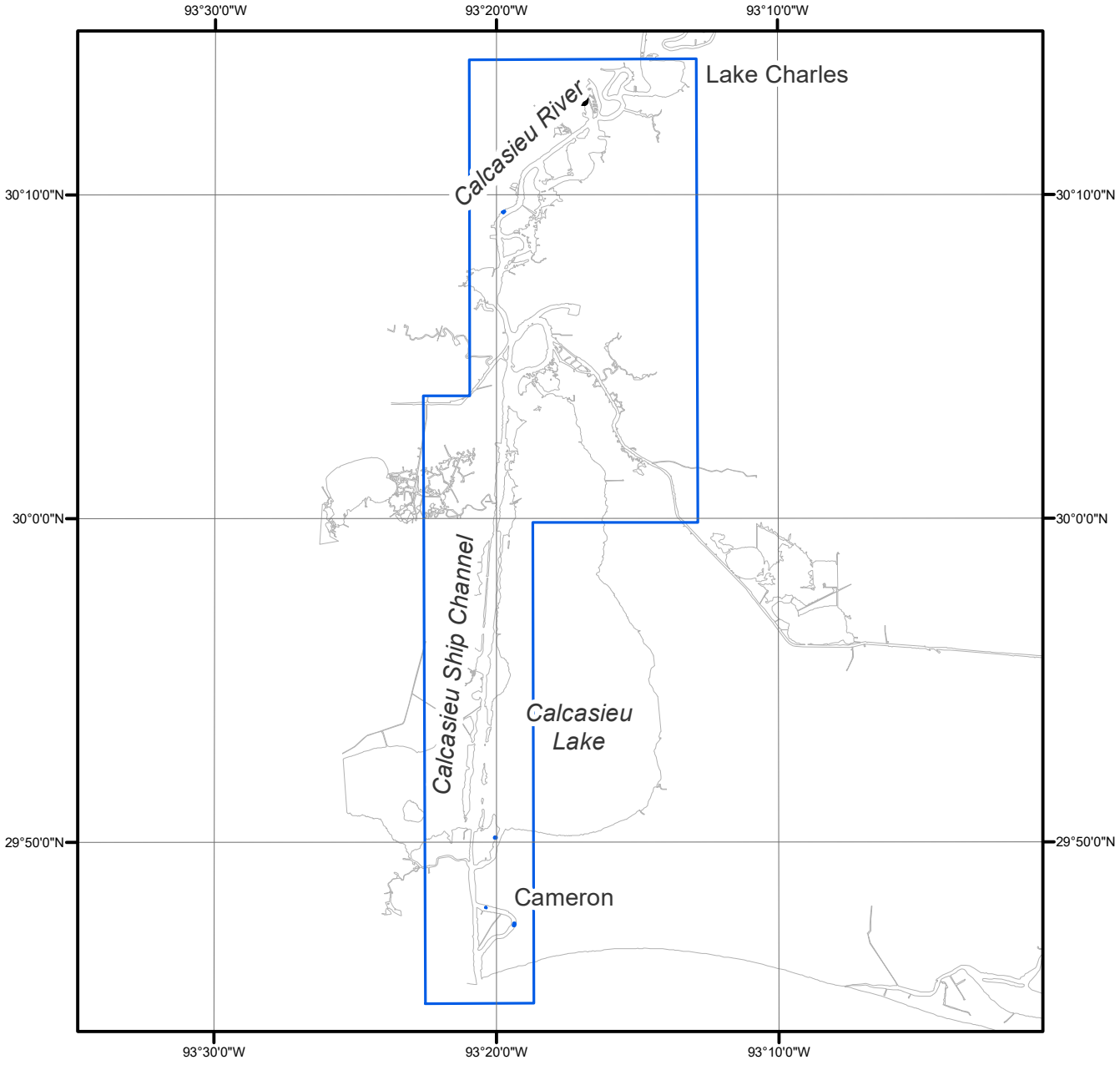
NOAA Shoreline Data Explorer

- GC11782 in shapefile format
- Metadata file for GC11782
- PCR in Adobe PDF format

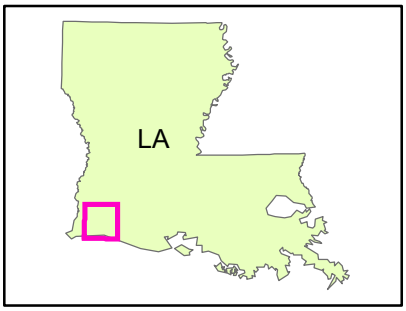
End of Report

PORT OF LAKE CHARLES/CAMERON

LOUISIANA



Overview



LA2212-CS-T

GC11782