

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT FL1615-CM-T

Midnight Pass, Florida

Introduction

Coastal Mapping Program (CMP) Project FL1615-CM-T provides accurate digital shoreline data for the northern portion of Casey Key in the Gulf of Mexico, in Florida. This project includes Midnight Pass, which is now closed. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) as well as geographic information systems (GIS) for coastal zone management applications.

Project Design

Project FL1615-CM-T was designed in response to a request for updated shoreline data from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA. Based on 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 completion of this project included WorldView satellite imagery from DigitalGlobe, Inc. One orthorectified, pan-sharpened natural color image mosaic with a spatial resolution of 0.5 meters was obtained for this project.

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

The satellite imagery was assessed for positional accuracy using the published locations of several U.S. Coast Guard maintained navigational aids. The color satellite image compared very well spatially, with all checked aids observed within Digital Globe's standard accuracy. Therefore the imagery was determined to be suitable for feature compilation without need for additional image georeferencing tasks. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was accomplished by RSD Applications Branch personnel in April 2017. Digital feature data was compiled in shapefile format from the satellite imagery using ArcGIS (ver. 10.4.1). 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 FL1615-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. The standard vendor-reported RMSE was used

to calculate a horizontal accuracy of 6.8 meters at the 95% confidence level in order to predict the accuracy of well-defined points measured during feature compilation.

The following table provides information on imagery used to complete this project:

Sensor	Source File (Tile) ID	Acquisition Date/Time	Tide Level*
WorldView-2	20150206_1610_WV2_ORI_R1C1.tif	2015-02-16 / 16:41:08 GMT	0.6 m

* Tide levels are given in meters above MLLW and are based on observations recorded at the time of image acquisition by the NOS gauge at St Petersburg, FL. The elevation of MHW in the project area is approximately 0.5 to 0.6 meters above MLLW.

Quality Control / Final Review

The final QC review was completed in April 2017. 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 10.4.1. The entire suite of project products was evaluated for compliance to CMP requirements. A Chart Evaluation File (CEF) resulted from comparison of the project imagery with the largest scale NOAA nautical chart covering the project:

- 11425 ICW- Charlotte Harbor to Tampa Bay, 1:40,000 scale, 40th Ed., Jan. 2017

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
- GC11231 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

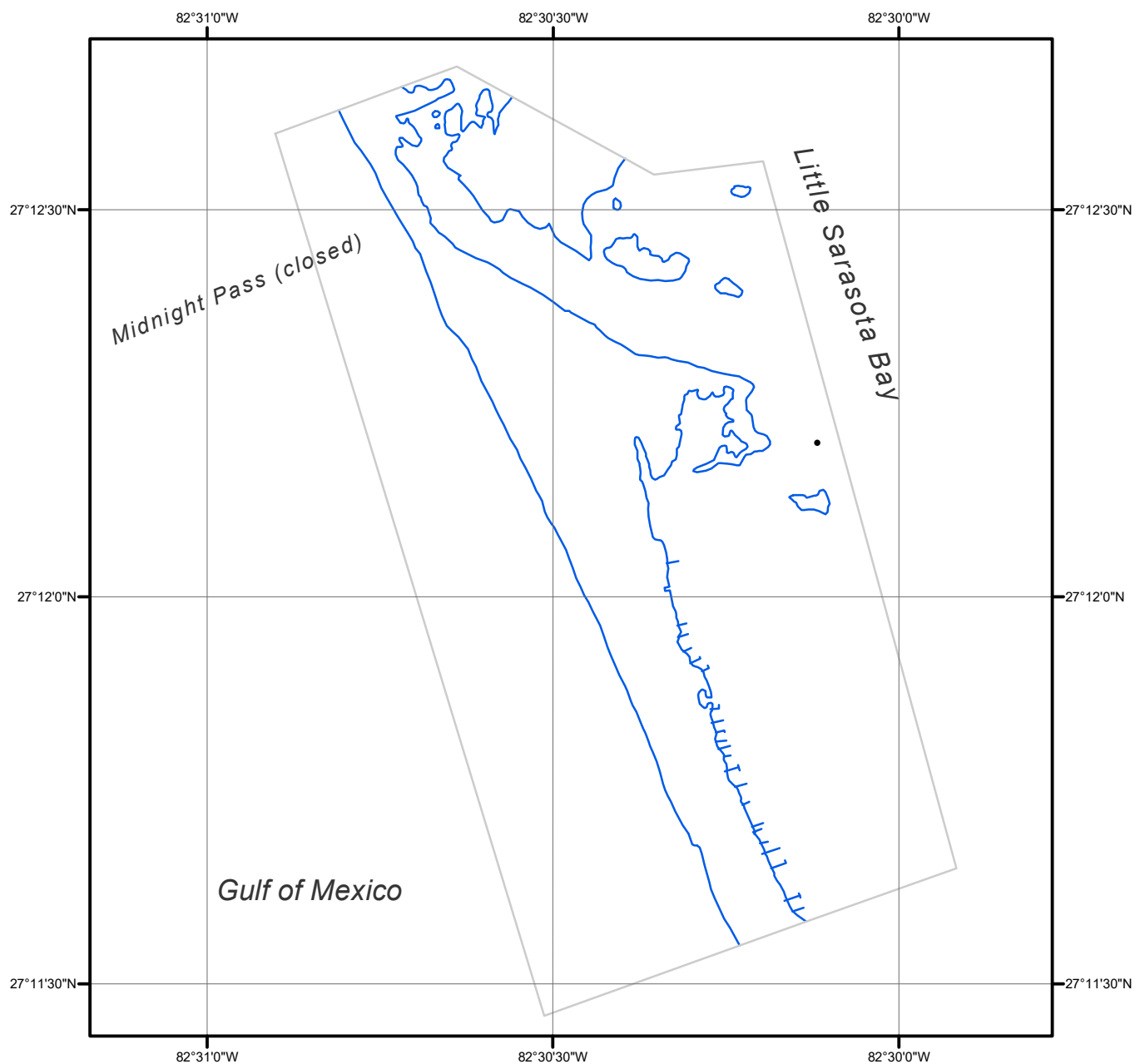
NOAA Shoreline Data Explorer

- GC11231 in shapefile format
- Metadata file for GC11231
- PCR in Adobe PDF format

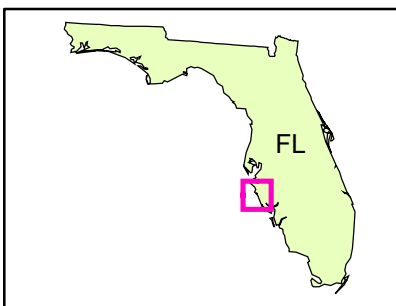
End of Report

MIDNIGHT PASS

FLORIDA



Overview



FL1615-CM-T

GC11231