

# **NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT**

## ***PROJECT FL1406***

### ***Fort Matanzas to Pellicer Creek, Florida***

#### **Introduction**

Coastal Mapping Program (CMP) Project FL1406 provides accurate digital shoreline data from Fort Matanzas to Pellicer Creek, Florida, including a portion of the Intracoastal Waterway (ICW). 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**

Project FL1406 was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA for new shoreline data for the Matanzas River and ICW near Fort Matanzas. 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 successful completion of this project included one color orthophoto mosaic from the National Agriculture Imagery Program (NAIP) consisting of source imagery acquired October 27, 2013 with a Leica Geosystems ADS40 digital scanner.

#### **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**

Rigorous refinement of the georeferencing of the NAIP imagery was not necessary since the image compared favorably spatially with the data sources used to verify its geolocation. The published locations of twelve (12) U.S. Coast Guard maintained navigational aids were compared with their positions as measured within the NAIP imagery. This assessment resulted in a calculated accuracy of 3.0 meters at the 95% confidence level for the image. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

#### **Compilation**

Data compilation was initiated by RSD personnel in January 2014. Digital feature data was compiled in shapefile format from the NAIP imagery using ESRI ArcGIS 9.3.1 desktop GIS software. Feature identification and attribution within the GC were based on image analysis as well as information extracted from the largest scale NOAA nautical chart, the U.S. Coast Guard Light List, and other ancillary sources. 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 FL1406 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 6.0 meters at the 95% confidence level. This predicted accuracy of well-defined points measured during the compilation phase was derived by doubling the assessed accuracy described above.

The following table provides further detail on the imagery used to complete this project:

Image Source	Resolution	Source ID	Acquisition Date/Time	Tide Level*
NAIP orthomosaic (ADS40)	1.0 m	ortho_1-1_1n_s_fl109_2013_1.sid	2013-10-27, 15:12–15:46 GMT	0.5 - 0.6

\* Tide levels are given in meters above MLLW and are based on actual observations recorded by the NOS reference gage at Fernandina Beach, FL with offsets applied to the Fort Matanzas substation within the project area. The height of the MHW tidal datum in the project area is approximately 1.2 meters above MLLW.

### Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in January 2014. The review process included an 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 9.3.1. The entire suite of project products was evaluated for compliance to CMP requirements.

Comparison of the largest scale NOAA nautical chart with the project imagery and compiled feature data resulted in creation of the Chart Evaluation File (CEF). The following nautical chart was used for comparison:

11485, ICW, Tolomato River to Palm Shores, 1:40,000 Scale, 36<sup>th</sup> Ed., Jul./10

### End Products and Deliverables

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

#### RSD Applications Branch Archive

- Hardcopy of the Project Completion Report (PCR)
- Hardcopies of image accuracy and tide level assessments
- Page size graphic plot of GC11047 file contents, attached to PCR

#### Remote Sensing Division Electronic Data Library

- Project database
- GC11047 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

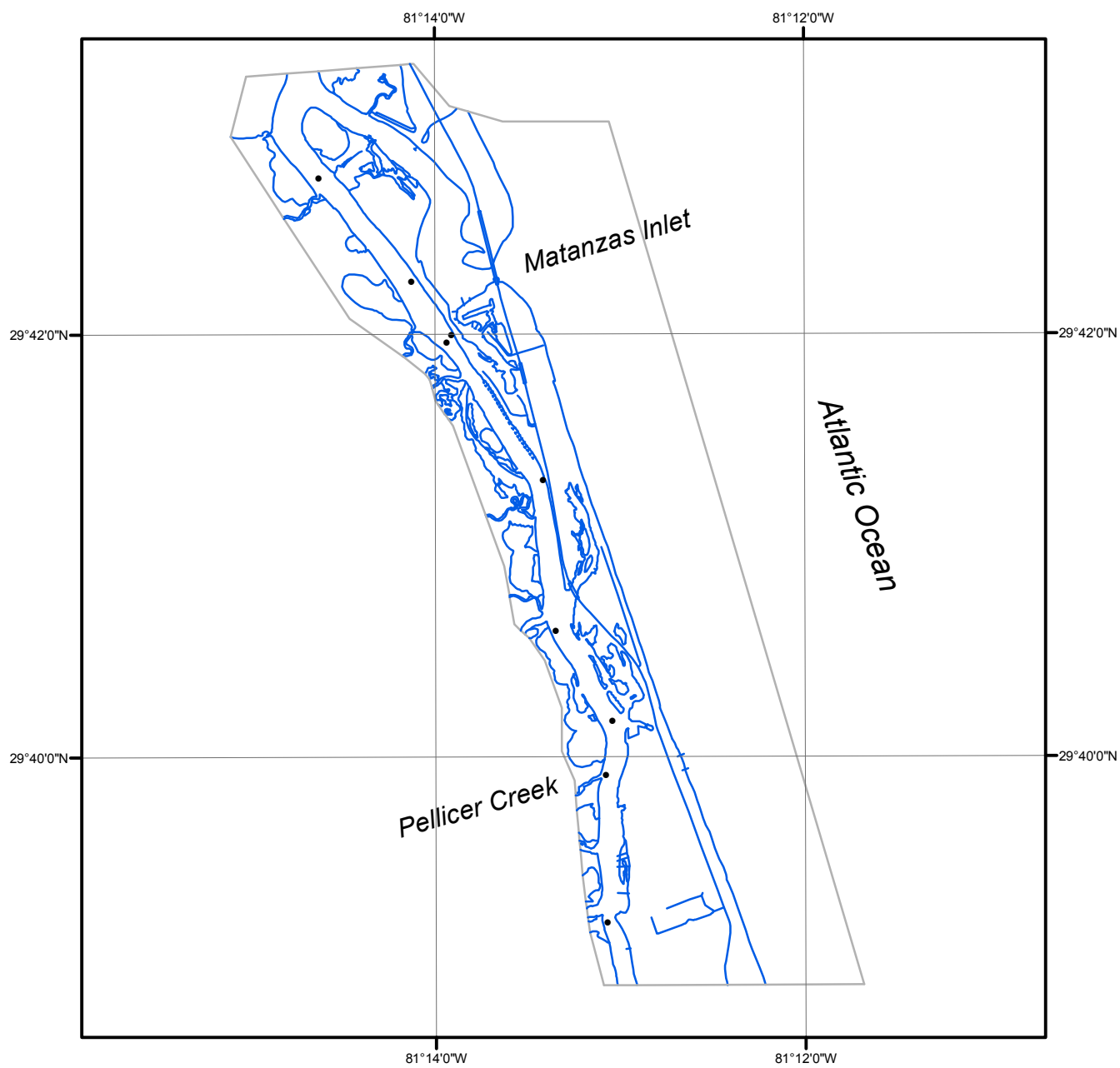
### **NOAA Shoreline Data Explorer**

- GC11047 in shapefile format
- Metadata file for GC11047
- Digital copy of the PCR in Adobe PDF format

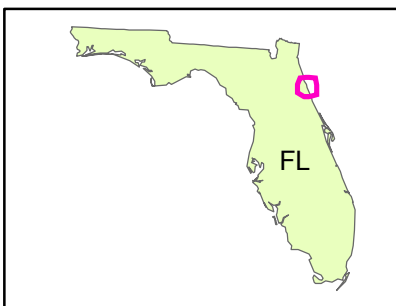
**End of Report**

# FORT MATANZAS TO PELLICER CREEK

## FLORIDA



Overview



FL1406

GC11047