

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT FL1911-CM-T

Eastpoint Breakwaters, Florida

Introduction

Coastal Mapping Program (CMP) Project FL1911-CM-T provides accurate digital shoreline data for a pair of breakwaters near Eastpoint, Florida. 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 FL1911-CM-T was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA for shoreline data to correct the charted positions of two breakwaters. 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 imagery (downloaded in tiled format) from one orthorectified pan-sharpened natural color WorldView-1 satellite image from DigitalGlobe (Maxar), Inc., obtained via the NextView contract.

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

Further spatial refinement of the georeferencing of the WorldView imagery was not necessary since the image used for compilation compared favorably spatially with the data sources used to verify its geolocation. In particular, two NGS geodetic control points used to assess the image accuracy were measured in the imagery to within 2 meters of their actual positions. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was completed by RSD personnel in July 2019. Digital feature data was compiled in shapefile format from the WorldView imagery using Esri's ArcGIS (ver. 10.6.1) desktop GIS software. Feature identification and attribution within the GC were based on image analysis of both WorldView images as well as information extracted from the largest scale NOAA nautical chart 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 FL1911-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 further detail on the imagery used to complete this project:

Sensor	Resolution	Source (Tile) ID	Acquisition Date/Time	Tide Level*
WorldView-1	0.5 m	20190615_WV01_ORI_R1C1_NAD83.jp2	2019-06-15 / 19:32:34 GMT	0.5 m

* Tide levels are given in meters above MLLW and are based on verified observations recorded by the NOS reference gage at Apalachicola, FL with offsets applied to the nearest substation to the project area. The height of the MHW tidal datum in the project area is 0.71 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in July 2019. The review process included an assessment of image georeferencing and 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 (ver. 10.6.1). 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:

- 11404, Carrabelle to Apalachicola Bay, 25th Ed., Mar. 2015

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
- GC11550 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

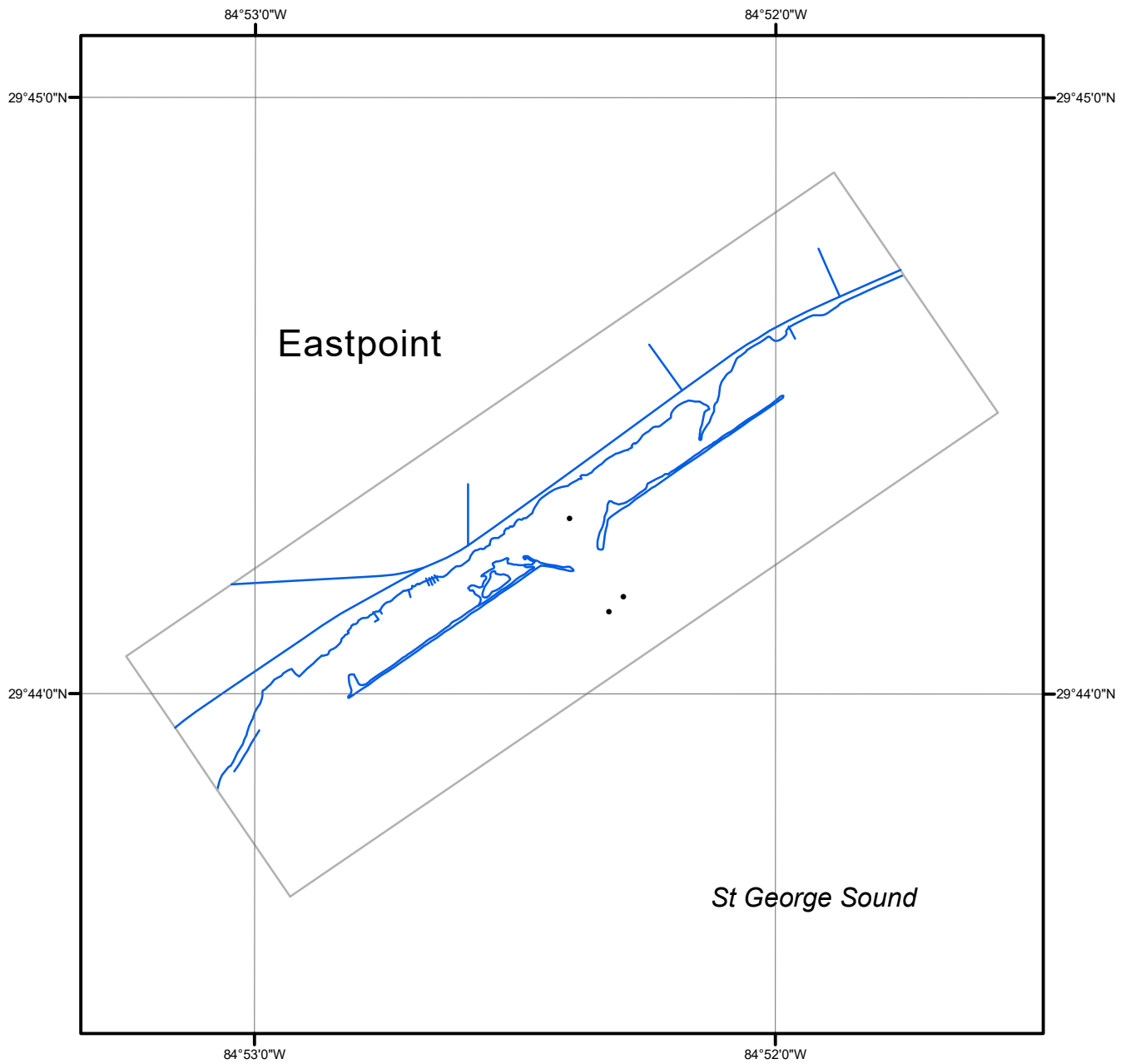
NOAA Shoreline Data Explorer

- GC11550 in shapefile format
- Metadata file for GC11550
- PCR in Adobe PDF format

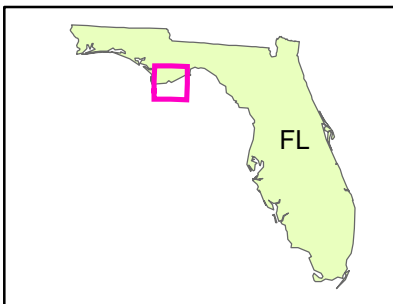
End of Report

EASTPOINT BREAKWATERS

FLORIDA



Overview



FL1911-CM-T

GC11550