

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT FL1419

Port Everglades, Florida

Introduction

NOAA Coastal Mapping Program (CMP) Project FL1419 provides a highly accurate database of new coastal feature data for Port Everglades, 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 FL1419 was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA for an evaluation and verification of changes within Chart 11470 (Fort Lauderdale/Port Everglades). 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 WorldView commercial satellite image from DigitalGlobe, Inc. acquired April 5, 2014, and one color orthophoto mosaic from the National Agriculture Imagery Program (NAIP) consisting of source imagery acquired October 10, 2010 with a Leica Geosystems ADS-52 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

The orthomosaic was assessed for positional accuracy using twenty (20) photo-identifiable ground control points extracted from previously completed CMP project FL9701 (GC-10465). The RMS of the standard deviations of the residuals for each measured check point were used to compute a predicted horizontal circular error (CE) of 1.2 meters based on a 95% confidence level. This CE value was doubled and added to the CE95 of the source in order to conservatively predict the accuracy of well-defined points measured during the compilation process. The WorldView image was not assessed for accuracy using ground control.

Compilation

Data compilation was performed by RSD personnel in April 2014. Using Esri's ArcGIS 9.3.1 desktop GIS software, digital feature data was compiled in shapefile format from the orthomosaic. All compiled features were further verified visually using the more

recent satellite image. 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 FL1419 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were tested to have a horizontal accuracy of 2.8 meters at the 95% confidence level. This predicted accuracy of compiled well-defined points is based on statistics derived in the accuracy assessment described above.

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

Image Source	Resolution	Source ID	Acquisition Date	Tide Level
NAIP ortho	1.0 m	ortho_1-1_n_s_fl011_2010_1.tif	2010-10-10	n/a
WorldView-2	0.5 m	14APR05164038-S3DMR23C03.ntf	2014-04-05	n/a

Quality Control / Final Review

Quality control tasks were conducted during all phases of project completion by senior RSD personnel in April 2014. The review process included assessment of the identification and attribution of feature data within the GC according to image analysis and criteria defined in C-COAST, and an inspection of topological connectivity within the GC using ArcGIS. The entire suite of project products was evaluated for compliance to CMP requirements. In addition to the GC, a Chart Evaluation File (CEF) resulted from comparison of the project imagery with the NOAA Electronic Navigational Chart (ENC) covering the project: *US5FL32M (Chart 11470), 27th Ed.*

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)
- Page size graphic plot of GC11066 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC11066 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- Chart Evaluation File in shapefile format

NOAA Shoreline Data Explorer

- GC11066 in shapefile format
- Metadata file for GC11066
- Digital copy of the PCR in Adobe PDF format

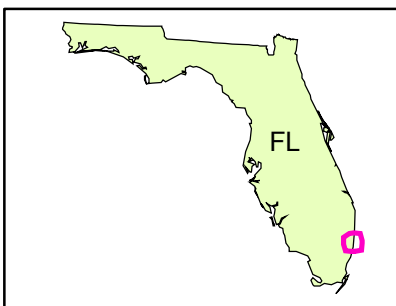
End of Report

PORT EVERGLADES

FLORIDA



Overview



FL1419

GC11066