

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT FL1105

Port Everglades, Florida

Introduction

NOAA Coastal Mapping Program (CMP) Project FL1105 provides a highly accurate database of new digital shoreline 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

The design of Project FL1105 was accomplished by the Requirements Branch (RB) of the Remote Sensing Division (RSD) in response to the need for updates to NOAA's Electronic Navigational Chart 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 imagery in order to ascertain the need for more current shoreline data. Refer to the CSCAP analysis memo for the Port of Everglades, Florida for details regarding 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

One color orthomosaic with a spatial resolution of 1 meter, generated from non-tide controlled images, was obtained from the U.S. Department of Agriculture's (USDA) National Agriculture Inventory Program (NAIP). This orthomosaic was assessed for positional accuracy and it was determined that further georeferencing was not necessary. Twenty (20) photo-identifiable ground control points were extracted from previously completed CMP project FL9701 (GC10465) and used to assess the horizontal accuracy of the orthoimagery. 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 tripled and added to the CE95 of the source in order to conservatively predict the accuracy of well-defined points measured during the compilation process.

Compilation

Data compilation was performed by RSD personnel in December 2011. Digital feature data was compiled in shapefile format from the NAIP imagery using ESRI's ArcGIS 10

desktop GIS software. 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 FL1105 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 4.0 meters at the 95% confidence level. This predicted accuracy of compiled well-defined points is a deductive estimate 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

Quality Control / Final Review

Quality control tasks were conducted during all phases of project completion by senior RSD personnel in January 2012. 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 10. 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:

RSD Applications Branch Archive

- Hardcopy of the Project Completion Report (PCR)
- Page size graphic plot of GC10919 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC10919 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- Chart Evaluation File in shapefile format

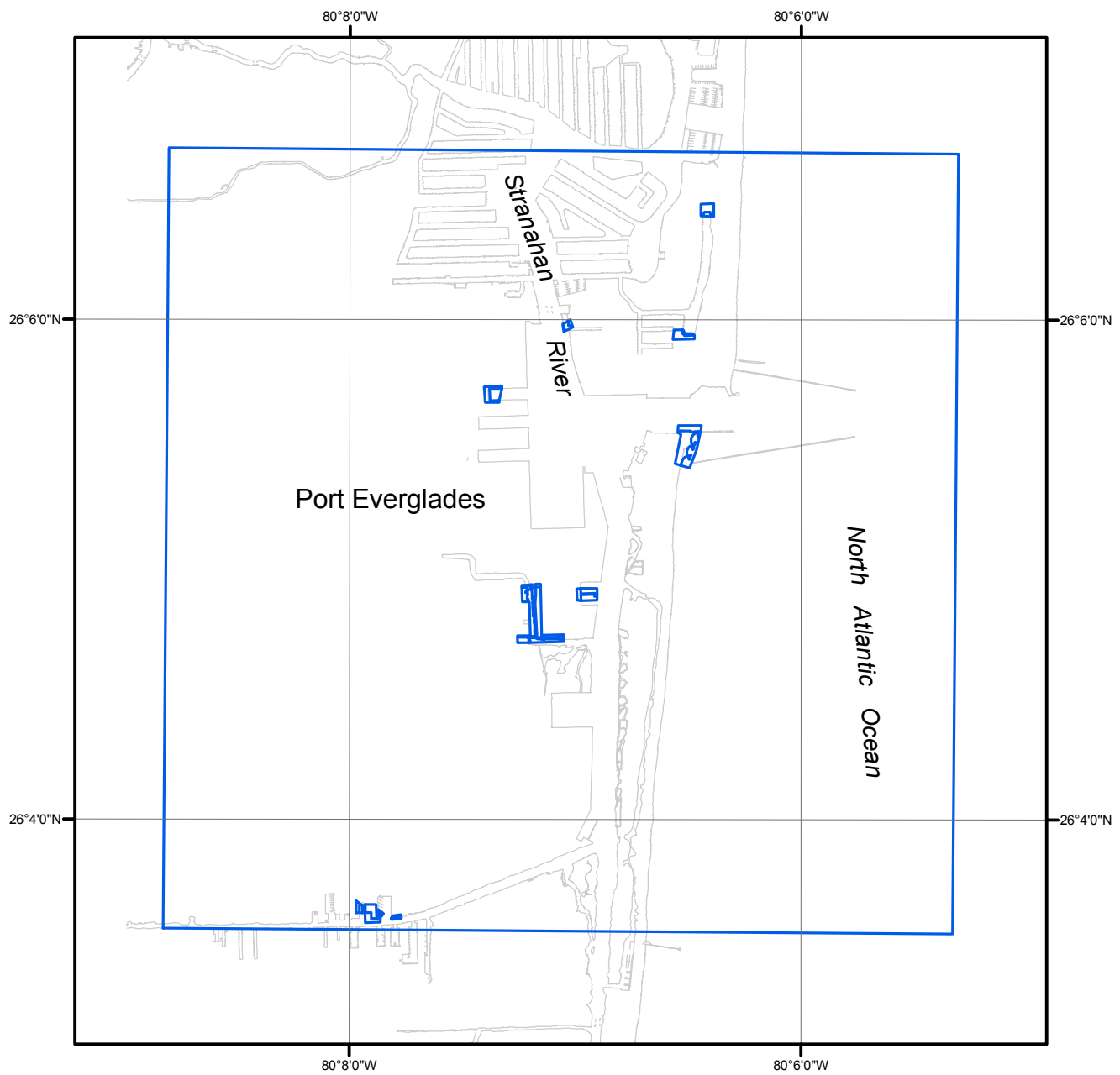
NOAA Shoreline Data Explorer

- GC10919 in shapefile format
- Metadata file for GC10919
- Digital copy of the PCR in Adobe PDF format

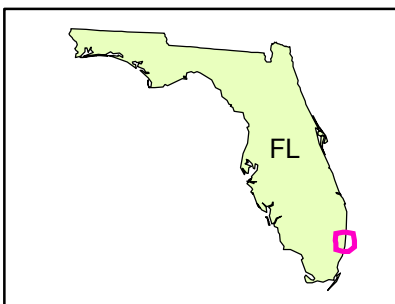
End of Report

PORT EVERGLADES

FLORIDA



Overview



FL1105

GC10919