

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT FL1304

St. Augustine Inlet, Florida

Introduction

Coastal Mapping Program (CMP) Project FL1304 provides accurate digital shoreline data for St. Augustine Inlet, near the city of St. Augustine, 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 coastal zone management applications.

Project Design

Project FL1304 was designed per a request from the Navigation Services Division (NSD) of the Office of Coast Survey, NOAA, for GIS data in response to indications of significant shoreline change within St. Augustine Inlet and potential encroachment on nearby navigational channels. One panchromatic WorldView-2 satellite image from DigitalGlobe, acquired January 14, 2011, was obtained through the National Geospatial-Intelligence Agency (NGA) in response to this request. The WorldView image has a resolution of 0.5 meters.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project source data.

Georeferencing

Rigorous refinement of the georeferencing of the WorldView image used for compilation was not necessary since image positioning compared well spatially with ground control points (GCPs), and since DigitalGlobe provided an acceptable accuracy assessment for their imagery. The accuracy of the WorldView image reported by the vendor is 5.0 m at the 90% confidence level (CE90). A total of seven GCPs extracted from the National Geodetic Survey (NGS) control database were used to verify this accuracy. The reported accuracy is exclusive of viewing geometry and terrain distortions. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

The compilation of cartographic feature data for this project was accomplished by a member of the Applications Branch (AB) of the Remote Sensing Division (RSD) in May 2013. Using ESRI's ArcGIS 9.3 desktop GIS software, digital feature data was compiled in ESRI shapefile format. Feature attributes were established using the C-COAST specification file, which provides the definition and attribution scheme for the full range of cartographic features pertinent to the CMP.

Spatial data accuracies for Project FL1304 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 5.7 meters, based on the vendor reported CE90 accuracy converted to the 95% confidence level (CE95). The table below provides detailed information on the image used for feature compilation.

Image Source	Source File Name	Acquisition Date/Time	Tide Stage*
WorldView-2	11JAN14161814-P1BS-052822010010_01_P002.TIF	2011-01-14 / 16:18:14	0.2-0.3 m

* Tide levels are given in meters above MLLW and are based on actual observations recorded by the NOS gauge at Fernandina Beach, FL at the time of acquisition, with offsets applied to two substations within the project area. The elevation of MHW ranges from 1.35-1.4 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted by a senior cartographer within the CMP. The final QC review was completed in May 2013. The review process consisted of an assessment of the identification and attribution of cartographic features 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. The entire suite of project products was evaluated for compliance to CMP requirements.

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

11485 ICW, Tolomato River to Palm Shores, 1:40,000 scale, 36th 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)
- Page size graphic plot of GC10987 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- GC10987 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- Chart Evaluation File in shapefile format

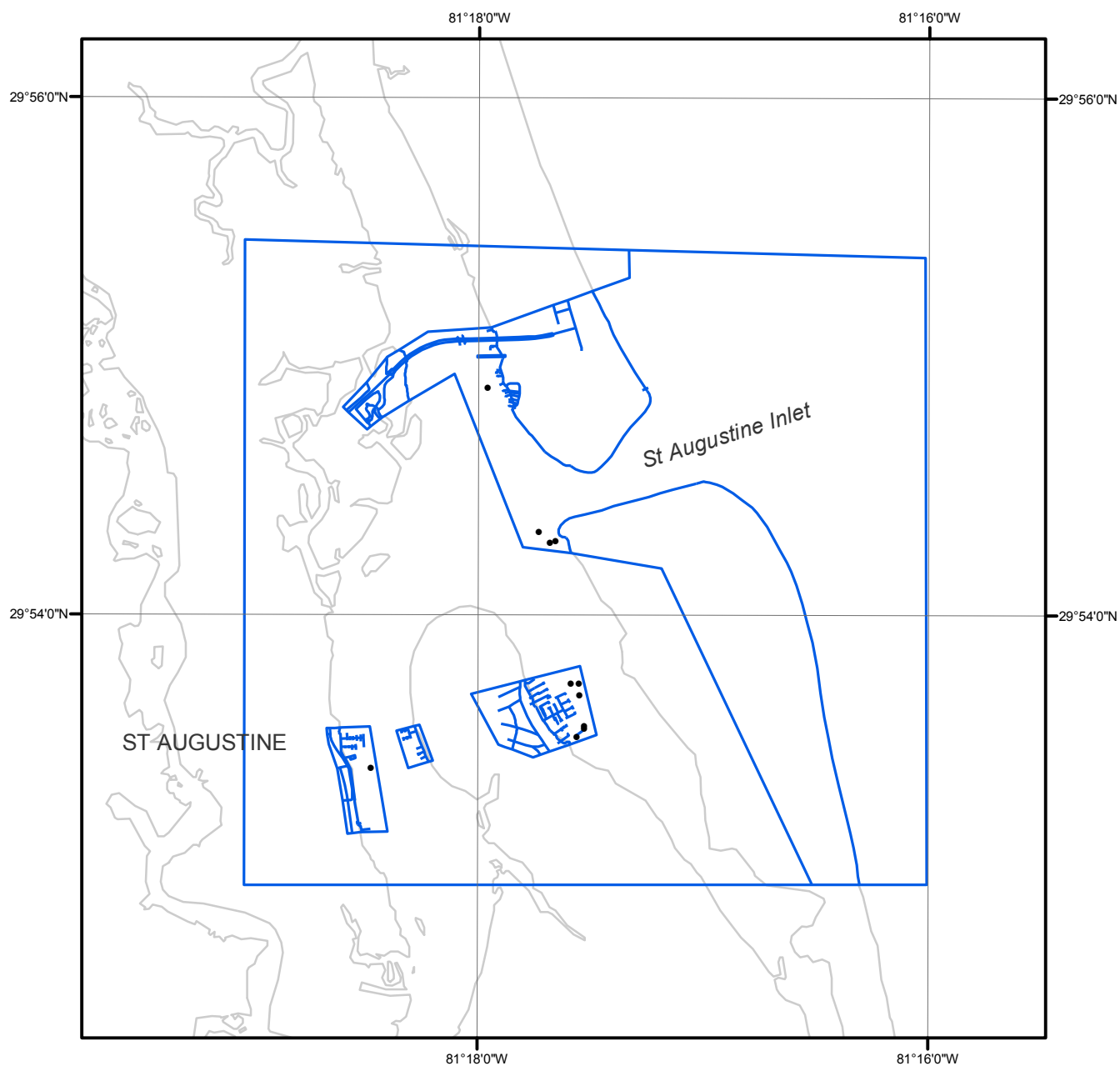
NOAA Shoreline Data Explorer

- GC10987 in shapefile format
- Metadata file for GC10987
- Digital copy of the PCR in Adobe PDF format

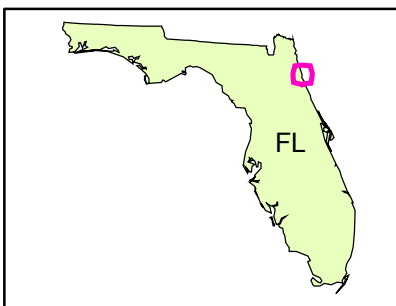
End of Report

ST AUGUSTINE INLET

FLORIDA



Overview



FL1304

GC10987