

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT SC1101

Raccoon Key and Cape Romain, South Carolina

Introduction

Coastal Mapping Program (CMP) Project SC1101 provides highly accurate digital shoreline for a portion of South Carolina shoreline from Sett Creek to Alligator Creek, including Raccoon Key and Cape Romain. 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 SC1101 was designed in response to a request from the Navigation Services Division (NSD) of the Office of Coast Survey, NOAA, for new shoreline data covering Sandy Point, on the western end of Raccoon Key. Available source data deemed adequate for successful completion of this project included one panchromatic WorldView-2 satellite image from DigitalGlobe, obtained through the National Geospatial-Intelligence Agency (NGA).

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

Georeferencing tasks were unnecessary, since DigitalGlobe provided an acceptable accuracy assessment for their imagery. The accuracy of the WorldView image, reported by the vendor at the 90% confidence level (CE90=6.5 m), was converted to CE95 for standard CMP reporting purposes.

Compilation

Data compilation was performed by RSD personnel in September 2011. Digital feature data was compiled in shapefile format from the WorldView imagery using ESRI's ArcGIS 9.3 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 SC1101 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 7.4 meters at the 95% confidence level.

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

Sensor	Resolution	Source ID	Acquisition Date/Time	Tide Level*
WorldView-2	0.5 m	01DEC10161558-p1bs-052442083010_04_p009.tif	2010-12-01 / 16:16 GMT	0.0

* Tide levels are given in meters above MLLW and are based on actual observations recorded by the NOS reference gauge at Charleston, SC, with offsets applied to the Five Fathom Creek and Cape Romain substations. The elevation of the MHW tidal datum in the project area is 1.5 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP quality assurance personnel in September 2011. 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. 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 charts were used for comparison:

- 11518, ICW Casino Creek to Beaufort River, 1:40,000 Scale, 37th Ed.
- 11531, Winyah Bay to Bulls Bay, South Carolina, 1:80,000 Scale, 22nd Ed.
- 11534, ICW Cape Fear River to Casino Creek, 1:40,000 Scale, 36th 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 GC10873 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC10873 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- Chart Evaluation File in shapefile format

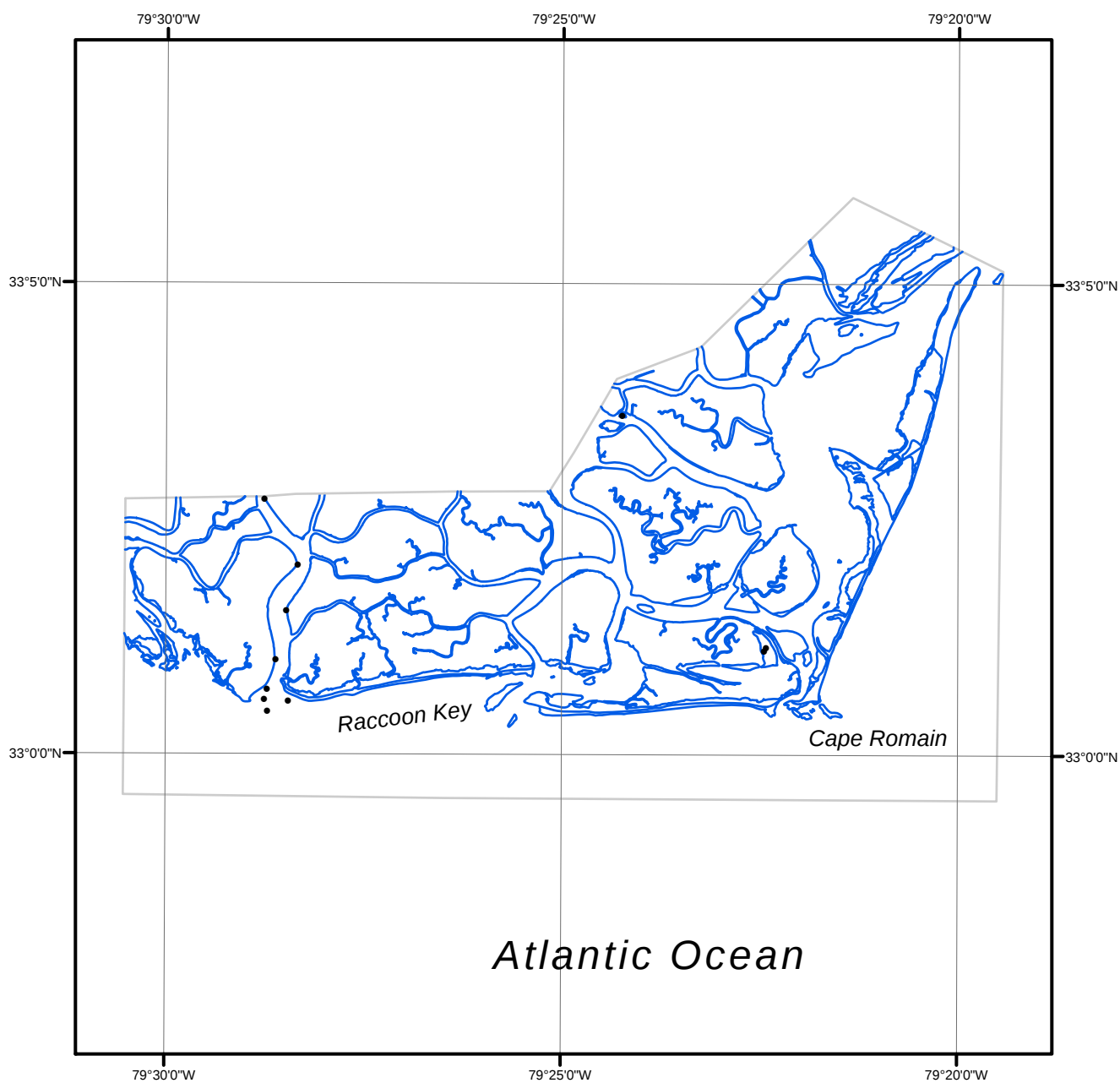
NOAA Shoreline Data Explorer

- GC10873 in shapefile format
- Metadata file for GC10873
- Digital copy of the PCR in Adobe PDF format

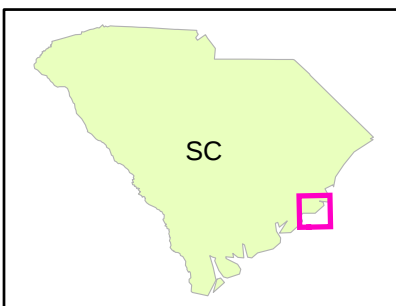
End of Report

RACCOON KEY AND CAPE ROMAIN

SOUTH CAROLINA



Overview



SC1101

GC10873