

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT LA1303

Wine Island Pass, Louisiana

Introduction

Coastal Mapping Program (CMP) Project LA1303 provides highly accurate digital shoreline data for Wine Island Pass and vicinity, Louisiana. 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 LA1303 was designed per a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA, for GIS data in response to a report of changes to shorelines and other charted features which could potentially impact safe navigation. WorldView-2 satellite imagery coverage (spatial resolution = 0.5 meters) from DigitalGlobe was obtained through the National Geospatial-Intelligence Agency (NGA) in response to this request, including one panchromatic image, acquired in November 2012, and pan-sharpened (color) imagery acquired in April 2011. The color imagery was delivered as a series of image subsets, and was used only as an aid in interpreting features compiled from the panchromatic image.

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 panchromatic WorldView image was not necessary since well-defined points in the image matched closely with features compiled in previously completed GC10790 (horizontal accuracy = 1.2 meters), and since DigitalGlobe provided an acceptable accuracy assessment for their imagery. After spatial assessment, the image was shifted uniformly 2.1 meters (NE) to improve alignment with GC10790.

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 March 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 LA1303 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 | Image Type | Source File Name | Acquisition Date/Time | Tide Stage* |
|--------------|---------------|--|------------------------|-------------|
| WorldView-2 | Panchromatic | 29NOV12WV021200012NOV29170452-P1BS-052895576080_01_P008_rpc_sub.tif | 2012-11-29 / 17:04 GMT | 0.1 m |
| WorldView-2 | Pan-sharpened | wine_island_R6C3.tif wine_island_R6C4.tif wine_island_R6C5.tif wine_island_R7C2.tif wine_island_R7C3.tif wine_island_R7C4.tif wine_island_R7C5.tif | 2011-04-13 / 17:14 GMT | 0.2 m |

* Tide levels are given in meters above MLLW and are based on actual observations recorded by the NOS gauge at East Point on Grand Isle, LA at the time of photography, with offsets applied to the Wine Island substation in the project area. The elevation of MHW is 0.4 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 March 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:

11357 Timbalier and Terrebonne Bays, 1:80,000 scale, 42nd Ed., May/12

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 GC10979 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- GC10979 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- Chart Evaluation File in shapefile format

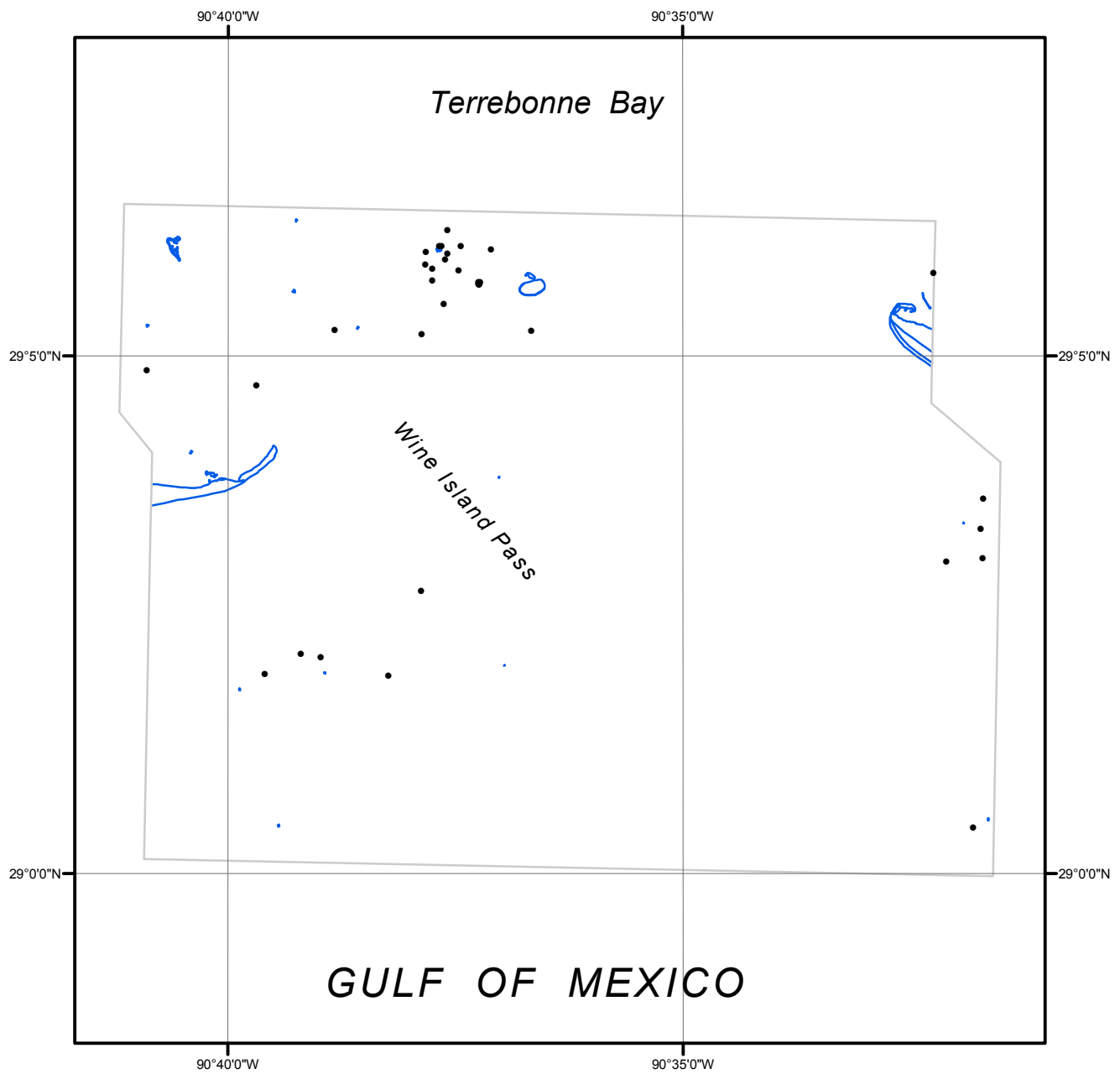
NOAA Shoreline Data Explorer

- GC10979 in shapefile format
- Metadata file for GC10979
- Digital copy of the PCR in Adobe PDF format

End of Report

WINE ISLAND PASS

LOUISIANA



Overview



LA1303

GC10979