

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT LA1605-CM-T

Mississippi River, Bohemia to Happy Jack, Louisiana

Introduction

Coastal Mapping Program (CMP) Project LA1605-CM-T provides highly accurate digital shoreline data for key areas of change in the vicinity of the Mississippi River from Bohemia to Happy Jack, 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 a variety of coastal zone management applications.

Project Design

Project LA1605-CM-T was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA. 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 orthorectified, pan-sharpened natural color satellite image (tile) from DigitalGlobe, Inc. Upon receipt of project imagery, a comparison was conducted with the largest scale NOAA nautical chart coverage resulting in creation of a Chart Evaluation File (CEF) containing additional identified changes. The chart used for this comparison was 11364 Mississippi River-Venice to New Orleans, 45th Ed., May 2014, 1:80,000 scale.

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 satellite imagery was assessed for positional accuracy using the published locations of several U.S. Coast Guard maintained navigational aids. The color satellite image compared very well spatially, with all checked aids observed within Digital Globe's standard accuracy. Therefore the imagery was determined to be suitable for feature compilation without need for additional image georeferencing tasks. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was accomplished by RSD Applications Branch personnel in May 2017. Digital feature data was compiled in shapefile format from the satellite imagery using ArcGIS (ver. 10.4.1). 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. Selected features were further modified with additional descriptive information to refine general classification.

Spatial data accuracies for LA1605-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. The standard vendor-reported RMSE was used to calculate a horizontal accuracy of 6.8 meters at the 95% confidence level in order to predict the accuracy of well-defined points measured during feature compilation.

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

Image Source	Source File ID (Tile)	Acquisition Date/Time	Water Level*
WorldView-2	20161122_1646_WV02_ORI.jp2	2016-11-22 / 16:46:58	0.4 m

* Water (river) level is given in meters above the LWRP and based on actual observations at the US Army Corps of Engineers gage at West Pointe a la Hache, LA. The height of the LWRP in the project area is approximately 0.1 meters above Mean Sea Level.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in May 2017. The review process included analysis of image georeferencing and 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 10.4.1. 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:

Remote Sensing Division Electronic Data Library

- GC11315 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

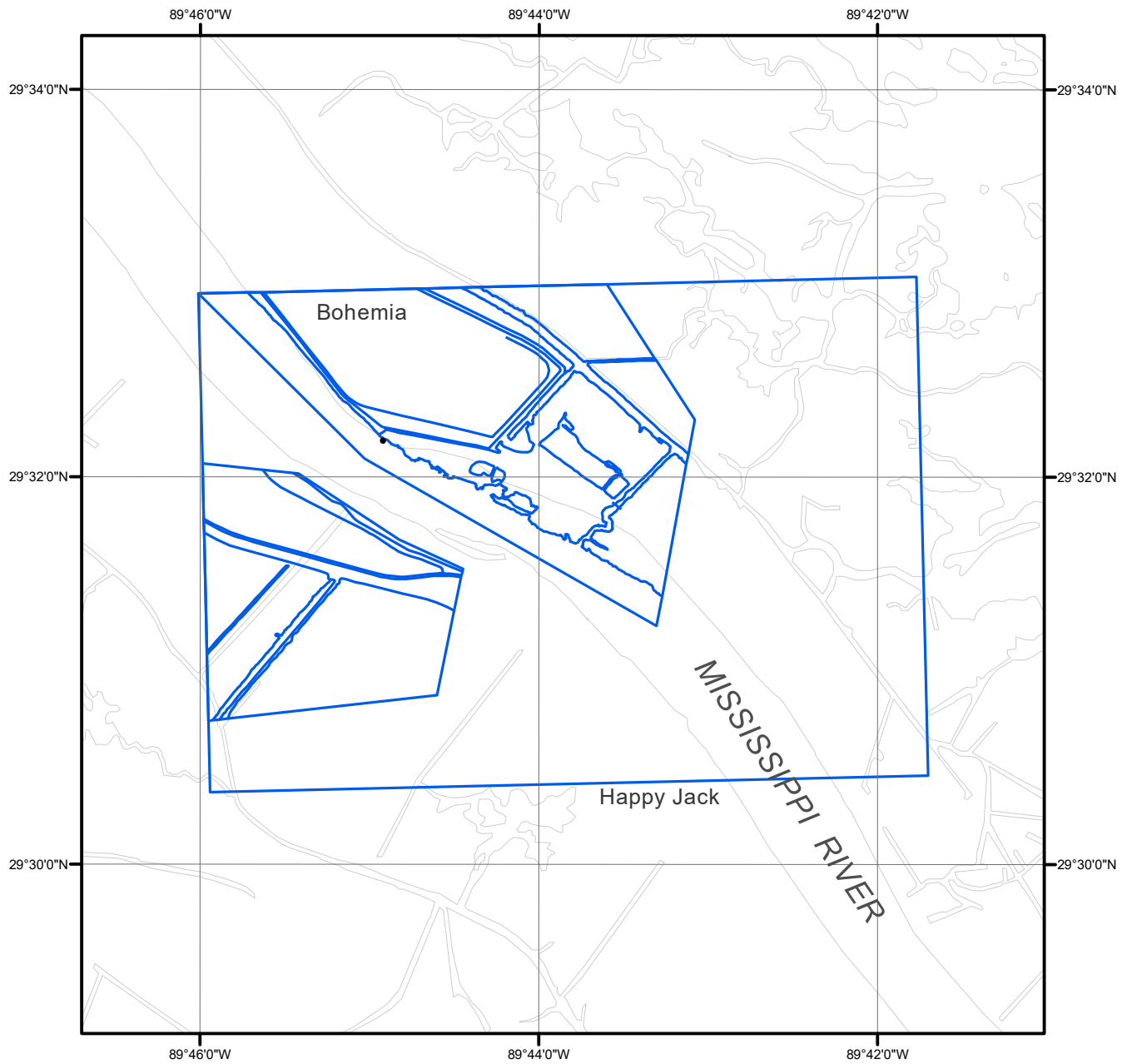
NOAA Shoreline Data Explorer

- GC11315 in shapefile format
- Metadata file for GC11315
- PCR in Adobe PDF format

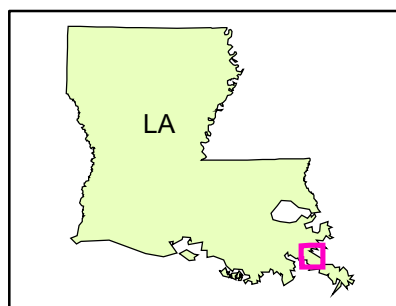
End of Report

MISSISSIPPI RIVER, BOHEMIA TO HAPPY JACK

LOUISIANA



Overview



LA1605-CM-T

GC11315