

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1805-CM-T

Fords Terror, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK1805-CM-T provides accurate digital shoreline data for a small portion of Fords Terror north of Endicott Arm, in Alaska. 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

CMP Project AK1805-CM-T was designed in response to a request from the Navigation Services Division (NSD) 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 this project included one orthorectified pan-sharpened natural color WorldView-2 image from Digital Globe Inc. acquired through the NextView government contract.

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 WorldView-2 imagery was assessed for positional accuracy and determined to be suitable for feature compilation without the need for further image georeferencing tasks. The RMSE accuracy by the vendor, Digital Globe, is reported as 3.9 meters. This value was used to calculate a horizontal circular error at the 95% confidence level (CE95) of 6.8 meters. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was accomplished by personnel of the Applications Branch (AB) of the Remote Sensing Division (RSD) in April 2018. Digital feature data was compiled in shapefile format from the satellite imagery using Esri's ArcGIS (ver. 10.5) 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 AK1805-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to

meet a horizontal accuracy of 6.8 meters at the 95% confidence level.

The table below provides further details on the imagery used to complete this project:

Image Source	Resolution	Source ID	Acquisition Date/Time	Tide Level*
WorldView-2	0.5 m	20160312_2008_WV02 _ORI_mos.jp2	3/12/2016 20:08 GMT	0.6 – 0.7 m

* Tide level is given in meters above MLLW and is based on actual observations recorded at the time of image acquisition by the NOS gauge at Juneau, AK (9452210), with time/height offsets applied to substations near the project area. The elevation of MHW is approximately 4.3 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in April 2018. 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. The entire suite of project products was evaluated for compliance to CMP requirements. A Chart Evaluation File (CEF) was created by comparing project imagery with the following nautical chart:

- 17360, 37th Ed., June 2015

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

- Project database
- GC11402 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

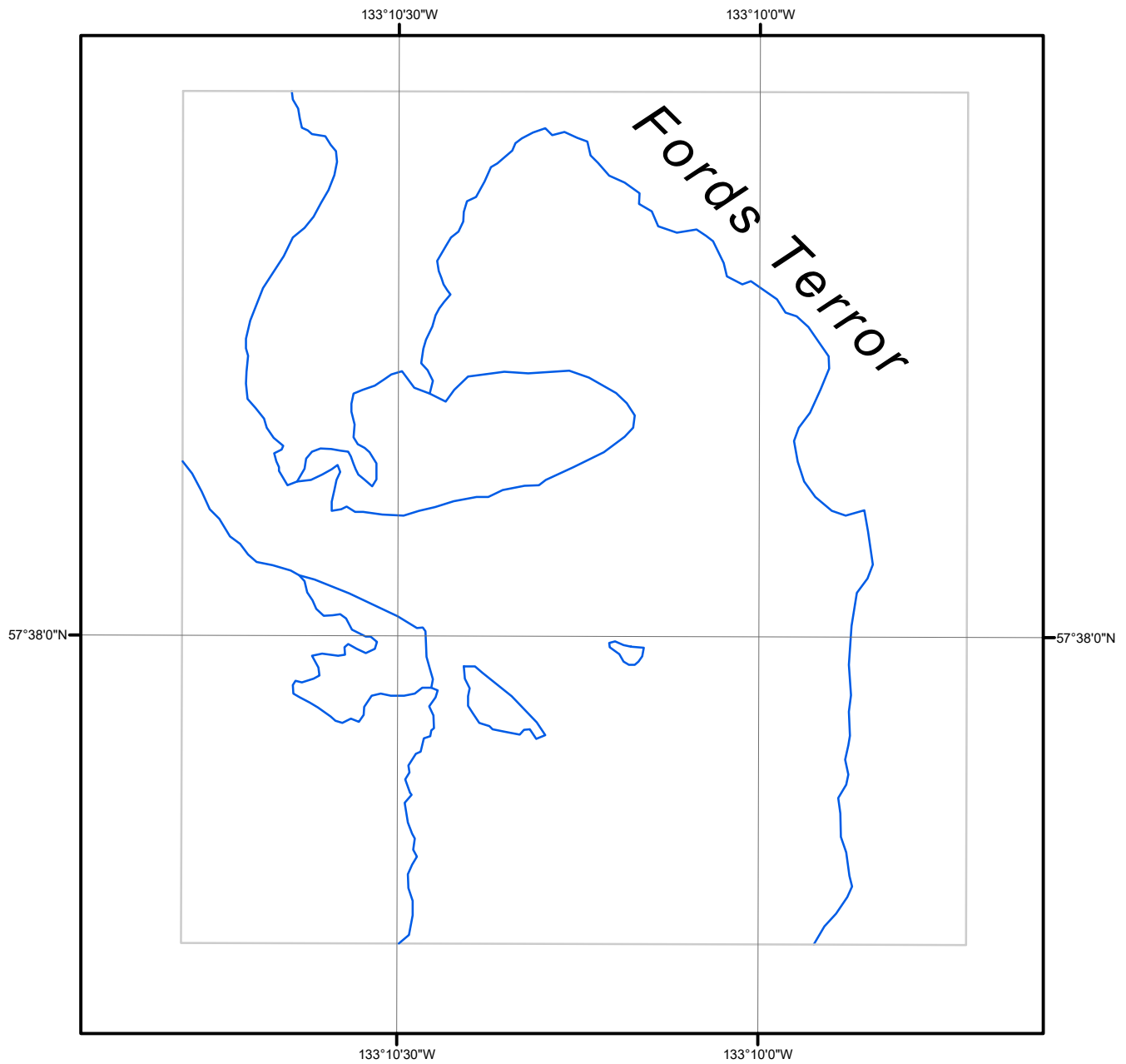
NOAA Shoreline Data Explorer

- GC11402 in shapefile format
- Metadata file for GC11402
- Digital copy of the PCR

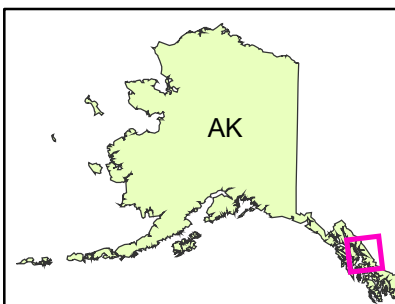
End of Report

FORDS TERROR

ALASKA



Overview



AK1805-CM-T

GC11402