

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1711B-CM-T

Kenai Peninsula, Aialik Bay to Resurrection Bay, Alaska

Introduction

Coastal Mapping Program (CMP) Project AK1711B-CM-T provides accurate digital shoreline data for a portion of Kenai Peninsula from Holgate Head in Aialik Bay to Callisto Head in Resurrection Bay. Project AK1711B-CM-T is a subproject of a larger acquisition project, AK1711-CM-T, which extends from Harris Bay to Day Harbor. 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 AK1711-CM-T was designed in response to a request from the National Park Service (NPS) for GIS data to update NOAA nautical charts in the vicinity of nearby national parks. Based on an 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 sources acquired in August 2016.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project source data, which was obtained from external sources.

Aerotriangulation

The aerotriangulation phase of this project was accomplished by personnel of the Applications Branch (AB) of the Remote Sensing Division (RSD) in November 2017. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation (DPW) using the Multi-Sensor Triangulation (MST) software module of BAE's SOCET SET (ver. 5.6) photogrammetric software. The Interactive Point Measurement tool within MST was used to collect several tie points and a simultaneous solve adjustment was then performed. Upon successful completion of this process, the triangulation software provided the standard deviations for each aerotriangulated ground point, which were used to compute a predicted horizontal circular error of 5.6 meters based on a 95% confidence level. Positional data is referenced to the North American Datum of 1983 (NAD83).

Compilation

The compilation phase was accomplished by AB personnel in March 2019. The digital mapping was performed using a DPW in conjunction with the SOCET SET Feature Extraction software module. 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 project AK1711B-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 8.6 meters at the 95% confidence level.

Verified water levels were obtained from the NOS tide station at Seward (#9455090), with time/height offsets applied to the tidal substation at Agnes Cove (#9455120). The water level, at the times of source acquisition, was approximately 1.3 meters above Mean Lower Low Water (MLLW). The elevation of the Mean High Water (MHW) tidal datum in the project area is approximately 3.0 meters above the MLLW datum.

Quality Control / Final Review

Quality control tasks were conducted upon project completion in September 2019. 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 Esri's ArcGIS (ver. 10.6) desktop GIS software. All project data was evaluated for compliance to CMP requirements. A Chart Evaluation File (CEF) resulted from comparison of the project imagery with the largest scale NOAA nautical chart covering the project:

- 16682, Cape Resurrection to Two Arm Bay, 18th Ed., May 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
- GC11352 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

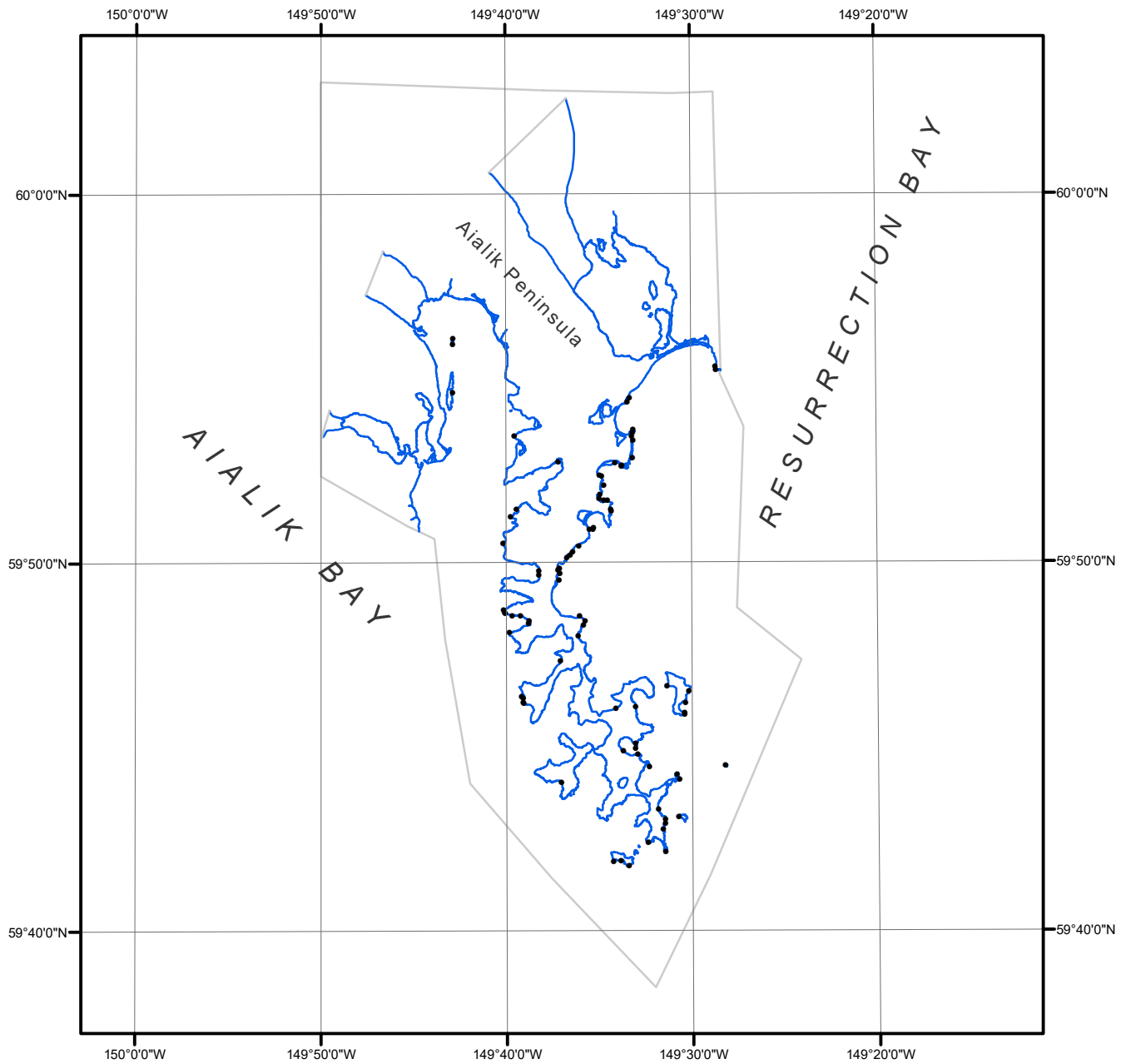
NOAA Shoreline Data Explorer

- GC11352 in shapefile format
- Metadata file for GC11352
- PCR in Adobe PDF format

End of Report

KENAI PENINSULA, AIALIK BAY TO RESURRECTION BAY

ALASKA



Overview



AK1711B-CM-T

GC11352