

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1601-CM-T

Freshwater Bay and Tenakee Inlet to Long Bay, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK1601-CM-T provides accurate digital shoreline data for Freshwater Bay and Tenakee Inlet extending northward from its mouth at Chatham Strait to Long Bay, 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

Project AK1601-CM-T was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA for data to support resolution of a minor discrepancy in Freshwater Bay in the vicinity of Cedar Cove and Pavlof Harbor on Chart 17300. Based on analysis of project requirements and results of a source data search, it was determined that CMP procedures from multiple source projects would apply for this project.

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.

Aerotriangulation

The aerotriangulation task was accomplished by RSD personnel in November 2016. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) Tool of SOCET SET version 5.6. 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 predicted horizontal circular errors of 4.0 meters based on a 95% confidence level. Positional data is referenced to the North American Datum of 1983 (NAD83).

Compilation

Data compilation was accomplished by personnel of the Applications Branch (AB) of the Remote Sensing Division (RSD) in December 2016. Feature data was compiled using the Feature Extraction software module within the SOCET SET (ver. 5.6) photogrammetric 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 AK1601-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 7.0 meters at the 95% confidence level. The height of the mean high water (MHW) tidal datum in the project area is between 4.0 and 4.2 meters above mean lower low water (MLLW). The water level at the times the source images were acquired was between 2.0 and 2.2 meters above MLLW

Quality Control / Final Review

Quality control tasks were conducted upon project completion by AB personnel in April 2017. 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 10.3. 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 charts:

- 17300, Stephens Passage to Cross Sound, 1:209,978 scale, 32th Ed., Oct. 2012
- 17320, Coronation Island to Lisianski Strait, 1:217,828 scale, 20th Ed., Feb. 2017

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
- GC11216 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

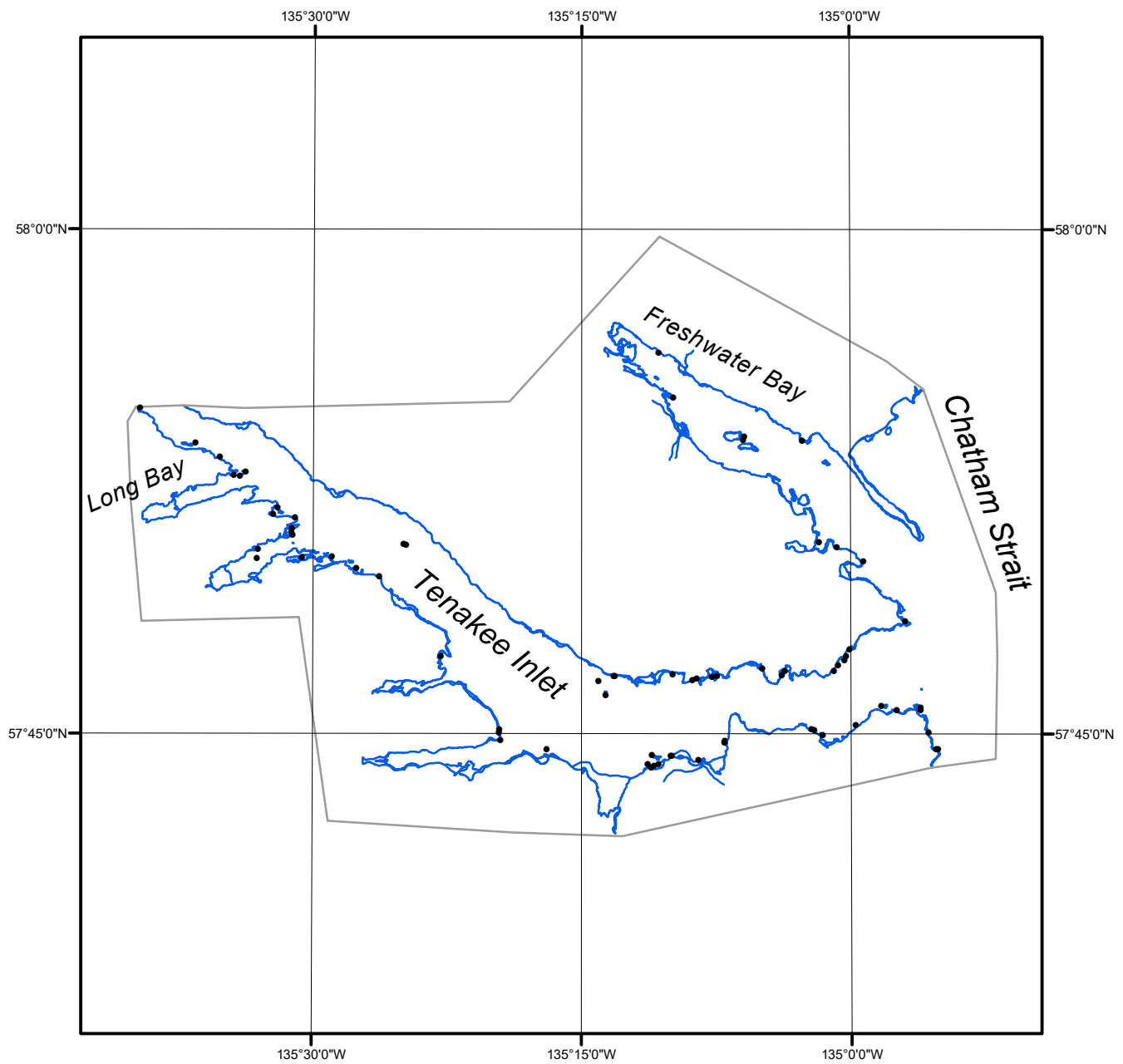
NOAA Shoreline Data Explorer

- GC11216 in shapefile format
- Metadata file for GC11216
- Copy of the PCR in Adobe PDF format

End of Report

FRESHWATER BAY AND TENAKEE INLET TO LONG BAY

ALASKA



Overview



AK1601-CM-T

GC11216