

# **NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT**

## ***PROJECT AK1711C-CM-T***

### ***Kenai Peninsula, Resurrection Bay to Day Harbor, Alaska***

#### **Introduction**

Coastal Mapping Program (CMP) Project AK1711C-CM-T provides accurate digital shoreline data for the coast of the Kenai Peninsula, from Callisto Head in Resurrection Bay to the upper reaches of Day Harbor, in Alaska. AK1711C-CM-T is a subproject of a larger 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 (AT) phase of this project was accomplished by RSD personnel in November 2017. AT procedures were completed on a Digital Photogrammetric Workstation (DPW) using the Multi-Sensor Triangulation (MST) software module of SOCET SET (ver. 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 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 RSD personnel in June 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 AK1711C-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 Day Harbor (#9455036). 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 June 2019. The review process included an assessment of the AT results and 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 (ver. 10.6) 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 charts covering the project:

- 16682, Cape Resurrection to Two Arm Bay, 18<sup>th</sup> Ed., May 2015
- 16683, Point Elrington to Cape Resurrection, 12<sup>th</sup> Ed., Jan. 2011

### **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**

- GC11353 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

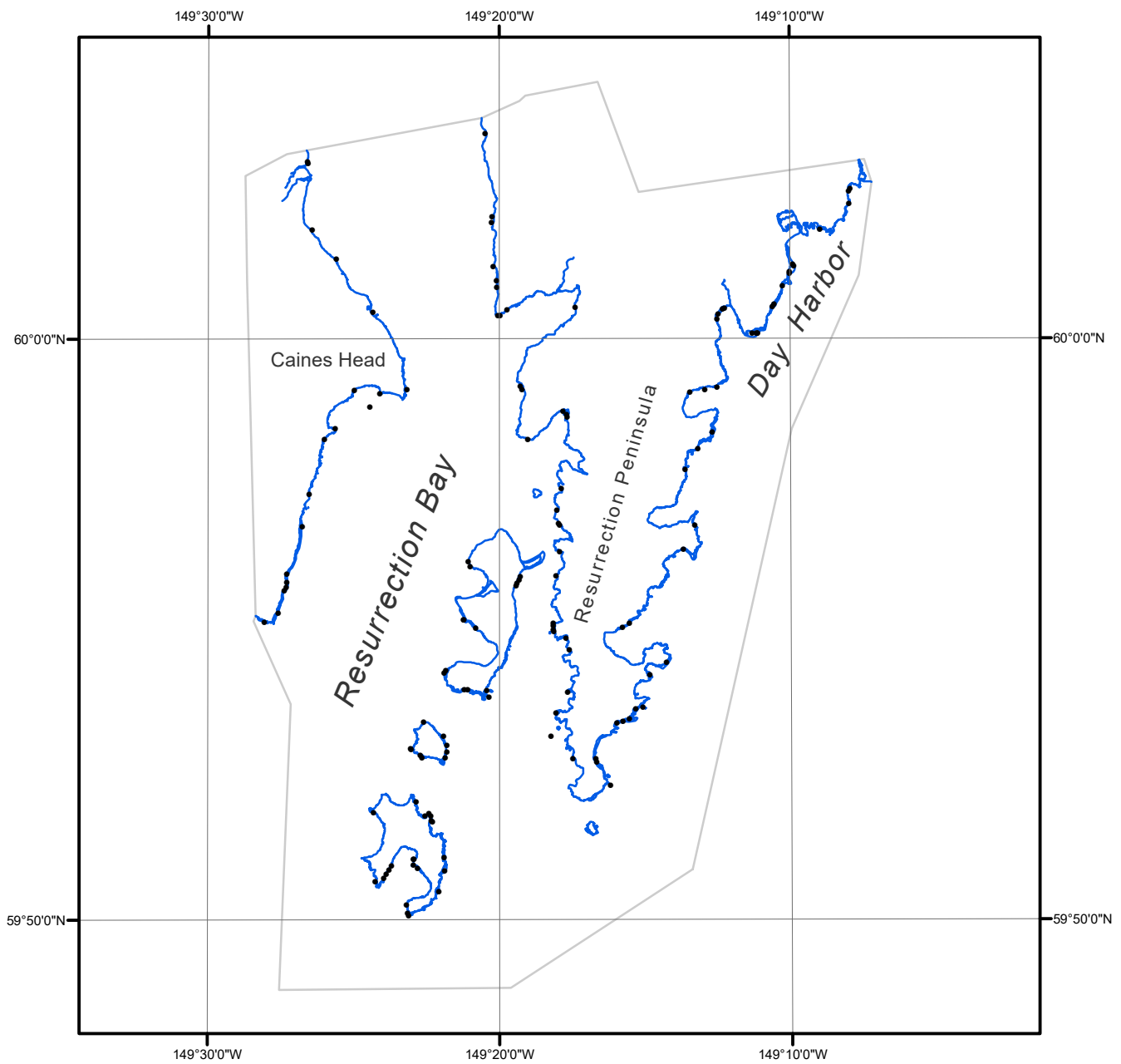
#### **NOAA Shoreline Data Explorer**

- GC11353 in shapefile format
- Metadata file for GC11353
- PCR in Adobe PDF format

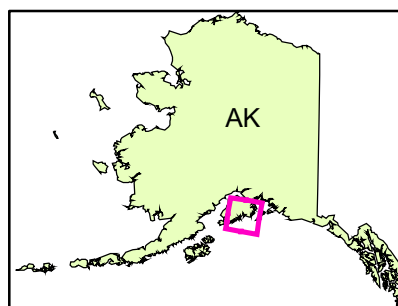
### **End of Report**

# KENAI PENINSULA, RESURRECTION BAY TO DAY HARBOR

## ALASKA



Overview



AK1711C-CM-T

GC11353