

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1012E

Seward, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK1012E provides digital shoreline data for Seward, Alaska. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) and coastal zone management activities.

Project Design

This project was designed per a request from the Marine Charting Division (MCD) of the Office of Coast Survey within NOAA for cartographic data in support of chart updates. Based on an analysis of project requirements and results of a source data search, it was determined that CMP procedures for multiple sources would apply for this project. Available source data deemed adequate for successful completion of this project included sources acquired in June 2009 and May 2012.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project source data.

Aerotriangulation

The aerotriangulation task was accomplished by personnel of the Applications Branch (AB) of the Remote Sensing Division (RSD) in June 2014. 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, forecasting an average predicted horizontal circular error for all well defined points in this project area of 3.4 meters at the 95% confidence level. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Digital feature data compilation for this project was accomplished by AB personnel in June 2014. The Feature Extraction tool within SOCET SET was used during the digital feature data compilation phase of project completion. 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.

Cartographic features were compiled to meet a horizontal accuracy of 6.4 meters at the 95% confidence level. Verified water levels were obtained from the NOS reference tide station at Seward, Alaska. The height of the mean high water (MHW) tidal datum in the project area is 2.9 meters above mean lower low water (MLLW). The water level at the times the source images were acquired was 0.7 meters below MLLW.

Quality Control / Final Review

Senior AB personnel conducted quality control (QC) tasks during all phases of project completion. The final QC review was completed in June 2014. The review process included analysis of aerotriangulation results 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 10.1 software. All project data was evaluated for compliance to CMP requirements.

Comparisons of the largest scale NOAA nautical chart with source imagery and compiled project data resulted in creation of the Chart Evaluation File (CEF). The following nautical chart was used in the comparison process:

16682, Cape Resurrection to Two Arm Bay, 1:81,847 scale, 17th Ed., Sep. /06
Including 1:10,000 scale inset of Seward

End Products and Deliverables

The following specifies the location and identification of the products generated during the completion of this project:

RSD Applications Branch Archive

- Hardcopy of the Project Completion Report (PCR)
- Page-size graphic plot of GC11090 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC11090 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

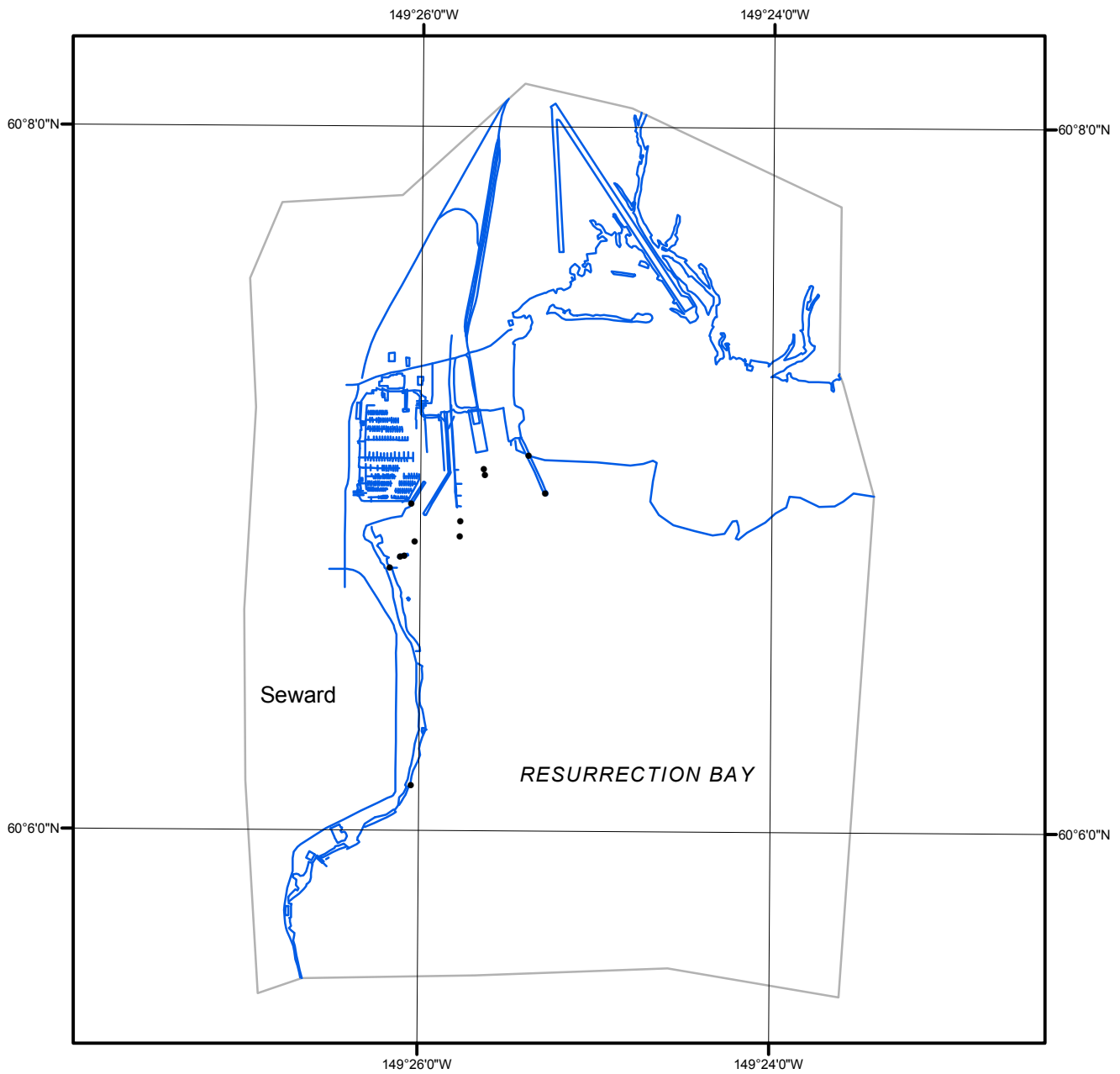
NOAA Shoreline Data Explorer

- GC11090 in shapefile format
- Metadata file for GC11090
- Digital copy of the PCR in Adobe PDF format

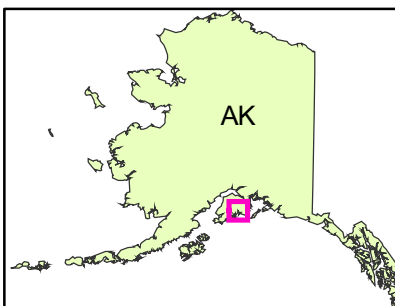
End of Report

SEWARD

ALASKA



Overview



AK1012E

GC11090