

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1201C

Southern Cordova Bay to Brownson Bay, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK1201C provides coastal zone mapping data for the southern portion of Cordova Bay, Alaska. Beginning just to the south of Hunter's Bay in the northeast and extending to Wallace Rock in the northwest, the project extends southwards to cover the multitude of islands between Cordova Bay and Eureka Channel, and eastwards to include Hessa Island and Inlet, and ending at Brownson Bay on the eastern end of the project. The Geographic Cell (GC) may be used to complement the Nautical Charting Program (NCP) as well as geographic information systems (GIS) for a variety of coastal zone management applications. Project survey data is referenced to the North American Datum of 1983 (NAD 83).

Project Design

Project AK1201C was designed to fulfill a request from the Hydrographic Surveys Division (HSD) of the Office of Coast Survey, NOAA, for GIS data in support of HSD operations. 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 September 2006, and some imagery from October 2012 that was acquired later to fill data gaps in the 2006 imagery.

Field Operations

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

Aerotriangulation

The aerotriangulation portion of the project was initiated by Western Air Maps, Inc. personnel in October 2011 utilizing a Digital Photogrammetric Workstation (DPW), which is a configuration of computer hardware, modular software components and other associated peripheral devices. The image files were imported into SOCET SET, (version 5.5.0) using the DataThruWay software. The importing process converted the stored, compressed files to the National Imagery Transmission Format (NITF 2.0) with headers and metadata. Aerotriangulation procedures were accomplished using the Multi-Sensor Triangulation (MST) module of SOCET SET. 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 7.0 meters at the 95% confidence level. This aerotriangulation solution, along with the related imagery, proved sufficient for the compilation phase. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

The data compilation phase of this project was initiated by RSD personnel in August of 2014. 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.

Cartographic features were compiled to meet a horizontal accuracy of 10.0 meters at the 95% confidence level. Tidal information was obtained from the NOS reference tide station at Sitka, AK, and time and height offsets were applied to tidal substations in the project area. The water level at the times the source images were acquired varied between, 1.8 and 1.9 meters above MLLW for the project area. The height of the mean high water datum equals 3.3 meters for the project area.

Quality Control / Final Review

Quality control tasks were conducted during all phases of project completion by a senior member of the Applications Branch of RSD. The final QC review was completed in January 2015. The final review process included assessment of the identification and attribution of digital feature data within the GC according to image analysis and criteria defined in C-COAST. Comparisons of the largest scale NOAA nautical charts with source imagery and compiled project data resulted in creation of the Chart Evaluation File (CEF). The following nautical charts were used in the comparison process:

17433, Kendrick Bay to Shipwreck Point, 1:40,000 scale, 12th Ed. May/14

End Products and Deliverables

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

RSD Applications Branch Archive

- Hardcopy of the Project Completion Report (PCR)
- Page size graphic plot of GC11073 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC11073 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

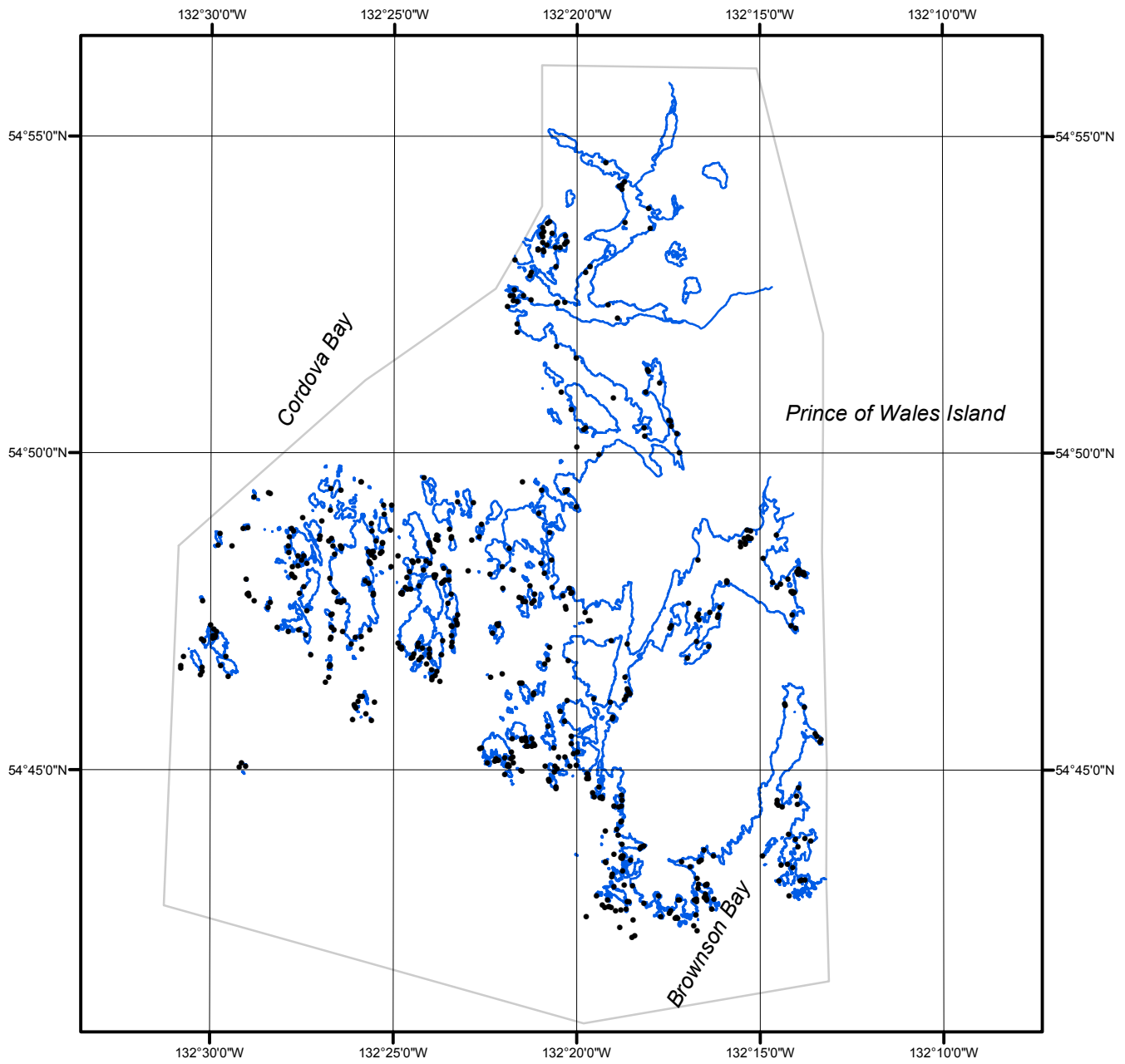
NOAA Shoreline Data Explorer

- GC11073 in shapefile format
- Metadata file for GC11073
- Digital copy of the PCR in Adobe PDF format

End of Report

SOUTHERN CORDOVA BAY TO BROWNSON BAY

ALASKA



Overview



AK1201C

GC11073