

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK0904

Southern Revillagigedo Channel and Felice Strait, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK0904 provides digital shoreline data for southern Revillagigedo Channel, including Duke Island and the southern portions of Annette Island and Felice Strait, Alaska. 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 Design

Project AK0904 was designed per a request from the Hydrographic Surveys Division (HSD) of the Office of Coast Survey, NOAA, for cartographic data in support of HSD field operations. Based on an analysis of project requirements, and as a result 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 May, July, and September 2006.

Field Operations

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

Aerotriangulation

Aerotriangulation tasks were accomplished by Western Air Maps, Inc. personnel in June 2011. The image files were imported into SOCET SET, Version 5.5.0 using the DataThruWay, Version 5.5.0 software. The importing process also converted the files to a recognized native SOCET SET format (NITF 2.0) and included supporting data extension files consisting of previously measured sensor model parameters. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) module within 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 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 initiated by Western Air Maps, Inc. personnel in June 2011 using a DPW in conjunction with the Feature Extraction module within SOCET SET. 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 Ketchikan, AK, and time and height offsets were applied to tidal substation in the project area. The mean tide range at this substation varied between 1.7 and 3.0 meters. The water level at the times the source images were acquired varied between 0.7 and 2.1 meters above MLLW. Due to the lack of MLLW imagery, ledges were not compiled.

Quality Control / Final Review

Western Air Maps, Inc. personnel conducted quality control (QC) tasks during all phases of project completion. The final QC review was completed in January 2012. 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 9.3.1 software. All project data was evaluated for compliance to CMP requirements.

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 chart was used in the comparison process:

17432, Clarence Strait and Moira Sound, 1:40,000 scale, 7th Ed.

17434, Revillagigedo Channel, 1:80,000 scale, 13th Ed.

17435, Harbors in Clarence Strait (Tamgas Harbor), 1:40,000 scale, 16th Ed.

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 GC10850 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC10850 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

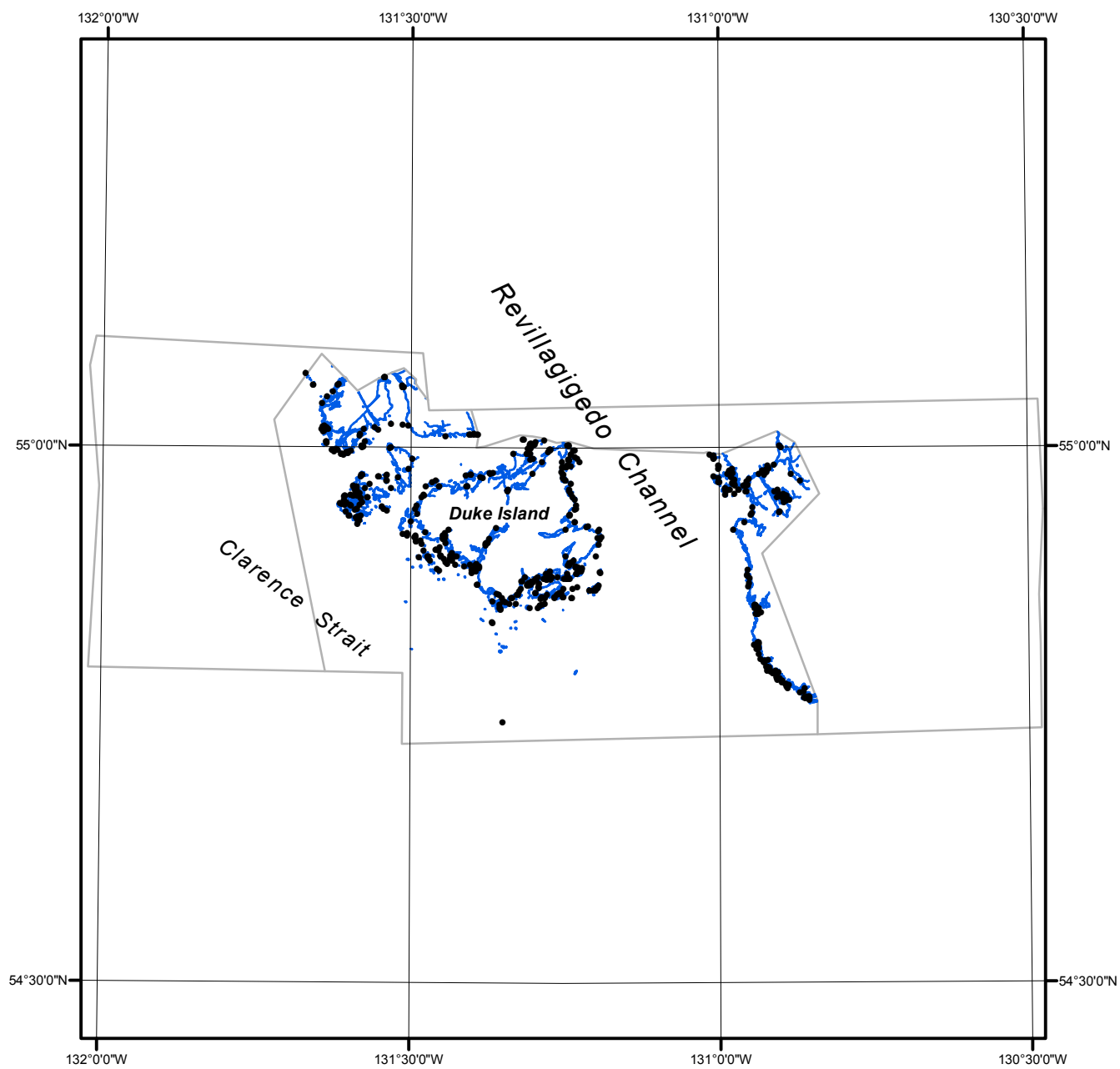
NOAA Shoreline Data Explorer

- GC10850 in shapefile format
- Metadata file for GC10850
- Digital copy of the PCR in Adobe PDF format

End of Report

SOUTHERN REVILLAGIGEDO CHANNEL AND FELICE STRAIT

ALASKA



Overview



AK0904

GC10850