

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK02A

SITKA SUPPLEMENTAL, SE ALASKA

Introduction

Coastal Mapping Program (CMP) Project AK02A provides supplemental coastal zone mapping data to compliment the coverage of project AK9703A, Sitka North, Southeast Alaska. Project AK02A provides coastal zone mapping data of four separate geographic sites in the Sitka area. The geographic coverage of the first area includes the western and southern shoreline of Kruzof Island from Cape Georgiana south to Cape Edgecumbe thence easterly towards Shoals Point. The geographic coverage of the second area includes a small section of the southwestern shoreline of Khaz Peninsula surrounding Klokachef Island. The geographic coverage of the third area includes the most northern portion of Duffield Peninsula from Deadman Reach northerly to Nismeni Point thence easterly to Peschani Point. The geographic coverage of the fourth area includes the eastern section of Nakwasina Passage, the northern section of Nakwasina Sound, and the northeastern section of Katlian Bay which are north of Sitka and tangent to Halleck Island and Lisianski Peninsula.

Project Design

This project was designed per a request from the NOAA Hydrographic Surveys Program (HSD) for cartographic 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 1999.

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 the Applications Branch of the Remote Sensing Division (RSD) in April 2002. The image files were imported into SocetSet, version 4.4.1, using the Data-Thru-Way, version 4.4.1 software. The importing process also converted the stored compressed files to a recognized native SocetSet format (NITF 2.0) and included supporting data extension files (AMSD) consisting of previously measured sensor model parameters. The analytical aerotriangulation procedures were completed from a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) Tool of SocetSet. The interactive

point measurement tool of MST was used to collect several tie points and it was determined from running the simultaneous solve adjustment program that the average predicted horizontal circular error for all well defined points in this project area is 6 meters at the 95% confidence level.

Compilation

Digital feature data compilation for this project was accomplished by the Applications Branch of RSD in June 2002. The Feature Extraction Tool of SocetSet was used during the digital cartographic feature data compilation phase of project completion. Feature attributes were established from the C-COAST specification file, which provides for the definition and attribution scheme for the suite of cartographic features pertinent to the CMP. Cartographic features were compiled to meet a horizontal accuracy of 10 meters at the 95% confidence level.

Final Review

Final office review operations were conducted interactively as the compilation phase was in progress, and independently upon initial completion of feature extraction. The process included review of aerotriangulation results, review of the identification and attribution of cartographic features based on image analysis and criteria defined in C-COAST, and review of client specific support products; such as the Chart Maintenance Print generated for NCP application. The entire suite of project products was evaluated for compliance to CMP requirements. The last step in the quality control process was the evaluation of the digital cartographic feature file (DCFF) contents focusing on the integrity of topology once the DCFF was converted into shapefile format. Copies of the following NOAA nautical charts were used for the chart comparison and for the Chart Maintenance Print:

17323, Salisbury Sound, 1:40,000 scale, 7/10/1993, 10th edition
17324, Sitka Sound to Salisbury Sound, 1:40,000 scale, 3/25/1989, 13th edition
17325, South and West Coasts of Kruzof Island, 1:40,000, 10/13/1990, 7th Edition
17338, Peril Strait, 1:40,000, 12/25/1999, 13th Edition

Project Products

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

RSD Applications Branch Archive

- Hard copy of the Project Completion Report (PCR)
- Page size graphic plot of GC-10522 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

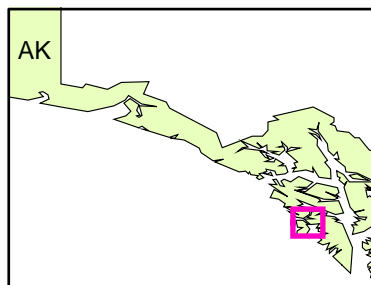
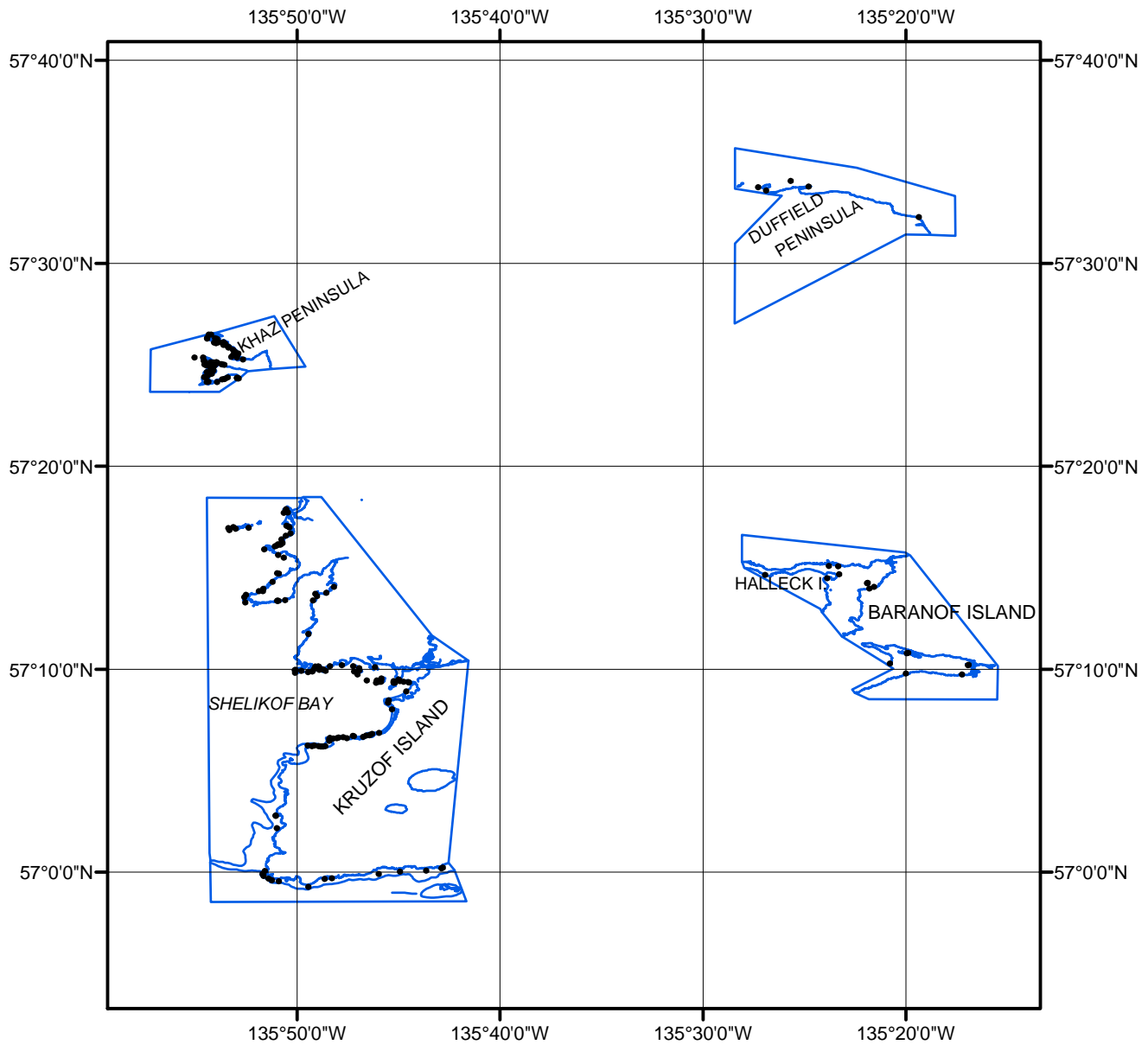
- Project Data Base
- Digital copy of DCFF GC-10522 in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

NOAA Shoreline Data Explorer

- DCFF for GC-10522
- Metadata file for GC-10522
- Digital copy of the PCR in Adobe Acrobat PDF format

End of Report

SITKA SUPPLEMENTAL SOUTHEAST, ALASKA



AK02A

GC10522