

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK0401B

CHATHAM STRAIT - NORTH SOUTHEAST ALASKA

Introduction

Coastal Mapping Program (CMP) Project AK0401B provides coastal zone mapping data of the western and northeastern shores of Chatham Strait. This data includes, north of Fredrick Sound, beginning at Murder Cove north to Mansfield Peninsula, including Whitewater Bay, Chaik Bay, Hood Bay and Kootznahoo Inlet. The data on the west side of Chatham Strait begins at Point Howard and extends South to Puffin Bay, including Freshwater Bay, Sitkoh Bay, Kelp Bay, Takatz Bay, Warm Spring Bay, Red Bluff Bay, Hoggatt Bay, Gut Bay, Patterson Bay, Deep Cove, Port Herbert, Port Walter, Port Lucy, Port Conclusion, Cape Ommaney and Larch Bay. Data collection in Peril Strait terminates at Hanus Bay. Data collection of Tenakee Inlet terminates at Corner Bay. Data collection in Icy Strait terminates approximately 7000 meters west of Point Couverden. The digital cartographic feature file 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 NOAA Hydrographic Surveys Division (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 from March 1991 to August 2003.

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 Western Air Mapping personnel in November 2004. The image files were imported into SOCET SET, version 5.0 using the DataThruWay, version 5.0 software. The importing process also converted the stored and compressed 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) Tool of SOCET SET. 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 7 meters at the 95% confidence level.

Compilation

Digital feature data compilation for this project was accomplished by Western Air Mapping personnel in September 2005. The Feature Extraction Tool of SOCET SET was used during the digital cartographic feature data compilation phase of project completion. Feature attributes were established from the C-COAST specification file which provided 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. Tidal information was obtained from the NOS tide station at Sitka, Alaska, which has a tidal range between MLLW and MHW of 2.8 meters. The source imagery was acquired when the stage of tide above MLLW was 3.0 meters during March 1999, 2.0 meters during April 2003 and 2.1 meters during August 2003. Precise acquisition times were not available to verify tidal information for the source imagery acquired during March and June of 1991.

Final Review

A final review was conducted interactively by Western Air Mapping personnel in September 2005, and independently upon initial completion of feature extraction. The process included a review of the aerotriangulation results, a review of the identification and attribution of cartographic features based on image analysis and criteria defined in C-COAST, and a review of client specific support products such as the Chart Evaluation File (CEF) 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 DCFF contents focusing on the integrity of topology once the DCFF was converted into shapefile format.

<u>CHART</u>	<u>SCALE</u>	<u>EDITION</u>	<u>DATE</u>
17300 Stephens Passage to Cross Sound including Lynn Canal	1:209,978	30	Oct. 2002
17300 Tenakee Inlet inset	1:100,000	30	Oct. 2002
17312 Hawk Inlet Chatham Strait	1:10,000	1	Aug. 1997
17316 Lynn Canal	1:80,000	20	April 2002
17316 Funter Bay inset	1:20,000	20	April 2002
17320 Coronation Island to Lisianski Strait	1:217,828	16	Dec. 2003
17330 Cape Ommaney to Byron Bay	1:20,000	8	Nov. 2003
17331 Chatham Strait- Ports Alexander, Conclusion and Armstrong	1:10,000	7	July 1999
17333 Chatham Strait- Ports Herbert, Walter, Lucy and Armstrong	1:20,000	8	Nov. 2003

17335	Patterson Bay and Deep Cove	1:20,000	6	July 1992
17336	Red Bluff Bay-Chatham Strait	1:20,000	8	May 1997
17336	Hoggatt Bay-Chatham Strait	1:20,000	8	May 1997
17336	Gut Bay- Chatham Strait	1:20,000	8	May 1997
17336	Surprise Harbor and Murder Cove- Frederick Sound	1:20,000	8	May 1997
17337	Kelp Bay Chatham Strait	1:40,000	8	June 1989
17337	Warm Spring Bay Chatham Strait	1:20,000	8	June 1989
17337	Takatz and Kasnyku Bays Chatham Strait	1:20,000	8	June 1989
17338	Peril Strait	1:40,000	13	Dec. 1999
17339	Hood Bay and Kootznahoo Inlet	1:30,000	11	March 1998
17339	Killisnoo Harbor	1:10,000	11	March 1998
17341	Whitewater Bay and Chaik Bay	1:20,000	8	May 2000

Project Products

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

RSD Applications Branch Archive

- Textual (hard) copy of the Project Completion Report (PCR)
- Page size graphic plot of GC10572 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project Data Base
- Digital copy of DCFF GC10572 in ESRI shapefile format
- Digital copy of CEF in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

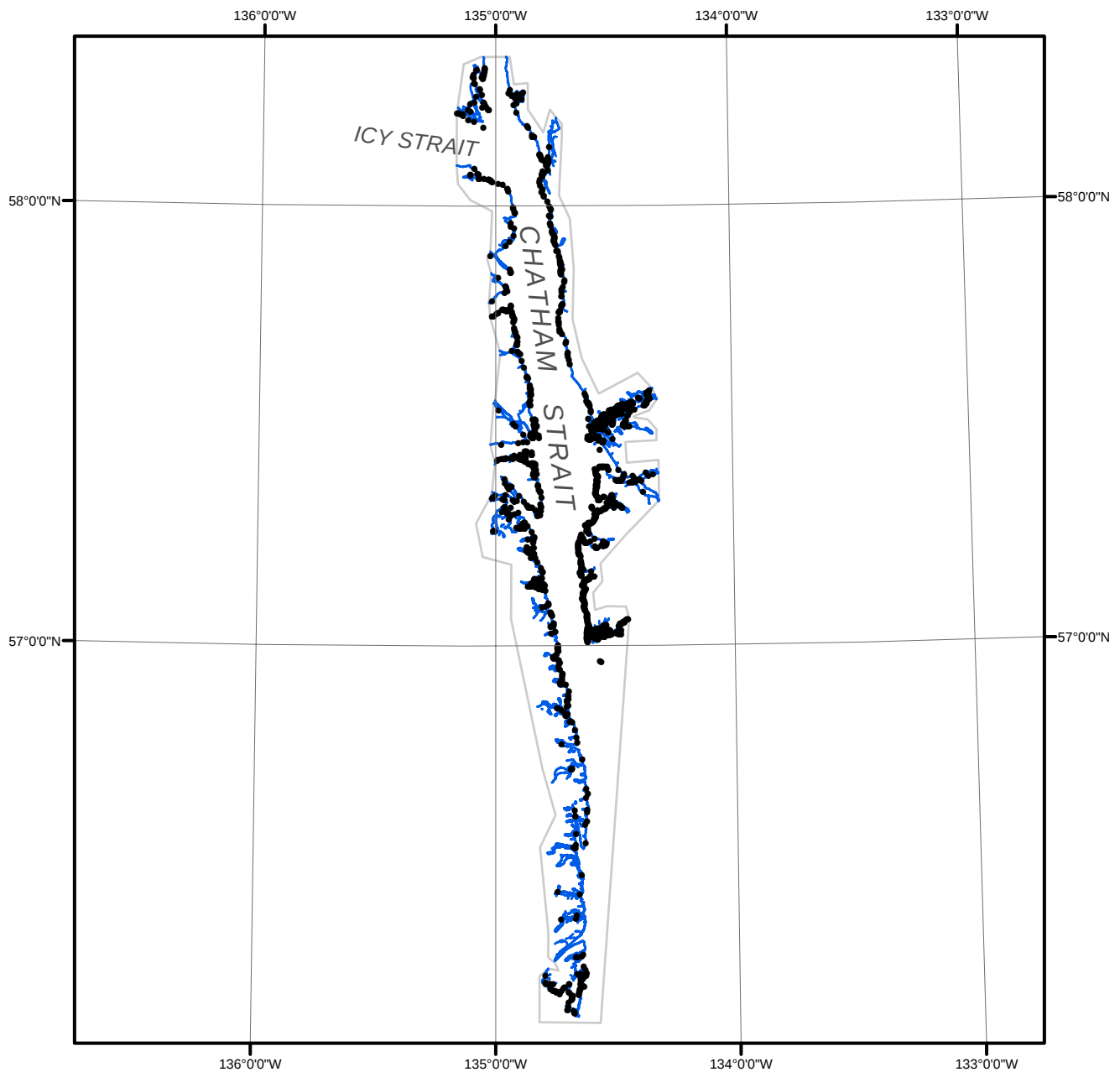
NOAA Shoreline Data Explorer

- DCFF for GC10572
- Metadata file for GC10572
- Digital copy of the PCR in Adobe Acrobat PDF format

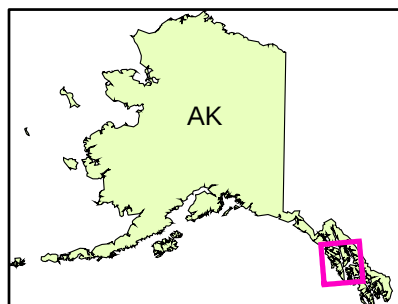
End of Report

CHATHAM STRAIT - NORTH

ALASKA



Overview



AK0401B

GC10572