

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT WA0402 BELLINGHAM BAY, WASHINGTON

Introduction

Coastal Mapping Program (CMP) Project WA0402 provides supplemental coastal zone mapping data to compliment the coverage of CM9304, San Juan Islands, Washington. Project WA0402 provides coastal zone mapping data in the northeastern portions of the Bellingham Bay and Samish Bay area from Hale Passage to Scotts Point. The geographic coverage additionally includes Portage Island, Eliza Island, Vendovi Island, and Jack Island. 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 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 August 2002.

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 a member of the Applications Branch of the Remote Sensing Division (RSD) in August 2004. The image files were imported into SOCET SET/DataThruWay, version 5.0 software. The importing process also converted the stored 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. The analytical aerotriangulation procedures were completed from 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 8 meters at the 95% confidence level.

Compilation

Digital feature data compilation for this project was accomplished by a member of the Applications Branch of RSD in December 2004. 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 provides 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. The tide stage for this project is approximately 1.5 meters above the MLLW datum. The tidal range for this area is 2.1 meters.

Final Review

Final office review operations were conducted interactively by a senior member of the Applications Branch of RSD in January 2005, and independently upon initial completion of feature extraction. The process included review of the 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 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.

NOAA nautical chart 18424, Bellingham Bay, WA, 1:40,000 scale, 26th edition, was used for the chart comparison.

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 GC10566 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project Data Base
- Digital copy of DCFF GC10566 in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

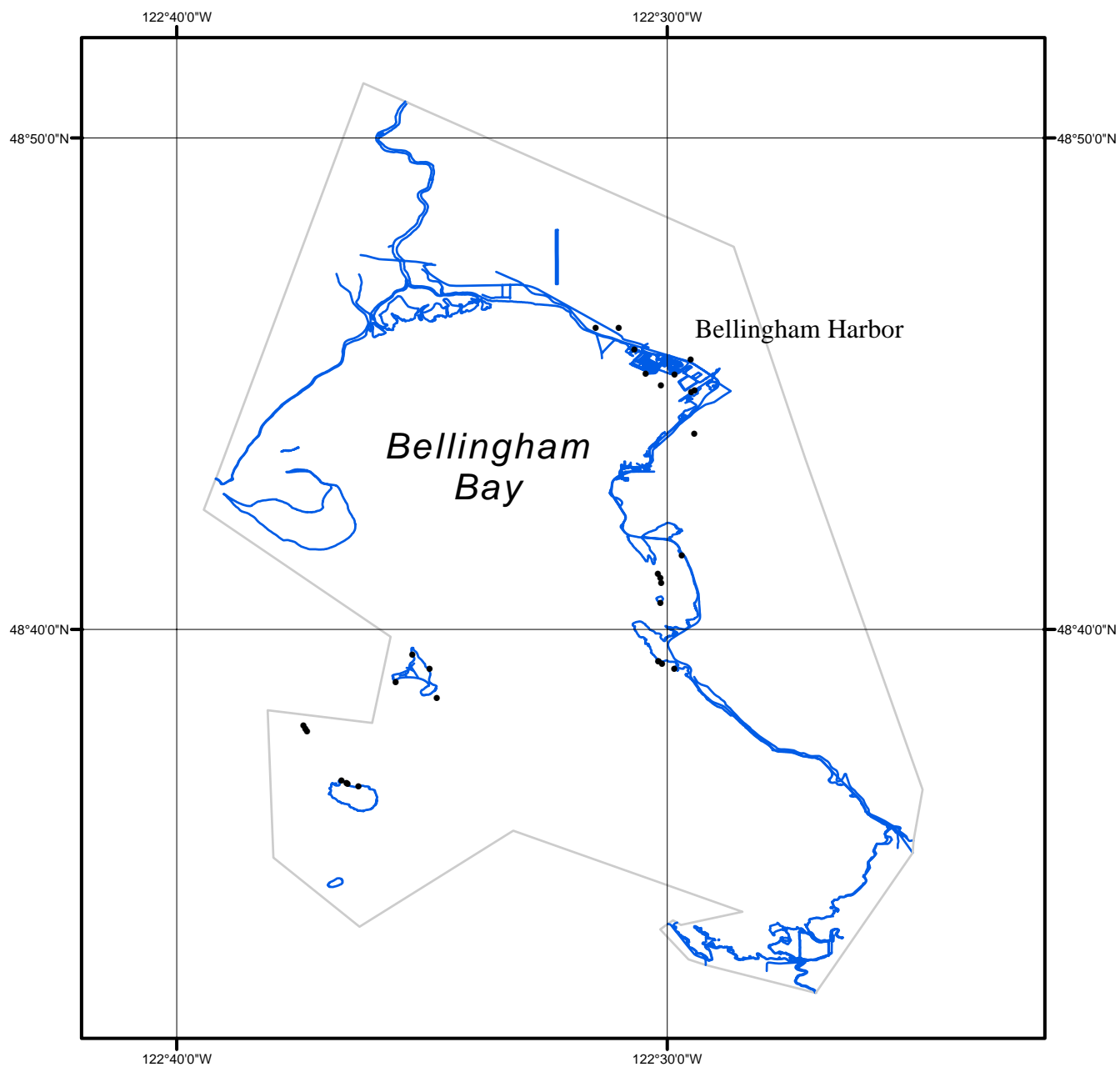
NOAA Shoreline Data Explorer

- DCFF for GC10566
- Metadata file for GC10566
- Digital copy of the PCR in Adobe Acrobat PDF format

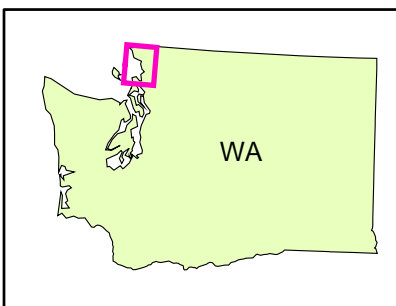
End of Report

BELLINGHAM BAY

WASHINGTON



Overview



WA0402

GC10566