

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT WA2205-CM-T

Kilisut Harbor, Washington

Introduction

Coastal Mapping Program (CMP) Project WA2205-CM-T provides accurate digital shoreline data for the southern end of Kilisut Harbor, Washington. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) as well as geographic information systems (GIS) for a variety of coastal zone management applications.

Project Design

Project WA2205-CM-T was designed in response to a request from the Navigation Services Division (NSD) of NOAA's Office of Coast Survey for shoreline data to update the NOAA Electronic Navigational Chart (ENC) series. Based on 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 one orthorectified pan-sharpened natural color satellite image (downloaded in tiled format) from DigitalGlobe, Inc.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project imagery, which was obtained from external sources.

Georeferencing

Spatial positioning of the satellite image was refined using the Georeferencing toolset within Esri's ArcGIS (ver. 10.8.1) desktop GIS software by a member of the Applications Branch (AB) of the Remote Sensing Division (RSD) in February 2022. The satellite image was adjusted to match the positioning of features from a previous CMP project, WA1401A-CM-N. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation for Project WA2205-CM-T was completed by AB personnel in February 2022. Feature data was copied from former CMP Project WA1401A-CM-N in shapefile format and modified according to the newer satellite imagery used for this project, with feature accuracies retained from the former project. Feature identification and attribution within the GC were based on image analysis of the satellite image as well as information extracted from the largest scale NOAA ENC and other ancillary sources. 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.

Spatial data accuracies for WA2205-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices, with features compiled to meet a horizontal accuracy of 3.0 meters at the 95% confidence level based on the accuracy of the source imagery used to compile former Project WA1401A-CM-N. The following table provides further detail on the imagery used to complete this project:

Sensor	Resolution	Source File ID	Acquisition Date/Time	Tide Level*
WorldView-3	0.38 m	20210925_WV03_ORTHO_mos.jp2	2021-09-25 / 19:32:00 GMT	1.7 m

* Tide level is given in meters above MLLW and is based on observations recorded by the NOS reference gage at Port Townsend, WA with offsets applied to the substation nearest the project area (Mystery Bay, WA). The height of the MHW tidal datum at Mystery Bay is 2.27 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in February 2022. The review process included an assessment of image georeferencing and 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. The entire suite of project products was evaluated for compliance to CMP requirements.

Comparison of the largest scale NOAA ENC with project imagery and compiled feature data resulted in creation of the Chart Evaluation File (CEF). The following ENC was used for comparison:

- US5WA28M, 23rd Ed., Oct. 2021, Scale 1:20,000

End Products and Deliverables

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

Remote Sensing Division Electronic Data Library

- Project database
- GC11768 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

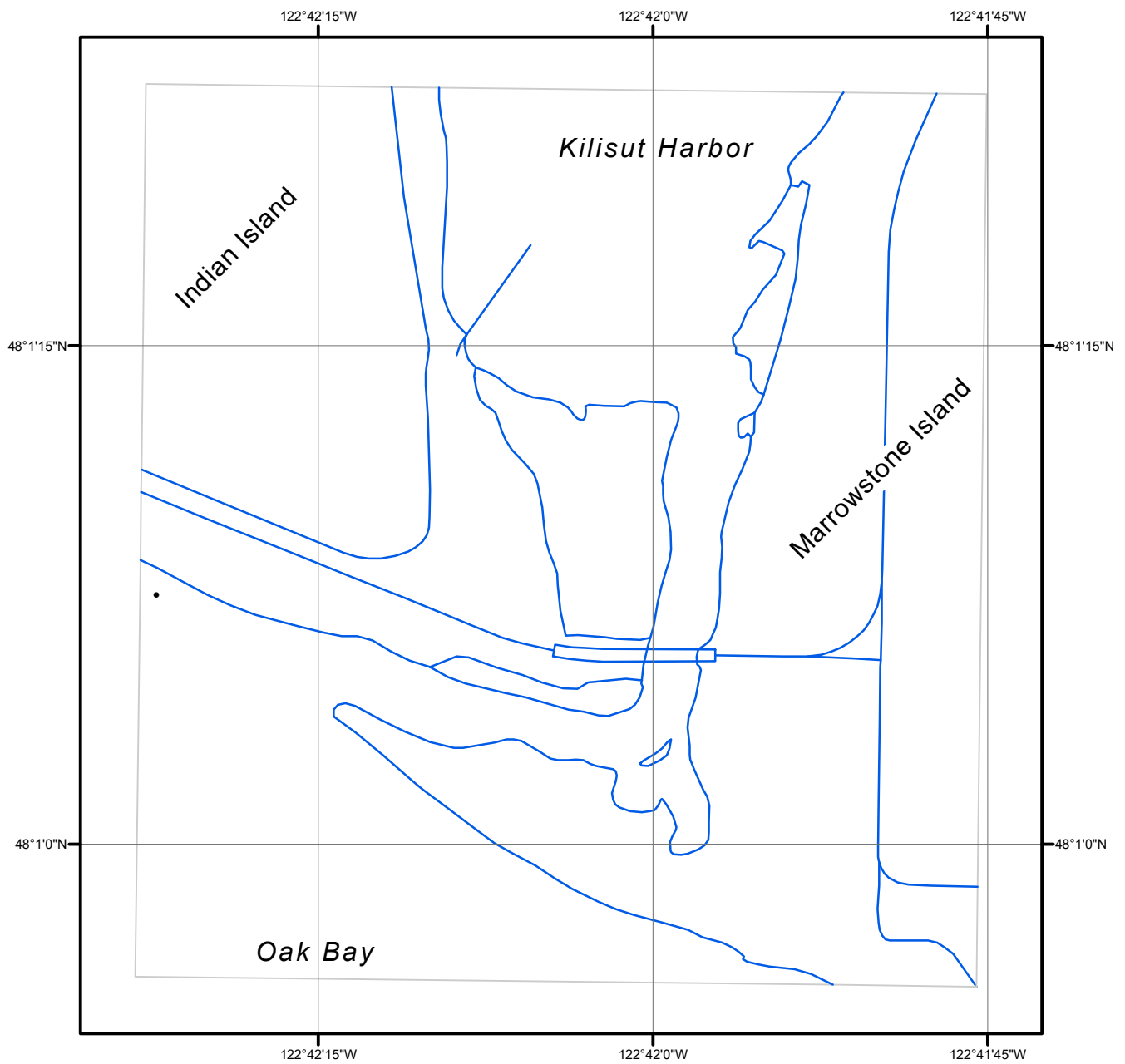
NOAA Shoreline Data Explorer

- GC11768 in shapefile format
- Metadata file for GC11768
- PCR in Adobe PDF format

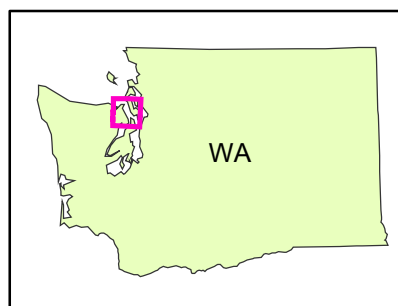
End of Report

KILISUT HARBOR

WASHINGTON



Overview



WA2205-CM-T

GC11768