

# **NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT**

## ***PROJECT WA1301***

### ***Neah Bay, Washington***

#### **Introduction**

Coastal Mapping Program (CMP) Project WA1301 provides accurate digital shoreline data for Neah Bay, Washington at the western portion of the Strait of Juan de Fuca. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) as well as geographic information systems (GIS) for coastal zone management applications.

#### **Project Design**

Project WA1301 was designed per a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA, for GIS data in response to indications of significant shoreline and infrastructure change within Neah Bay. One color orthophoto mosaic from the National Agriculture Imagery Program (NAIP) under the U.S. Department of Agriculture was obtained in response to this request.

#### **Field Operations**

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

#### **Georeferencing**

Rigorous refinement of the georeferencing of the NAIP imagery used for compilation was not necessary since image positioning compared well spatially with ground control points. NAIP imagery is acquired at a one-meter ground sample distance (GSD) with a horizontal accuracy that matches within six meters of photo-identifiable ground control points, which are used during image inspection. A total of five control points extracted from the National Geodetic Survey's (NGS) control database were used to verify this accuracy. The reported accuracy is exclusive of viewing geometry and terrain distortions. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

#### **Compilation**

The compilation of cartographic feature data for this project was accomplished by a member of the Applications Branch (AB) of the Remote Sensing Division (RSD) in May 2013. Using ESRI's ArcGIS 9.3 desktop GIS software, digital feature data was compiled in ESRI shapefile format. Feature attributes were established using the C-COAST specification file, which provides the definition and attribution scheme for the full range of cartographic features pertinent to the CMP.

Spatial data accuracies for Project WA1301 were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a

horizontal accuracy of 6.0 meters. The table below provides detailed information on the image used for feature compilation.

Image Source	Source File Name	Acquisition Date/Time	Tide Stage*
NAIP ortho	ortho_1-1_1n_s_wa009_2011_1.sid	08-20-2011 / 15:50 GMT	0.9 m

\* Tide levels are given in meters above MLLW and are based on actual observations recorded by the NOS gauge at Neah Bay, WA at the time of acquisition. The elevation of MHW is 2.0 meters above MLLW.

## Quality Control / Final Review

Quality control tasks were conducted by a senior cartographer within the CMP. The final QC review was completed in May 2013. The review process consisted of an assessment of the identification and attribution of cartographic features 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. The entire suite of project products was evaluated for compliance to CMP requirements.

Comparisons of the largest scale NOAA nautical chart with satellite imagery and compiled project data resulted in creation of the Chart Evaluation File (CEF). The following nautical chart was used in the comparison process:

18484, Neah Bay, 1:10,000 scale, 12<sup>th</sup> Ed., Jun./06

## 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 GC10989 file contents, attached to PCR

### Remote Sensing Division Electronic Data Library

- GC10989 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

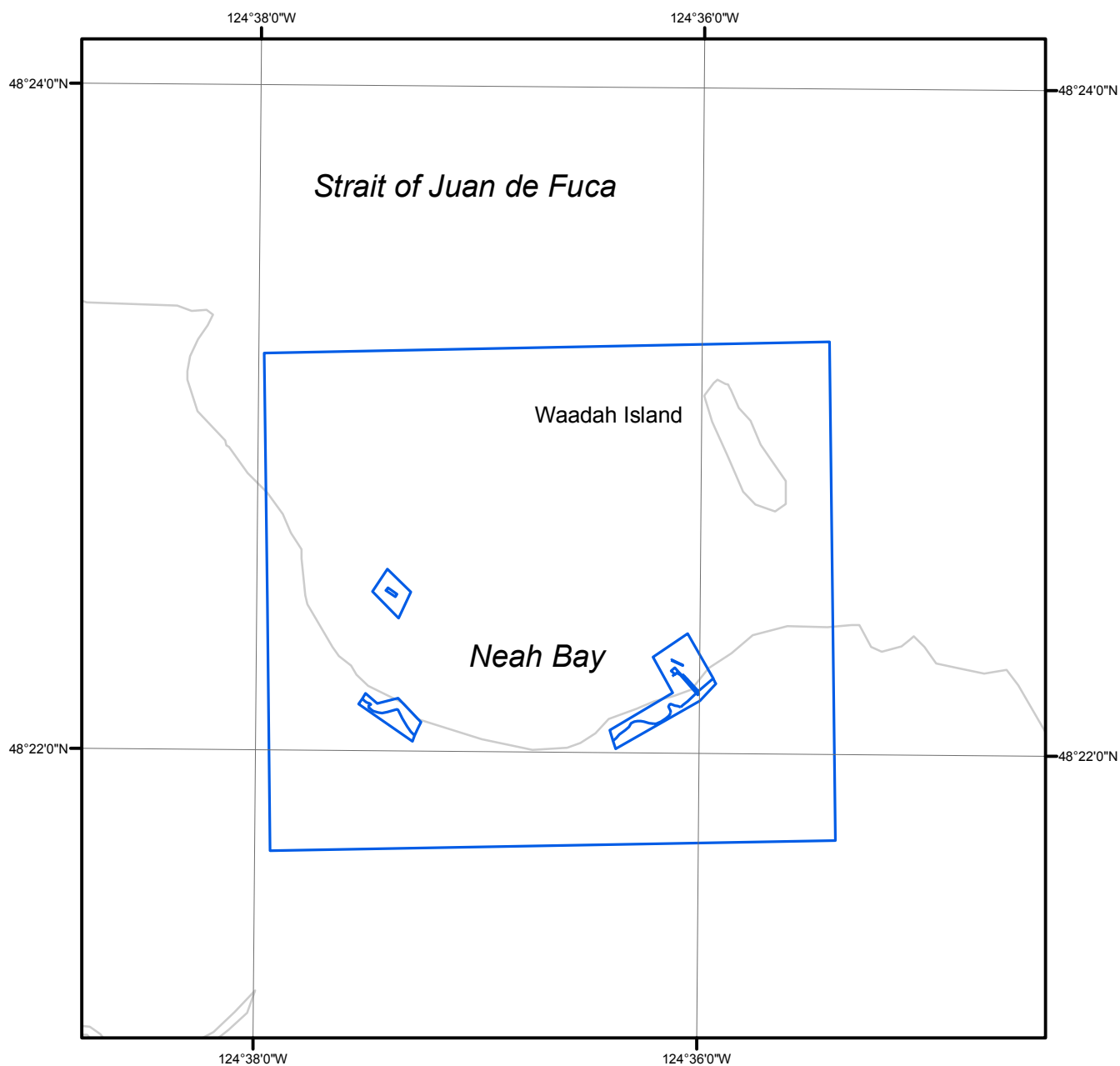
### NOAA Shoreline Data Explorer

- GC10989 in shapefile format
- Metadata file for GC10989
- Digital copy of the PCR in Adobe PDF format

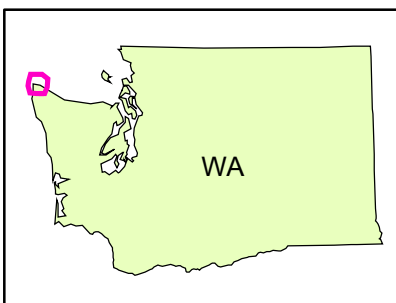
## End of Report

# NEAH BAY

## WASHINGTON



Overview



WA1301

GC10989