

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

## ***PROJECT AK1403***

### ***Atka Pier Extension, Alaska***

#### **Introduction**

Coastal Mapping Program (CMP) Project AK1403 provides accurate digital shoreline data within Nazan Bay near Atka, Alaska. 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 AK1403 was designed per a request from the Nautical Data Branch (NDB) of the Office of Coast Survey, NOAA, for GIS data in response to the lengthening of a navigationally significant pier near Atka. One panchromatic WorldView-2 satellite image from DigitalGlobe Inc., acquired April 23, 2013, was obtained in response to this request. The WorldView image has a resolution of 0.5 meters.

#### **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 WorldView image used for compilation was not necessary since image positioning compared well spatially with ground control points (GCPs), and since DigitalGlobe provided an acceptable accuracy assessment for their imagery. The accuracy of the WorldView image reported by the vendor is 5.0 m at the 90% confidence level (CE90). A total of three GCPs extracted from the National Geodetic Survey (NGS) control database were used to verify this accuracy (OUTER, INNER, ASTRO2). 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 February 2014. Using Esri 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 accuracy for Project AK1403 was determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a

horizontal accuracy of 5.7 meters, based on the vendor reported CE90 accuracy converted to the 95% confidence level (CE95). The table below provides detailed information on the image used for feature compilation.

Image Source	Source File Name	Acquisition Date/Time	Tide Stage*
WorldView-2	23APR13WV021600013APR23225340-P1BS-500071871200_01_P003.tif	2013-04-23 / 22:53:40	0.2 m

\* Tide level is given in meters above MLLW and is based on actual observations recorded by the NOS gauge at Atka, AK at the time of image acquisition. The elevation of MHW is 1.0 meters above MLLW in the project area.

## Quality Control / Final Review

Quality control tasks were conducted by a senior cartographer within the CMP. The final QC review was completed in February 2014. Review included of assessment of the identification and attribution of cartographic features according to image analysis and criteria defined in C-COAST. Quality control concluded with an inspection of topological connectivity within the GC using ArcGIS 9.3. All project products were evaluated for compliance to CMP requirements.

Comparison of the largest scale NOAA nautical chart with the satellite imagery resulted in creation of the Chart Evaluation File (CEF). The following nautical chart was used in the comparison, although no discrepancies were found within the project area: *16490, Nazan Bay and Amlia Pass, 1:20,000 scale, 8<sup>th</sup> Ed., Oct. 25/03.*

## 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 GC11056 file contents, attached to PCR

### Remote Sensing Division Electronic Data Library

- GC11056 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

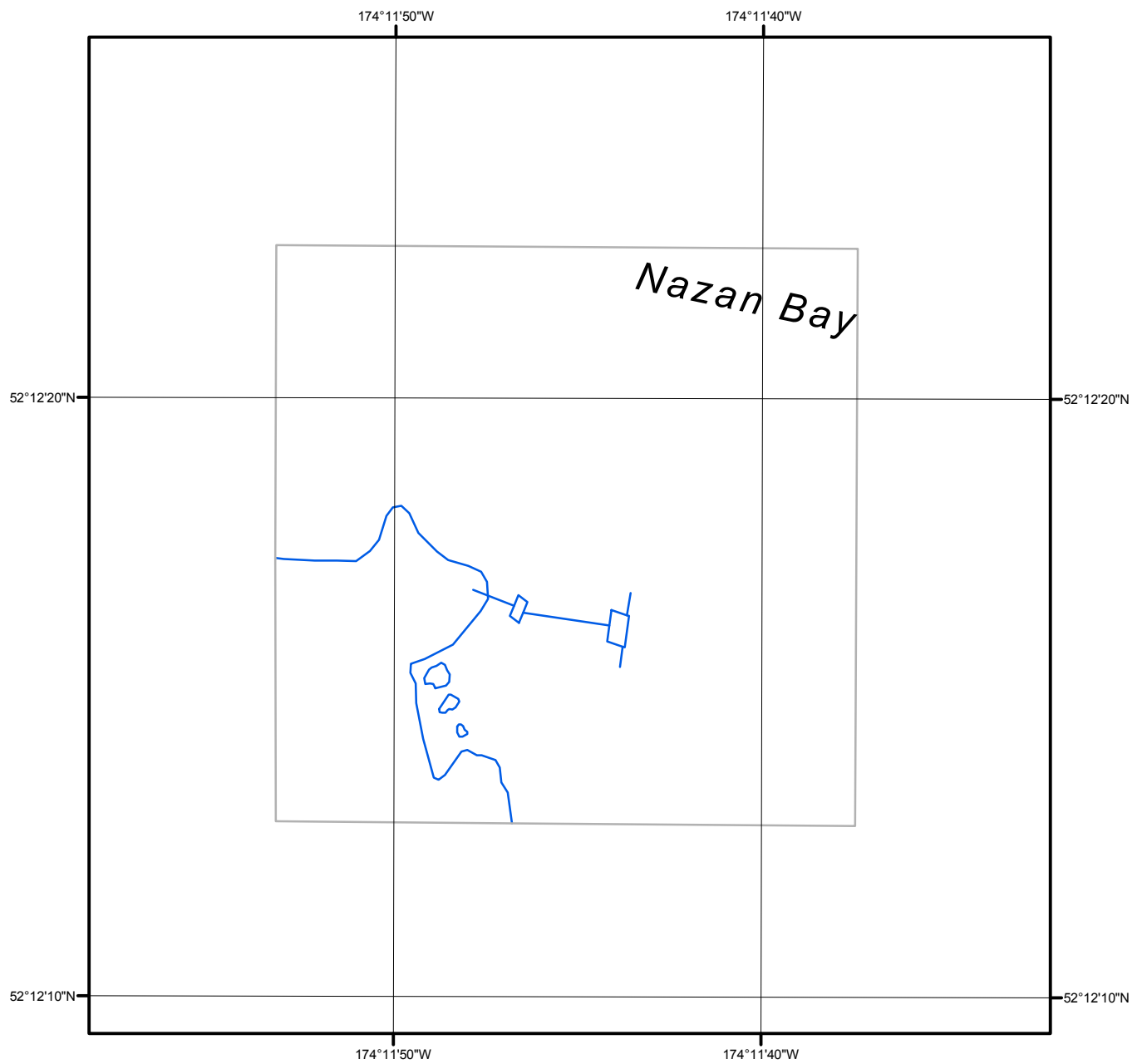
### NOAA Shoreline Data Explorer

- GC11056 in shapefile format
- Metadata file for GC11056
- Digital copy of the PCR in Adobe PDF format

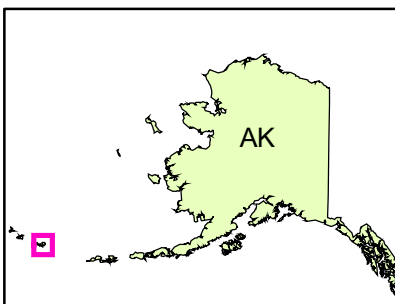
## End of Report

# ATKA PIER EXTENSION

## ALASKA



Overview



AK1403

GC11056