NOAA COASTAL MAPPING PROGRAM
PROJECT COMPLETION REPORT

PROJECT WA2207-CM-T

Centennial Island, Snake River, Washington

Introduction

Coastal Mapping Program (CMP) Project WA2207-CM-T provides accurate digital shoreline data for Centennial Island, in the Snake River, in eastern 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 WA2207-CM-T was designed in response to a request from the Marine Chart Division (MCD) of the Office of Coast Survey, NOAA for shoreline data for an uncharted manmade island in the Snake River. 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 three orthorectified commercial satellite images from DigitalGlobe, Inc., obtained via the NextView contract.

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

Two project images required no further spatial refinement of the georeferencing since the images compared favorably spatially with data sources used to verify their geolocation and since the image vendor provided acceptable accuracy assessments. The third image was shifted to better match the spatial positioning of the other two images, using the Georeferencing toolset within Esri's ArcGIS (ver. 10.8.1) software. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was completed by Remote Sensing Division (RSD) personnel in February 2022. Digital feature data was compiled in shapefile format from the satellite imagery using ArcGIS software. Feature identification and attribution within the GC were based on image analysis of the project images as well as information extracted from the largest scale NOAA nautical chart 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 WA2207-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. The standard vendor-reported RMSE was used to calculate a horizontal accuracy of 6.8 meters at the 95% confidence level in order to predict the accuracy of well-defined points measured during feature compilation.

The following table provides further detail on the imagery used to complete this project:

Sensor	GSD	Image Type / Source ID	Acquisition Date/Time	River Level*
GeoEye-1	0.28 m	Pan-sharpened natural color / 18JUL24185545-S3DS_R1C1-014850110010_ 01_P001.TIF	2018-07-24 / 18:55:30 GMT	735.43 ft
WorldView-1	0.35 m	Panchromatic / 19AUG12214052-P3DS_R1C1-014850111010_01_P001.TIF	2019-08-12 / 21:40:47 GMT	736.25 ft
WorldView-1	0.5 m	Panchromatic / 19AUG28220437-P2AS-014850112010_01_P001.TIF	2019-08-28 / 22:04:34 GMT	735.50 ft

* River levels are given in feet above MSL. The normal pool elevation behind the Lower Granite Dam is 738 ft above MSL.

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 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 (ver. 10.8.1). The entire suite of project products was evaluated for compliance to CMP requirements.

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

US5OR36M, 12th Ed., Jun. 2018, 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
- GC11774 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

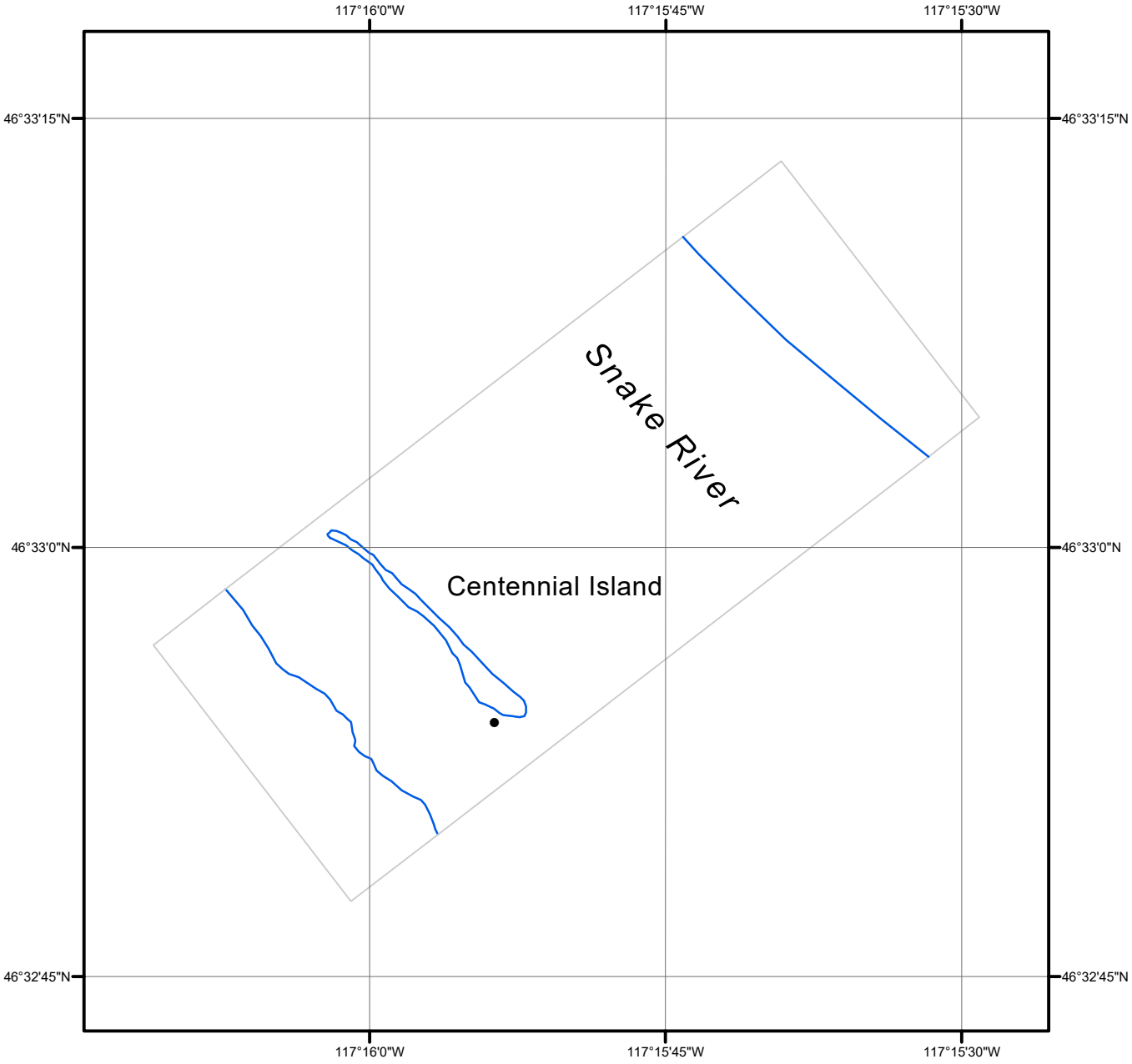
NOAA Shoreline Data Explorer

- GC11774 in shapefile format
- Metadata file for GC11774
- PCR in Adobe PDF format

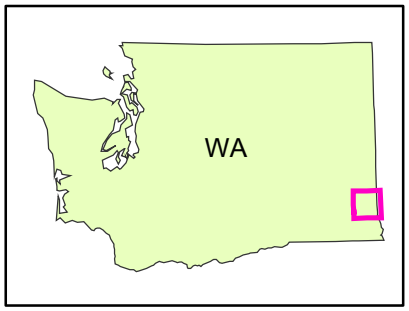
End of Report

CENTENNIAL ISLAND, SNAKE RIVER

WASHINGTON



Overview



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GC11774