

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1807-CM-T

Tarr Inlet at Margerie and Grand Pacific Glaciers, Alaska

Introduction

NOAA Coastal Mapping Program (CMP) Project AK1807-CM-T provides accurate digital shoreline data where Tarr Inlet meets Margerie and Grand Pacific Glaciers, in southeast 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 a variety of coastal zone management applications.

Project Design

Project AK1807-CM-T was designed in response to a request originating from the Navigation Services Division (NSD) of the Office of Coast Survey, NOAA. 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 this project included orthorectified natural color WorldView commercial satellite imagery from DigitalGlobe, Inc., obtained through the NextView government 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

Four WorldView images were used for this project. Three of these images, used for compilation, were georeferenced to align with previously compiled CMP GC10779 (AK0809) using Georeferencing tools in Esri's ArcGIS (ver. 10.5) desktop GIS software. The remaining image was used for reference only and was not georeferenced. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Data compilation was accomplished by personnel of the Applications Branch (AB) of the Remote Sensing Division (RSD) in May 2018. Feature data was compiled in shapefile format from the satellite imagery using Esri's ArcGIS (ver. 10.5). 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 AK1807-CM-T were determined according to standard Federal Geographic Data Committee (FGDC) practices. Cartographic features were compiled to meet a horizontal accuracy of 13 meters at the 95% confidence level. This accuracy is based on the accuracy of the source data to which project imagery was georeferenced. The table below provides further details on the imagery used to complete this project:

Image Source	Resolution	Source ID (tiles)	Acquisition Date/ Time	Tide Level*
WorldView-3	0.35 m	20160609_WV03_ORI_MOS_ NAD83.jp2	2016-06-09 / 20:55 GMT	n/a
WorldView-2	0.5 m	20171222_WV02_ORI_MOS_ NAD83.jp2	2017-12-22 / 20:34 GMT	1.7 m
WorldView-2	0.5 m	18JAN18204322-S3DS_R1C1- 057957893010_01_P001_NAD 83.jp2	2018-01-18 / 20:43 GMT	4.2 m
WorldView-2	0.5 m	18JAN18204322-S3DS_R1C1- 057957895010_01_P001_NAD 83.jp2	2018-01-18 / 20:43 GMT	4.2 m

* Tide levels are given in meters above MLLW and based on observations recorded by the NOS reference gage at Elfin Cove, AK, with time and height offsets applied to the substation at Tarr Inlet, Glacier Bay. The height of the MHW tidal datum for Tarr Inlet is 4.8 meters above MLLW.

Quality Control / Final Review

Quality control tasks were conducted upon project completion by senior CMP personnel in May 2018. 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 10.5. The entire suite of project products was evaluated for compliance to CMP requirements. A Chart Evaluation File (CEF) was created by comparing project imagery with the following nautical chart:

- 17318, Glacier Bay; Bartlett Cove, Alaska, 8th Ed., Nov. 2012

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
- GC11425 in shapefile format
- Project Completion Report (PCR)
- CEF in shapefile format

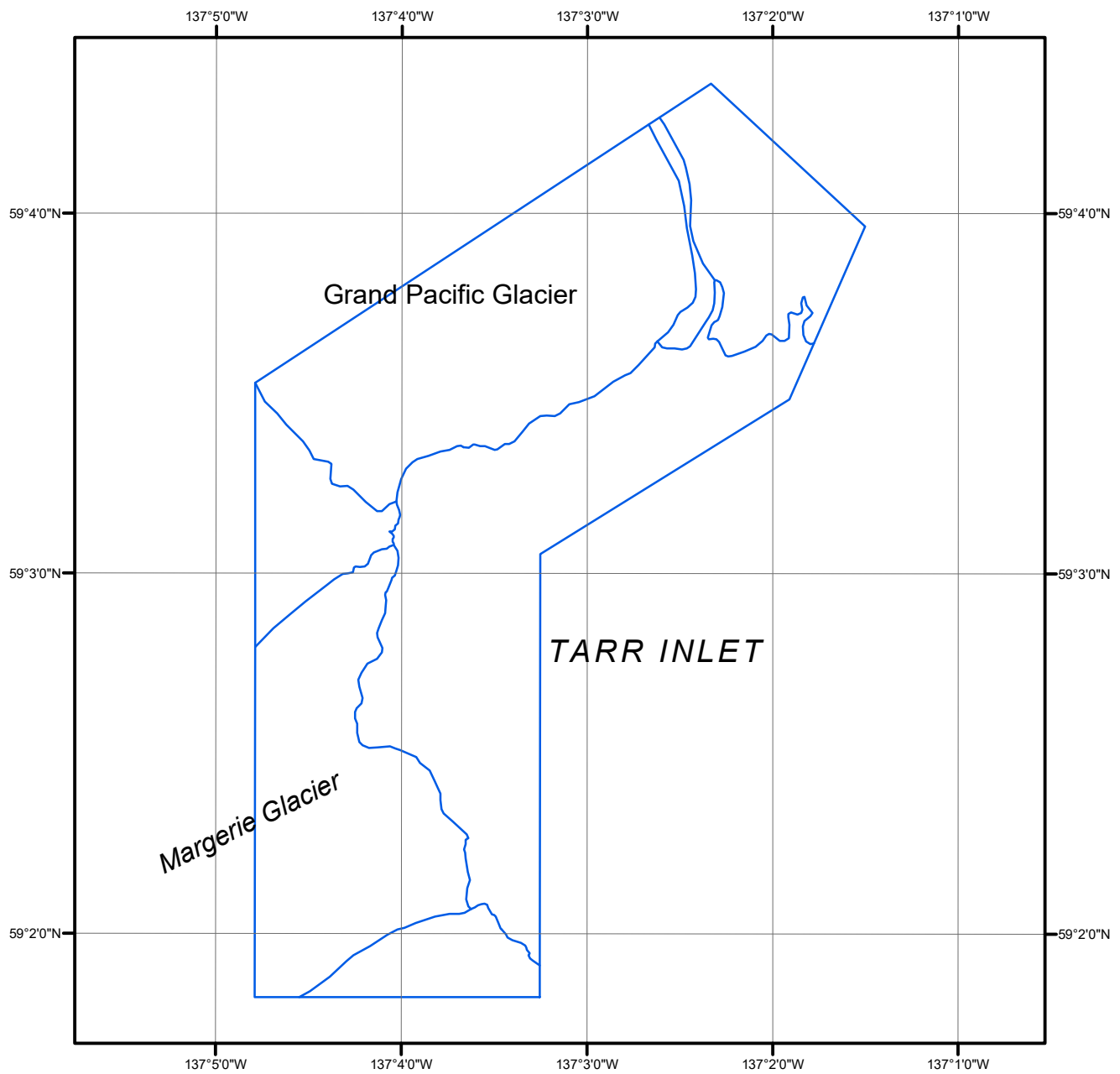
NOAA Shoreline Data Explorer

- GC11425 in shapefile format
- Metadata file for GC11425
- Digital copy of the PCR in Adobe PDF format

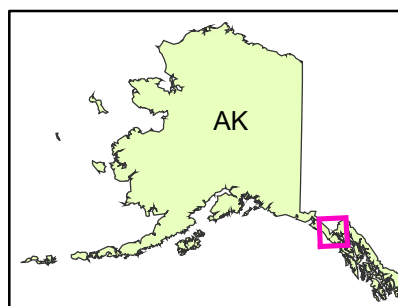
End of Report

TARR INLET AT MARGERIE / GRAND PACIFIC GLACIERS

ALASKA



Overview



AK1807-CM-T

GC11425