

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

## ***PROJECT AK0609***

### ***Tracy Arm, Southeast Alaska***

#### **Introduction**

Coastal Mapping Program (CMP) Project AK0609 provides coastal zone mapping data of Sawyer Glacier and South Sawyer Glacier in Tracy Arm in southeastern Alaska. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) and coastal zone management activities. Project survey data is referenced to the North American Datum of 1983 (NAD 83).

#### **Project Design**

This project was designed per a request from the NOAA Hydrographic Surveys Division (HSD) of the Office of Coast Survey, NOAA, for cartographic data in support of HSD operations. Based on an 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 sources acquired in May, 2004.

#### **Field Operations**

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

#### **Aerotriangulation**

The aerotriangulation task was accomplished by Remote Sensing Division (RSD) personnel in April, 2007. The image files were imported into SOCET SET, Version 5.2 using the DataThruWay, Version 5.2 software. The importing process also converted the stored and compressed files to a recognized native SOCET SET format (NITF 2.0) and included supporting data extension files consisting of previously measured sensor model parameters. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) Tool of SOCET SET. The Interactive Point Measurement tool within MST was used to collect several tie points and a simultaneous solve adjustment was then performed, forecasting an average predicted horizontal circular error for all well defined points in this project area of 9 meters at the 95% confidence level. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

## **Compilation**

Digital feature data compilation for this project was accomplished by RSD personnel in April of 2007. The Feature Extraction tool of SOCET SET was used during the digital feature data compilation phase of project completion. 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. Selected features were further modified with additional descriptive information to refine general classification.

Cartographic features were compiled to meet a horizontal accuracy of 12 meters at the 95% confidence level. Tidal information was obtained from the NOS reference tide station at Juneau, AK, and time and height offsets were applied to a tidal substation in the project area. The mean tide range at the substation was 4.0 meters. The water level at the time the source images were acquired was 0.9 meters above MLLW.

## **Quality Control / Final Review**

The final quality control review was completed by RSD personnel in May of 2007. The review process included analysis of aerotriangulation results and 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 9.2 software. All project data was evaluated for compliance to CMP requirements.

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

- 17311, Holkham Bay and Tracy Arm, 1:40,000 scale, 1<sup>st</sup> Ed.
- 17311, Tracy Arm, 1:20,000 scale inset, 1<sup>st</sup> Ed.

## **End Products and Deliverables**

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

### **RSD Applications Branch Archive**

- Hardcopy of the Project Completion Report (PCR)
- Page-size graphic plot of GC10674 file contents, attached to PCR

### **Remote Sensing Division Electronic Data Library**

- Project database
- GC10674 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

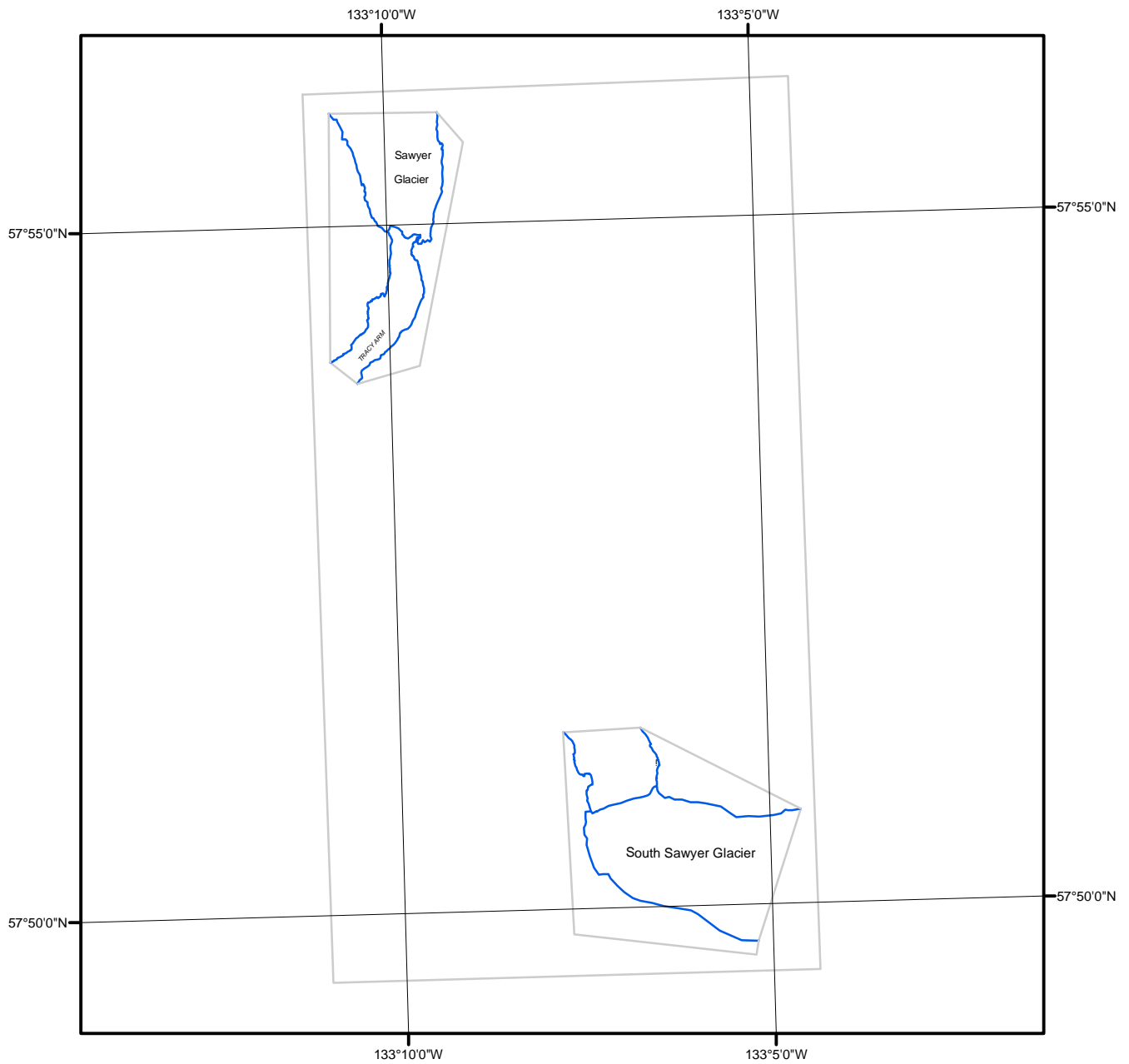
### **NOAA Shoreline Data Explorer**

- GC10674 in shapefile format
- Metadata file for GC10674
- Digital copy of the PCR in Adobe PDF format

## **End of Report**

# TRACY ARM

## ALASKA



Overview



AK0609

GC10674