H13036

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	H13036

LOCALITY

State(s):	Alaska
General Locality:	Aleutian Islands
Sub-locality:	Vicinity of Beaver Bay

2017

CHIEF OF PARTY
Andrew Orthmann

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Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H13036**

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State(s):	**Alaska**
General Locality:	**Aleutian Islands**
Sub-Locality:	**Vicinity of Beaver Bay**
Scale:	**40000**
Dates of Survey:	**07/20/2017 to 09/26/2017**
Instructions Dated:	**06/09/2017**
Project Number:	**OPR-P384-KR-17**
Field Unit:	**TerraSond Limited**
Chief of Party:	**Andrew Orthmann**
Soundings by:	**Multibeam Echo Sounder**
Imagery by:	
Verification by:	**Pacific Hydrographic Branch**
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via http://www.ncei.noaa.gov/.

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Descriptive Report to Accompany Survey H13036

Project: OPR-P384-KR-17

Locality: Aleutian Islands

Sublocality: Vicinity of Beaver Bay

Scale: 1:40000

July 2017 - September 2017

TerraSond Limited

Chief of Party: Andrew Orthmann

A. Area Surveyed

The survey area is located in the vicinity of Unga Strait, a frequently transited passage for vessels between Unga Island to the south and the Alaska Peninsula to the north. The closest community is Sand Point, population 1,044 (2016), located southeast of the survey area on Popof Island. Area characteristics include rugged, rocky coastline and highly variable bottom topography with depths that change rapidly over short distances, especially as shore is approached. Unga Strait is relatively protected, with additional protection for vessels available in nearby bays including Beaver Bay, which is entirely within this survey area.

Field work was carried out on this project between July and September 2017, with bathymetric data collection occurring in July and August. Office work including final data processing and reporting was completed from October through December, 2017. Work was done in accordance with the Hydrographic Survey Project Instructions (dated June 9th, 2017), Hydrographic Survey Services Statement of Work (dated May 19, 2017), and the Hydrographic Surveys Specifications and Deliverables (April 2017 edition).

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
55° 31' 23.35" N 161° 18' 18.32" W	55° 19' 35.68" N 160° 49' 17.63" W

Table 1: Survey Limits

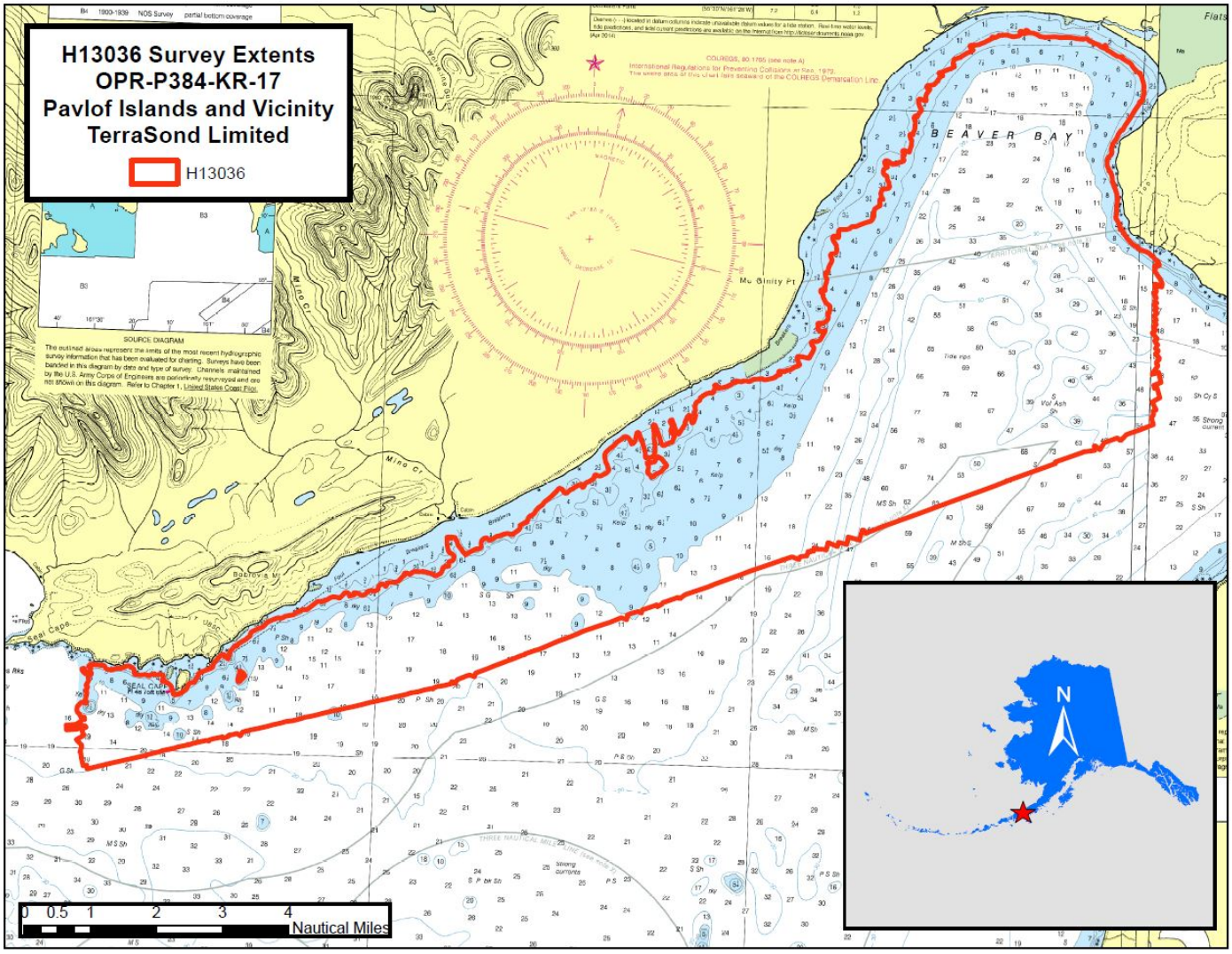

Figure 1: Survey extents and overview

The geographical survey limits assigned via the Project Reference File (PRF) were achieved. The inshore limit, the 8 m contour, was achieved in all areas where it was safe for personnel and equipment to do so.

A.2 Survey Purpose

The purpose of this project is to provide contemporary surveys to update National Ocean Service nautical charts to support an increase in vessel traffic in Unga Strait. This survey area includes protected waters for vessels transiting from areas to the east in the Gulf of Alaska and Shelikof Strait to the very busy Unimak Passage, which is the gateway to the Bering Strait utilized by cargo, fishing, and trans-pacific vessels. This passage and nearby areas are utilized by the fishing fleet in Bristol Bay and the Bering Sea as well as the tug and tow traffic delivering goods to the Aleutian Islands, western Alaska, and the Arctic. Local vessel traffic to and from the nearby fishing community of Sand Point as well as fishing activity within the survey area is

also common. This area was last surveyed using partial bottom coverage techniques. Survey data from this project is intended to supersede all prior survey data in the common area.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

The following table lists the coverage requirements for this survey as assigned in the project instructions:

Water Depth	Coverage Required
All survey areas	100-meter multibeam set line spacing (HSSD Section 5.2.2.4 Option A). Feature developments/disprovals shall be done to complete coverage (HSSD Section 5.2.2.3) requirement.
All waters in survey area	Acquire backscatter data during all multibeam data acquisition (HSSD Section 6.2)

Table 2: Survey Coverage

Coverage requirements were generally met, with the following important notes and/or exceptions:

Set Line Spacing areas:

1. Despite requirements for 100-m set line spacing, Complete Coverage was actually achieved for most of the area due to water depth. This generally occurred in depths of 30-40 meters and greater.

Bathymetric splits were acquired where appropriate to address charted soundings falling between lines and adequately define shoals, contours, and significant deeps. These were rare for this survey because much of the set spaced area received complete coverage.

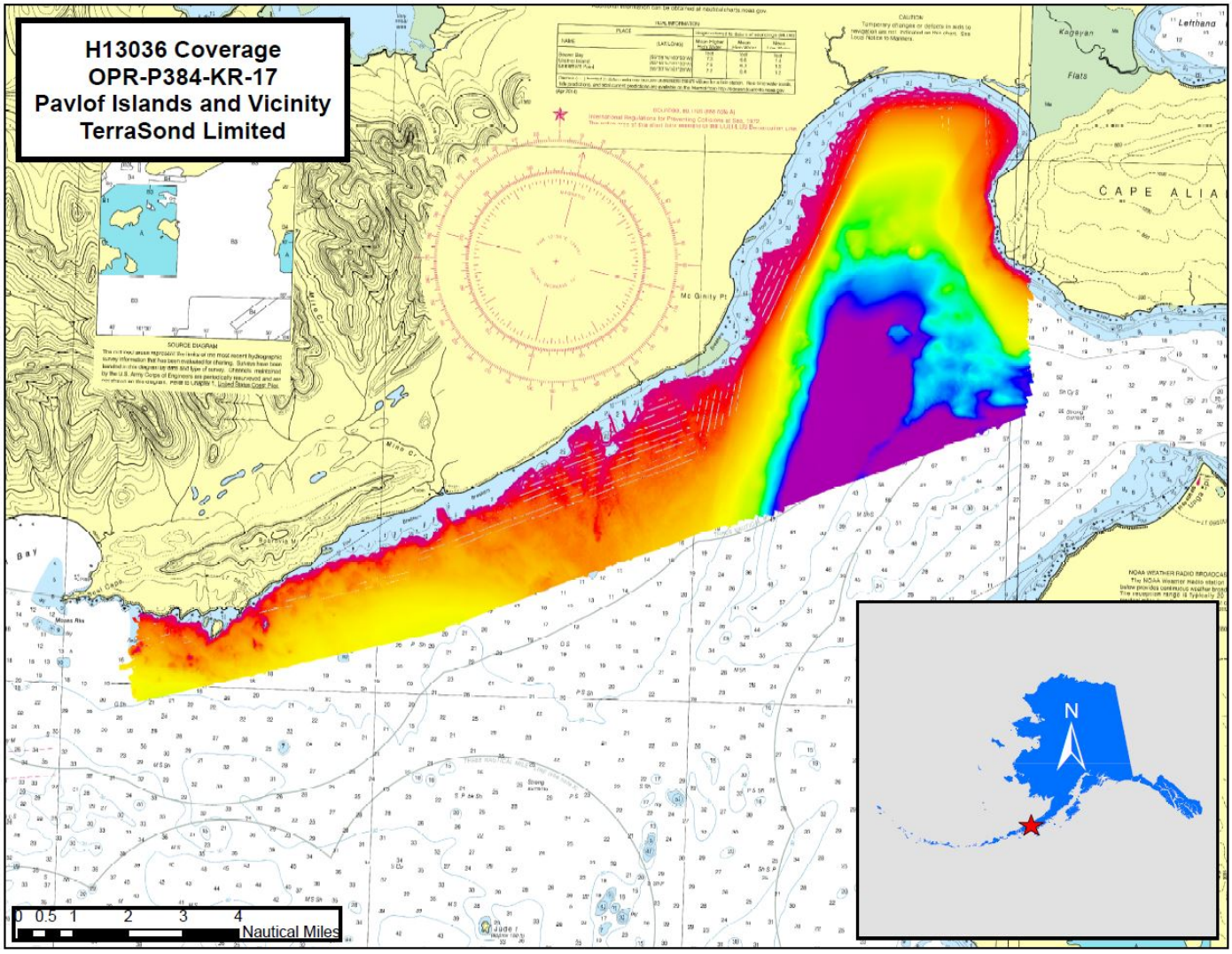

Figure 2: Coverage Graphic Image

A.6 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	HULL ID	*Qualifier 105*	*ASV-CW5*	*Total*
LNM	**SBES Mainscheme**	0	0	0
	MBES Mainscheme	361	627	988
	Lidar Mainscheme	0	0	0
	SSS Mainscheme	0	0	0
	SBES/SSS Mainscheme	0	0	0
	MBES/SSS Mainscheme	0	0	0
	SBES/MBES Crosslines	40	47	87
	Lidar Crosslines	0	0	0
Number of Bottom Samples				6
Number Maritime Boundary Points Investigated				0
Number of DPs				274
Number of Items Investigated by Dive Ops				0
Total SNM				50.9

Table 3: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey:

Survey Dates	Day of the Year
07/20/2017	201

Survey Dates	Day of the Year
07/21/2017	202
07/22/2017	203
07/24/2017	205
07/25/2017	206
07/30/2017	211
07/31/2017	212
08/01/2017	213
08/02/2017	214
08/08/2017	220
08/09/2017	221
08/10/2017	222
08/11/2017	223
08/12/2017	224
08/14/2017	226

Table 4: Dates of Hydrography

Bathymetry collection was completed on 8/14. Bottom samples were completed on 9/26.

B. Data Acquisition and Processing

B.1 Equipment and Vessels

Refer to the Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods. Additional information to supplement survey data and any deviations from the DAPR are discussed in the following sections.

B.1.1 Vessels

The following vessels were used for data acquisition during this survey:

Hull ID	*Qualifier 105*	*ASV-CW5*
LOA	32 meters	5.5 meters
Draft	1.8 meters	0.5 meters

Table 5: Vessels Used

The Qualifier 105 (Q105) is a 32 m aluminum-hull vessel owned and operated by Support Vessels of Alaska. The Q105 acquired multibeam data and provided housing and facilities for on-site data processing. The vessel was also used to collect bottom samples, deploy/recover BMPG tide gauges, conduct sound speed casts, and deploy/recover the ASV-CW5 vessel.

The ASV-CW5 (C-Worker 5) is a 5.5 m aluminum-hull Autonomous Surface Vessel (ASV) owned and operated by ASV Global. The ASV was operated in an unmanned but monitored mode, collecting multibeam data in close proximity to the Q105.

Refer to the DAPR for vessel photos, offset diagrams, and more information on vessel operations.

B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

Manufacturer	Model	Type
Teledyne Reson	Seabat 7101	MBES
Applanix	POSMV 320 V5	Positioning and Attitude
Applanix	POSMV 320 Wavemaster II	Positioning and Attitude
Valeport	Rapid SVT 200Bar	Sound Speed Profiler
Teledyne Oceanscience	RapidCAST	Sound Speed Profiler Deployment System
Trimble	5700	Base Station
Sea-Bird Electronics	SBE 26 Plus	Submerged Tide Gauge
AML Oceanographic	MinosX with Xchange Sensors	Conductivity and Temperature Gauges

Table 6: Major Systems Used

Details on equipment specifications, configurations, quality control, and methods of operation are available in the DAPR.

B.2 Quality Control

B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 8.81% of mainscheme acquisition.

Effort was made to ensure crosslines had good temporal and geographic distribution, were run so as to enable maximal nadir-to-nadir comparisons, and percent of mainscheme LNM requirements were achieved. Crosslines were conducted with both vessels to ensure there was ample overlap for inter-vessel comparisons, with each vessel crossing the other's mainscheme lines. Since the two vessels worked in close proximity and ran parallel lines, crosslines were often collected in sets.

The crossline analysis was conducted using CARIS HIPS “Line QC Report” process. Each crossline was selected individually and run through the process, which calculated the depth difference between each accepted crossline sounding and a "QC" BASE (CUBE-type, 4 m resolution) surface’s depth layer created from the mainscheme data. QC surfaces were created with the same parameters used for 4 m surfaces as the final surfaces, with the important distinction that the QC surfaces did not include crosslines so as to not bias the results. Differences in depth were grouped by beam number and statistics computed, which included the percentage of soundings with differences from the QC surface falling within IHO Order 1a. When at least 95% of the sounding differences exceed IHO Order 1a, the crossline was considered to “pass,” but when less than 95% of the soundings compare within IHO Order 1, the crossline was considered to “fail.” A 5% (or less) failure rate was considered acceptable since this approach compares soundings to a surface (instead of a surface to a surface), allowing for the possibility that noisy crossline soundings that don't adversely affect the final surface(s) would be counted as a QC failure in this process if the difference from the sounding to the surface exceeded the allowable TVU.

Results: Agreement with the crosslines is excellent. For each crossline, at least 97.4% of soundings agreed to the mainscheme surface within the allowable TVU. Most crosslines had results of 99% or better.

Refer to Separate II: Digital Data for the detailed Crossline QC Reports.

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Method	Measured	Zoning
Discrete Zoning	0.034 meters	0.061 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
Qualifier 105	0 meters/second	1.679 meters/second	0.025 meters/second
ASV-CW5	0 meters/second	1.679 meters/second	0.025 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

All soundings were assigned a horizontal and vertical value for estimated total propagated uncertainty (TPU).

Real-time (dynamic) error estimates were computed and loaded for all applicable data. This replaced the static error estimates for attitude, positioning, and tide during final TPU computation. Exceptions, if they exist, are rare and are listed in Section B.3 of this report. Note that the tide error values for measured and zoning shown above are maximum errors for reference only -- actual tidal errors were computed dynamically. Refer to the DAPR for more information on derivation of TPU estimates.

The BASE surfaces were finalized in CARIS HIPS so that the uncertainty value for each grid cell is the greater of either standard deviation or uncertainty. The uncertainty layer of each final surface was then examined for areas of uncertainty that exceeded allowable TVU for the depth (Order 1a for depths less than 100 m, and Order 2 for depths 100 m and deeper). Uncertainty for the surfaces are 0.10 m to 1.53 m for the 4 m surface, 0.20 m to 1.66 m for the 8 m surface, and 0.36 m to 0.81 m for the 16 m surface.

The vast majority of grid cells have uncertainty values within allowable TVU. Highest uncertainties were found in areas of varying bottom topography such as slopes and near bottom features where high standard deviations are caused by the wide depth ranges of soundings contributing to each grid cell, outer edges of multibeam swathes without adjacent line overlap, and areas exhibiting sound speed or motion artifact error. Despite elevated TPU values for these grid cells, the data is within specifications.

B.2.3 Junctions

The project instructions specified junction analysis be undertaken between current project sheets (current junctions) as well as specific overlapping contemporary surveys (prior junctions). For this survey, three junctions were examined, all of which were current junctions.

Difference surface methodology was used for the junction comparisons. Surfaces from the junctioning surveys were differenced from each other in CARIS HIPS. The differences were then extracted, statistics computed, and examined where differences exceeded the allowable TVU for the depth multiplied by 1.414 at a 95% C.I. (per the HSSD).

For current junction comparisons, 4 m resolution CUBE BASE surfaces were used for the comparisons.

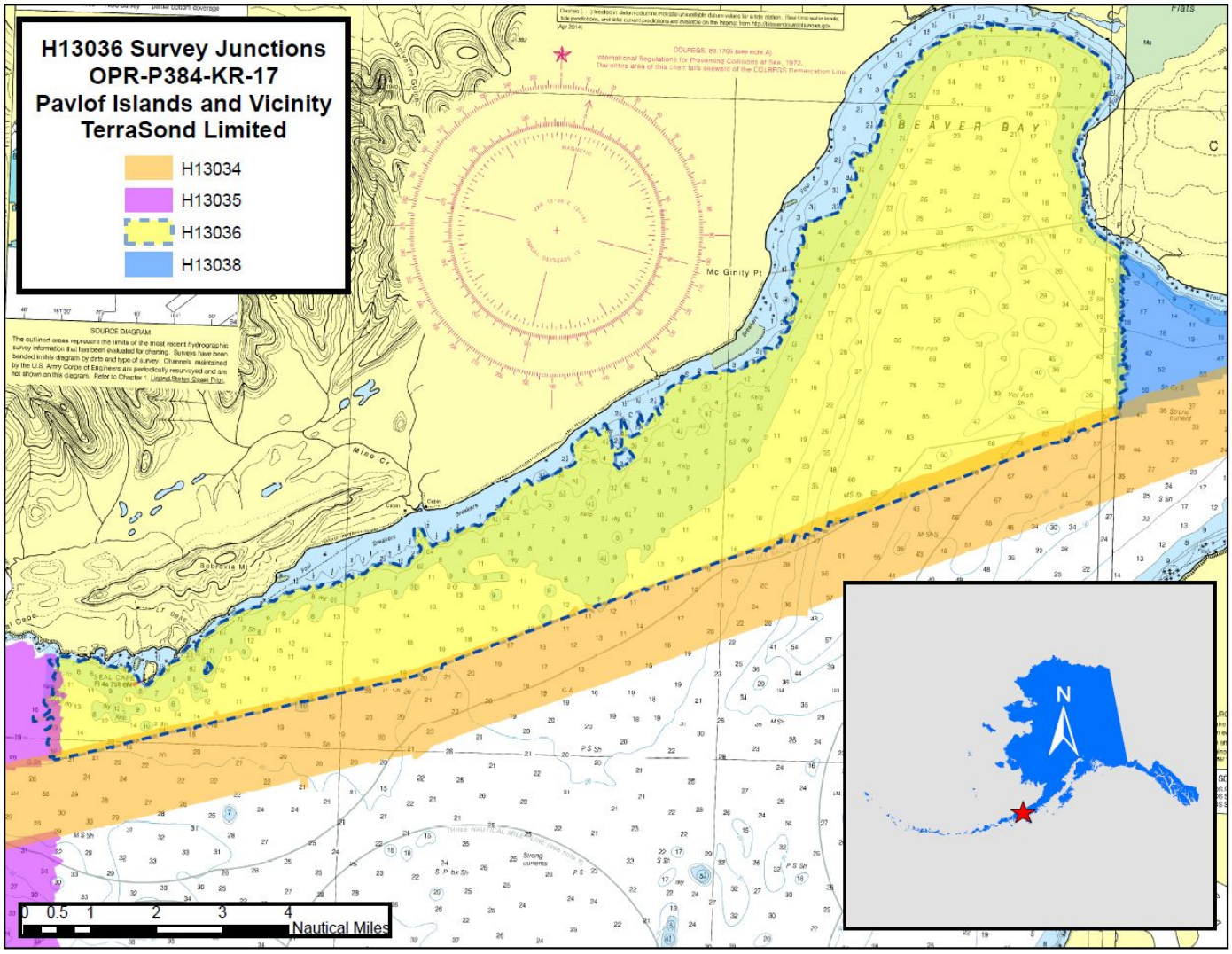

Figure 3: Survey extents and overview

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13034	1:40000	2017	TerraSond	S
H13035	1:40000	2017	TerraSond	SW
H13038	1:40000	2017	TerraSond	E

Table 9: Junctioning Surveys

H13034

4 m CUBE CSAR surfaces for H13034 and H13036 were differenced from each other and the results were extracted and analyzed. These surveys compare well within specifications. The average difference between these surveys is 0.062 m with a standard deviation of 0.221 m. At least 98.5% of overlapping grid cells compare within the allowable TVU (multiplied by 1.414) for the depth.

H13035

4 m CUBE CSAR surfaces for H13035 and H13036 were differenced from each other and the results were extracted and analyzed. These surveys compare well within specifications. The average difference between these surveys is 0.027 m with a standard deviation of 0.193 m. At least 99.3% of overlapping grid cells compare within the allowable TVU (multiplied by 1.414) for the depth.

H13038

4 m CUBE CSAR surfaces for H13036 and H13038 were differenced from each other and the results were extracted and analyzed. These surveys compare well within specifications. The average difference between these surveys is 0.041 m with a standard deviation of 0.264 m. At least 96.8% of overlapping grid cells compare within the allowable TVU (multiplied by 1.414) for the depth.

B.2.4 Sonar QC Checks

Echosounder confidence checks consisting of bar checks, lead lines, and inter-vessel acoustic comparisons were undertaken on this project. Results were excellent, with agreement averaging 0.008 m for bar checks, 0.007 m for lead lines, and 0.056 m for inter-vessel acoustic comparisons . Refer to the bar check, lead line, and echosounder depth comparison logs available in Separate I: Acquisition and Processing Logs for specific results. Refer to the project DAPR for more information regarding QC checks methodology.

B.2.5 Equipment Effectiveness

7101 Errant Pings

The 7101 MBES sonars often output an errant, skewed swath. These were relatively common but generally did not occur consecutively, therefore having little effect on data quality or density. These were rejected manually in CARIS swath editor when encountered, or in CARIS subset mode if they adversely affected final surfaces. Refer to the DAPR, Section B, for more information and an example.

ASV-CW5 Rotated Head

The ASV-CW5 MBES sonar head was rotated 30 degrees to starboard (starboard-up) from JD211 onwards to more effectively survey near-shore areas. Although this configuration was advantageous for surveying steep, rocky areas, the rotation made starboard beams more subject to errors including those from sound speed, motion, and acoustic noise, especially when surveying flat offshore areas. While in this configuration, care was taken to ensure appropriate overlap and reject erroneous outer beam data in processing. Unrejected (accepted) soundings collected in this configuration showed good agreement with crosslines as well as overlapping lines. Final data is within specifications. Refer to the DAPR Section B for more information.

B.2.6 Factors Affecting Soundings

Sound Speed Error

A general downward or upward across-track cupping in multibeam data, indicative of sound speed error, is present sporadically in the data set. For ASV-CW5 data collected with the 30 degree rotated sonar head, this appears instead as an upward or downward curving swath on the starboard side only. When it occurred, the sound speed error adversely affected outer beams by up to 0.50 m in places, to 1 m or more on rotated head data. To minimize the error, sound speed profiles were collected every 2 to 4 hours during multibeam operations, and filters were used in processing to remove the outermost beams. Additionally, in processing, outer beam data was rejected manually where sound speed error adversely affected the surface by an amount greater than the allowable TVU for the depth. The effect of sound speed error on final surfaces is relatively minor, normally not exceeding 0.5 m, and is within specifications.

Motion Artifact

Motion artifact, though uncommon, is occasionally visible in the final multibeam surfaces. This is the result of uncompensated effects of motion, particularly due to roll. The primary contributer was motion induced on the survey vessels by poor sea states. A survey-grade Applanix POSMV units were used for motion compensation but residual error within the manufacturer specifications for the system remains nonetheless. The problem was addressed in acquisition by avoiding surveying in higher sea states whenever practical, and running with line spacing that allowed significant overlap between lines in Complete Coverage areas. In processing, filtering removed outer beams that were most affected, and remaining soundings that adversely affected the surfaces greater than the allowable TVU for the depth were manually rejected. Following the additional filtering and editing, the effect on the final surface is normally 0.25 m or less, which is within specifications.

Note that the ASV-CW5, at 3.5 m in length was a much smaller survey platform than the Q105 at 32 m in length, and therefore, experienced greater induced motion at the same sea states, resulting in more motion artifact for lines run simultaneously.

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: 2 hours

Sound speed profiles or casts were acquired aboard the Q105 while underway with an Oceanscience RapidCAST system, which utilized a Valeport sound speed profiler. The interval between subsequent casts was normally 2 hours, though an interval of 4 hours was used from JD196 to JD207. During each cast, the sound speed sensor was lowered as close as possible to the seafloor, and then retracted to the vessel and downloaded. When surveying lines covering widely varying water depths, deeper portions of lines were favored for casts to ensure that the sound speed variance through as much water column as possible was measured.

The ASV-CW5 vessel was not equipped to collect sound speed profiles. Instead, the profile data collected aboard the Q105 was used to correct all ASV-CW5 data. This was possible because the ASV-CW5 worked in close proximity (up to 3 km, but usually within 1 km) of the Q105 at all times.

In processing, the sound speed profiles were examined and outliers rejected. Up and down portions of the profiles were averaged and a combined profile at a standardized 0.10 m depth increment was output to CARIS SVP format with time and position. Sound speed profiles were applied with the “nearest in distance within time” method in CARIS HIPS, with time set to 4 hours up until JD207, and 2 hours from JD207 onwards. Exceptions, if they occurred, are listed in section B.3 of this report.

B.2.8 Coverage Equipment and Methods

Refer to the DAPR, section B.2.4 "Data Coverage and Density," for details on the equipment, software, and methodology used to meet object detection, coverage, and data density requirements.

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

Corrections applied to echo soundings are detailed in the project DAPR. No deviations occurred except for those listed below. Note that despite exceptions, affected data is within specifications.

Post-processed Data Exception

Delayed Heave (TrueHeave), SBETs, and SMRMSGs could not be applied to the following lines because no POS raw files were logged during their period of acquisition:

All ASV JD220 lines with filename prefixes from 0882 to 0909

Sound Speed Correction Exception

The following lines required sound speed correction using Nearest in Distance within 3 hours (instead of the standard 2 hours):

0652-ASV-214-C7MS02300_-_0001
1122-ASV-223-C6MS00920_-_0001
1123-ASV-223-C6MS00920_-_0001
1124-ASV-223-C6MS00920_-_0001

Note: Two versions of the HIPS Vessel File (HVF) exist for each vessel in the CARIS project (standard and "-DH" versions). This was done to address differences in raw multibeam record types for the lines associated with each HVF. Refer to Section B of the DAPR for additional information.

B.3.2 Calibrations

Calibrations were undertaken as described in the DAPR. No deviations occurred.

B.4 Backscatter

Multibeam backscatter was logged at all times during this survey, but not processed. Raw DB and XTF files, submitted with the survey deliverables, contain the backscatter records.

B.5 Data Processing

B.5.1 Primary Data Processing Software

The following Feature Object Catalog was used: V5.6.

There were no software configuration changes after the DAPR was submitted.

B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13036_MB_4m_MLLW_Final	CUBE	4 meters	0 meters - 80 meters	NOAA_4m	Set Line Spacing MBES

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13036_MB_8m_MLLW_Final	CUBE	8 meters	72 meters - 160 meters	NOAA_8m	Set Line Spacing MBES
H13036_MB_16m_MLLW_Final	CUBE	16 meters	144 meters - 320 meters	NOAA_16m	Set Line Spacing MBES

Table 10: Submitted Surfaces

The final depth information for this survey was submitted as CARIS BASE surfaces (CSAR format) which best represented the seafloor at the time of the 2017 survey. The surfaces were created from fully processed data with all final corrections applied.

Surfaces were created using NOAA CUBE parameters and resolutions by depth range in conformance with the 2017 HSSD. Surfaces were finalized, and designated soundings were applied where applicable. Horizontal projection was selected as UTM Zone 4 North, NAD83.

Non-finalized versions of the CSAR surfaces are also included. These do not have the _Final designation in the filename.

A CARIS HOB file was submitted (H13036_FFF.HOB) with the survey deliverables as well. The final feature file (FFF) contains meta-data and other data not readily represented by the final surfaces, including bottom samples and shoreline verification results, if applicable. Each object is encoded with mandatory S-57 attributes and NOAA Extended Attributes (V#5.6).

Since the maximum depth for Survey H13036 is 156m, the processing branch only finalized and combined surfaces to 8m resolution since the 16m will not need to be archived.

C. Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR.

C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

Traditional Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
Sand Point, AK	9459450
King Cove, AK	9459881

Table 11: NWLON Tide Stations

The following subordinate water level stations were established for this survey:

Station Name	Station ID
Zachary Bay	9459465

Table 12: Subordinate Tide Stations

File Name	Status
9459450.tid	Final Approved

Table 13: Water Level Files (.tid)

File Name	Status
OPRR300KR2017_20171031.zdf	Final

Table 14: Tide Correctors (.zdf or .tc)

The Zachary Bay (9459465) station was used for tidal zoning purposes only. Final corrections used the NWLON station Sand Point, AK (9459450).

C.2 Horizontal Control

The horizontal datum for this project is NAD83 (2011).

The projection used for this project is UTM Zone 4N.

The following PPK methods were used for horizontal control:

Smart Base

Positioning and attitude data was post-processed for this project.

The Continually Operating Reference Station (CORS) site AB07 (Sand Point) was used as the primary base station for GPS post-processing. The site was used in an Applanix SmartBase (ASB) algorithm configuration, yielding final positioning results well within requirements. Project base stations installed in Sand Point (0056 and 5240) were not used for final positioning, but were utilized for independent position quality checks on the AB07-derived results.

Real-time positions for both vessels were replaced during data processing with post-processed kinematic (PPK) solutions, with few exceptions (noted if applicable earlier in this report).

Quality control confidence checks were performed at least weekly on the survey vessels as well as the project base stations. RMS error estimates for positioning results were very good, with RMS error generally estimated at 0.10 m (or better). Confidence check results are available in Separate I.

Refer to the project DAPR for additional details on quality control checks, results, and PPK processing methodology.

Final positions are NAD83 (2011).

The following CORS Stations were used for horizontal control:

HVCR Site ID	Base Station ID
AB07	Sand Point CORS

Table 15: CORS Base Stations

The following user installed stations were used for horizontal control:

HVCR Site ID	Base Station ID
0056	Sand Point 1
5240	Sand Point 2

Table 16: User Installed Base Stations

WAAS was used for real-time corrections only.

The following WAAS Stations were used for horizontal control:

DGPS Stations
n/a

Table 17: FAA WAAS Stations

D. Results and Recommendations

D.1 Chart Comparison

The chart comparison was performed by examining all Electronic Navigational Charts (ENCs) that intersect the survey area. The latest editions available at the time of the review (12/4/17) were used.

The chart comparison was accomplished by overlaying the finalized BASE surfaces with shoal-biased soundings, and final feature file on the charts in CARIS HIPS. The general agreement between charted soundings and survey soundings was then examined and a more detailed comparison was undertaken for any shoals or other dangerous features. In areas where a large scale chart overlapped with a small scale chart, only the larger scale chart was examined.

When comparing to survey data, chart scale was taken into account so that 80 m (1 mm at chart scale) was considered to be the valid radius for charted soundings and features.

Results are shown in the following sections.

It is recommended that in all cases of disagreement this survey should supersede charted data.

USCG Notice to Mariners (NM) and USCG Local Notice to Mariners (LNM) were checked for updates affecting the area. None of note were found within this survey area that were issued subsequent to issuance date of the project instructions nor prior to the completion of operations.

D.1.1 Electronic Navigational Charts

The following are the largest scale ENCs, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US4AK55M	1:80000	20	08/11/2017	08/11/2017	NO
US4AK56M	1:80000	4	12/04/2015	12/04/2015	NO
US4AK57M	1:80000	15	12/01/2015	12/01/2015	NO

Table 18: Largest Scale ENCs

US4AK55M

This survey's overlap with US4AK55M is incidental, with slight overlap on this survey's west side. However, one sounding from this chart was covered by this survey and is discussed in the Shoal and Hazardous Features section of this report.

Refer to the DRs for the junctioning surveys to the west for more discussion on agreement for this chart.

US4AK56M

General agreement between this survey and US4AK56M is very good. The vast majority of charted soundings agree with this survey to within 2 m. Greatest discrepancy seems to be on the western and eastern slopes of Beaver Bay, where charted soundings often show slightly shoaler than actual depth, likely due to the scale of the chart. There are no individual discrepancies of special note not already discussed elsewhere in this report. Refer to the FFF for near-shore feature discrepancies and recommendations.

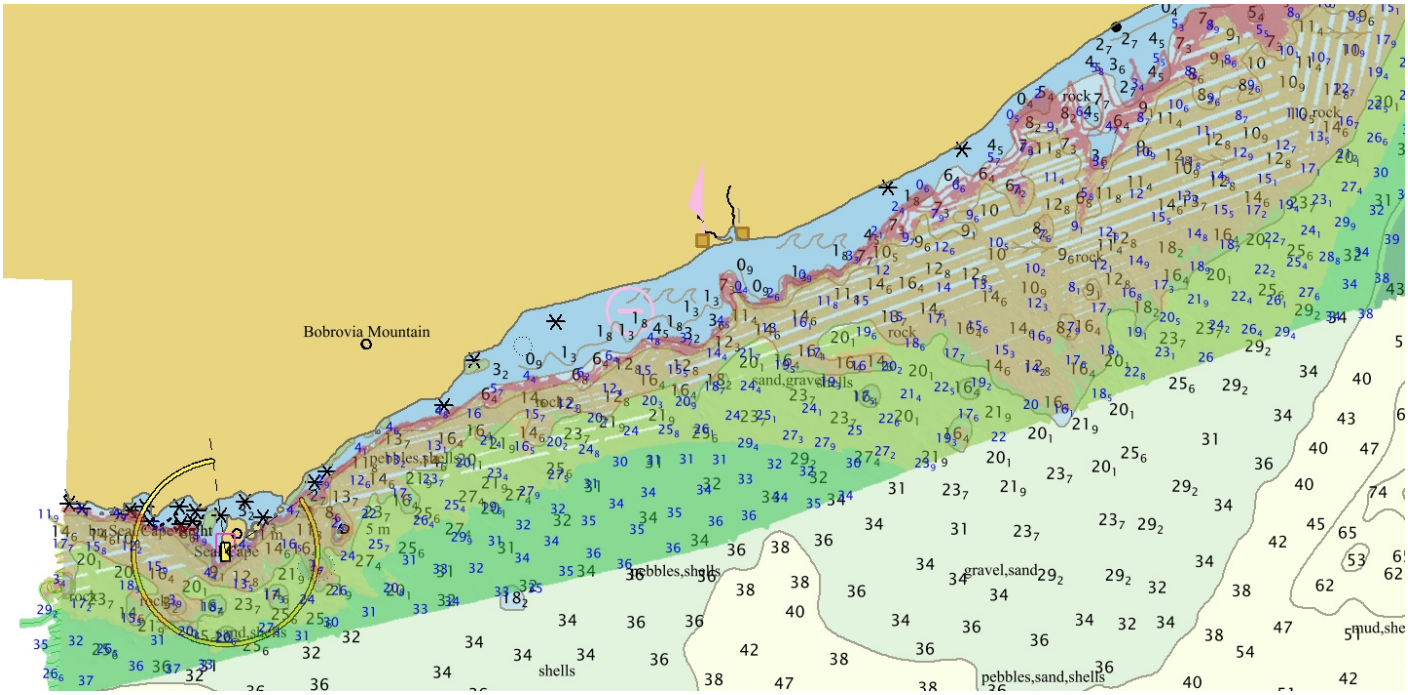

Figure 4: Soundings from this survey (blue) overlaid on ENC US4AK56M, showing generally good agreement. Image 1 of 3, west side of survey area. Soundings in meters.

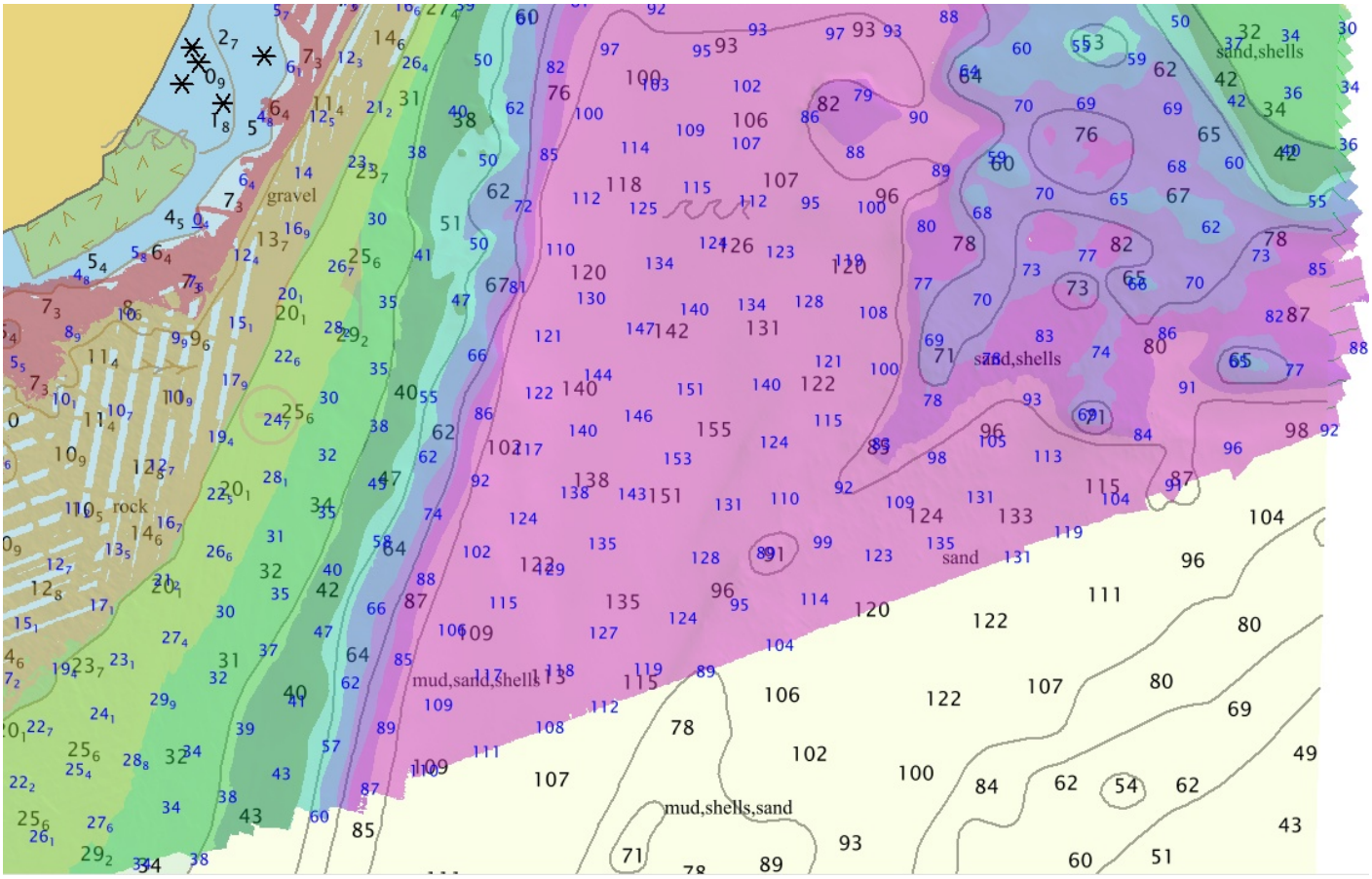

Figure 5: Soundings from this survey (blue) overlaid on ENC US4AK56M, showing generally good agreement. Image 2 of 3, SE side of survey area. Soundings in meters.

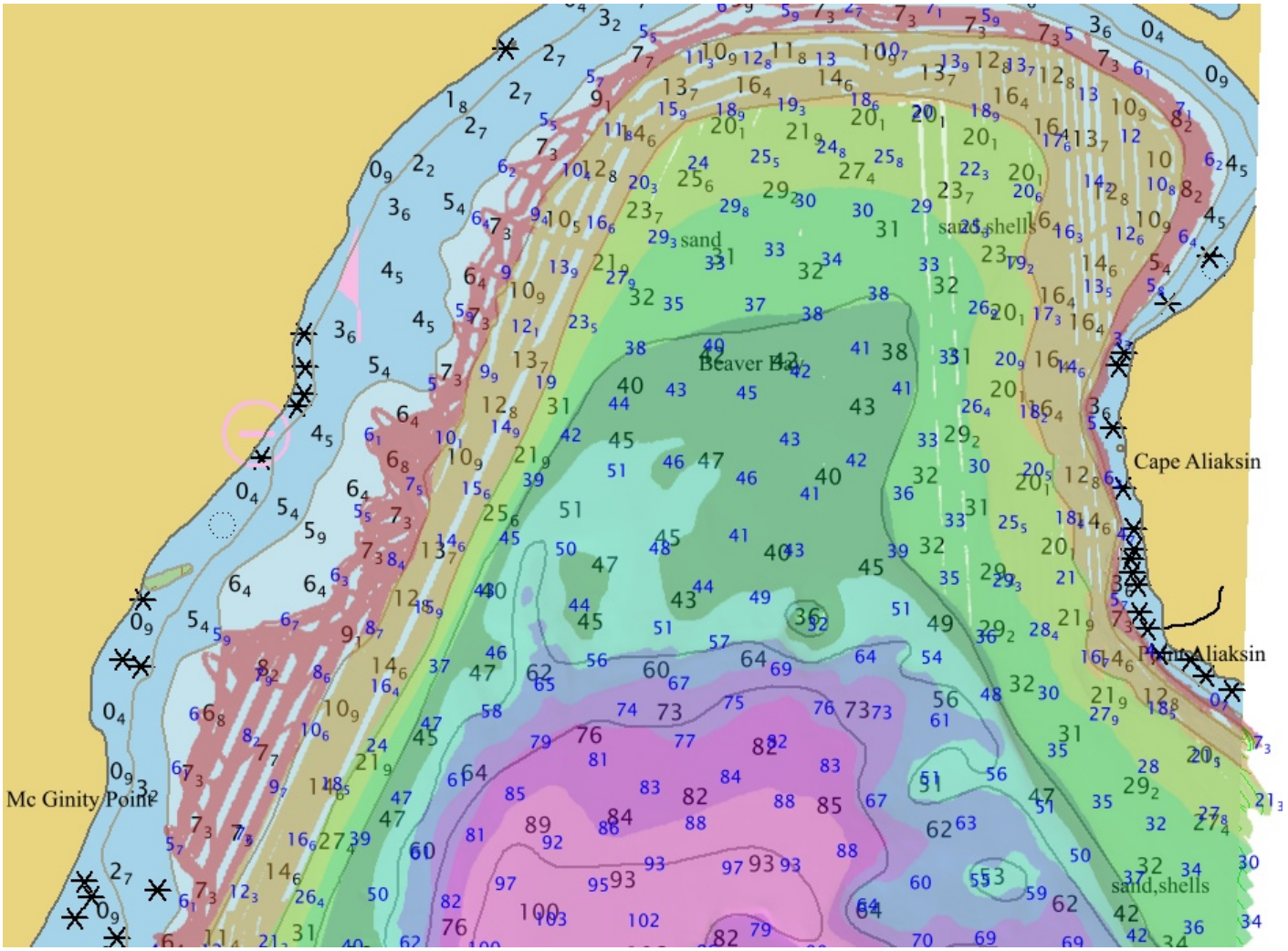

Figure 6: Soundings from this survey (blue) overlaid on ENC US4AK56M, showing generally good agreement. Image 3 of 3, north side of survey area inside Beaver Bay. Soundings in meters.

US4AK57M

This survey's overlap with US4AK57M is incidental, with slight overlap on this survey's east side. Refer to the DRs for the junctioning surveys to the east for discussion on agreement for this chart.

D.1.2 Maritime Boundary Points

No maritime boundary points were assigned for this survey.

D.1.3 Charted Features

There are no charted features labeled PA, ED, PD, or Rep. within the survey extents.

D.1.4 Uncharted Features

New features (such as kelp, rocks, reefs, ledges, and foul areas) were identified in the near-shore zone during limited shoreline verification and are portrayed in the FFF. Other significant uncharted features including DTONs, if applicable, are discussed elsewhere in this report

D.1.5 Shoal and Hazardous Features

In addition to the near-shore features investigated during limited shoreline verification (discussed in the Additional Results section of this report), charted shoals and potentially hazardous features were investigated.

1. A 4.5 m sounding charted on USAK55M at 55-20-37.29156 N, 161-17-40.66476 W is located in the junction between this survey and H13035 to the west. It was investigated with multibeam. A slightly shoaler depth of 3.476 m was found approximately 110 m NE of the charted position in the soundings from this survey.

2. A 3.2 m sounding charted on USAK56M at 55-20-29.90796 N, 161-15-59.7492 W was investigated with multibeam. The shoalest depth in the area was found to be 3.965 m about 95 m NE of the charted sounding at 55-20-31.85084 N, 161-15-55.6148 W.

3. A charted rock on USAK56M at 55-20-50.8704 N, 161-13-54.6132 W with a depth of 2.7 m was investigated with multibeam. It was found nearby, about 18 m NE at 55-20-51.1908 N, 161-13-53.8248 W and slightly shoaler at 1.449 m. It is portrayed in the FFF at its actual position and depth.

4. The tide rips (water turbulence feature) charted on USAK56M at 55-26-18.5064 N, 160-54-45.5148 W was not verified or disproved by this survey and should be retained.

DTONs

One DTON was submitted for this survey: Seal Cape Light ATON was found to have a damaged daymarker/ beacon and the light was out and was submitted as a DTON. Refer to the ATON section of this report for additional information. The DTON is included in the FFF for reference.

DTON reports are included in Appendix II.

D.1.6 Channels

No channels exist in the survey area.

D.1.7 Bottom Samples

Bottom samples were collected for this survey.

Of the assigned bottom sample locations in the Project Reference File (PRF), seven intersected this survey area. Samples were successfully obtained at all but one assigned location.

For primary constituents, samples within Beaver Bay largely returned sand and mud, with mixed results elsewhere. Broken shells were common secondary constituents in nearly all the samples.

One sample could not be obtained at the assigned location 55-21-45.6696 N, 161-12-32.15376 W. Three attempts at that location returned a closed sampler, indicating good bottom contact by the sampler. Only a small amount of kelp was returned. This was likely hard bottom. Chart USAK56M indicates pebbles and shells at this location. It is recommended the charted nature of seafloor be retained.

Significant discrepancies (for primary constituents) between bottom samples and charted nature of seafloor features are:

1. Pebbles were returned at 55-22-29.52012 N, 161-07-10.740 W where the chart indicates sand.
2. Shells were returned at 55-27-07.98012 N, 160-50-16.260 W where the chart indicates sand. However, sand was also returned as a secondary constituent.
3. Mud was returned at 55-30-05.51988 N, 160-54-11.340 W where the chart indicated sand.

Samples were not retained. However, photos were taken prior to discarding. Bottom characteristics were encoded as SBDARE objects in the FFF, with photos in the accompanying "Multimedia" directory, included with the survey deliverables.

D.2 Additional Results

D.2.1 Shoreline

Limited shoreline verification was assigned and accomplished for this project.

A Composite Source File (CSF) was provided with the Work Instructions. Assigned features were extracted from the CSF and systematically investigated. The primary method of investigation was through low-altitude inspection using a UAS (unmanned aerial system) at low tide. Structure from Motion (SfM) software was used to build orthophotomosaics of approximately 3.5 cm resolution and tide-corrected DEM point clouds of approximately 10 cm resolution over assigned feature locations and the surrounding area within the assigned search radius (80 m, or 1 mm at chart scale). These were then correlated with the assigned features

and attributed accordingly in CARIS HIPS to assemble the Final Feature File (FFF) submitted with the survey deliverables.

The vast majority of features were verified to exist within 80 m of their source location. However, most required modification to their positions or extents. Features originating from the chart showed the greatest discrepancy from this survey, but usually were still within 80 m.

GC-sourced features agreed to this survey well, often to within 5 m.

Conflicting features (pairs of features), sourced from GC and the chart, were common in the CSF. These were deconflicted, usually resulting in one revised (new) feature.

Refer to the FFF for investigation results including recommendations. Refer to the DAPR for details on shoreline verification acquisition, processing, and quality control. Refer to the Multimedia directory submitted with the survey deliverables for orthophotomosaics and DEM TIF images (projected as NAD83 UTM Zone 4).

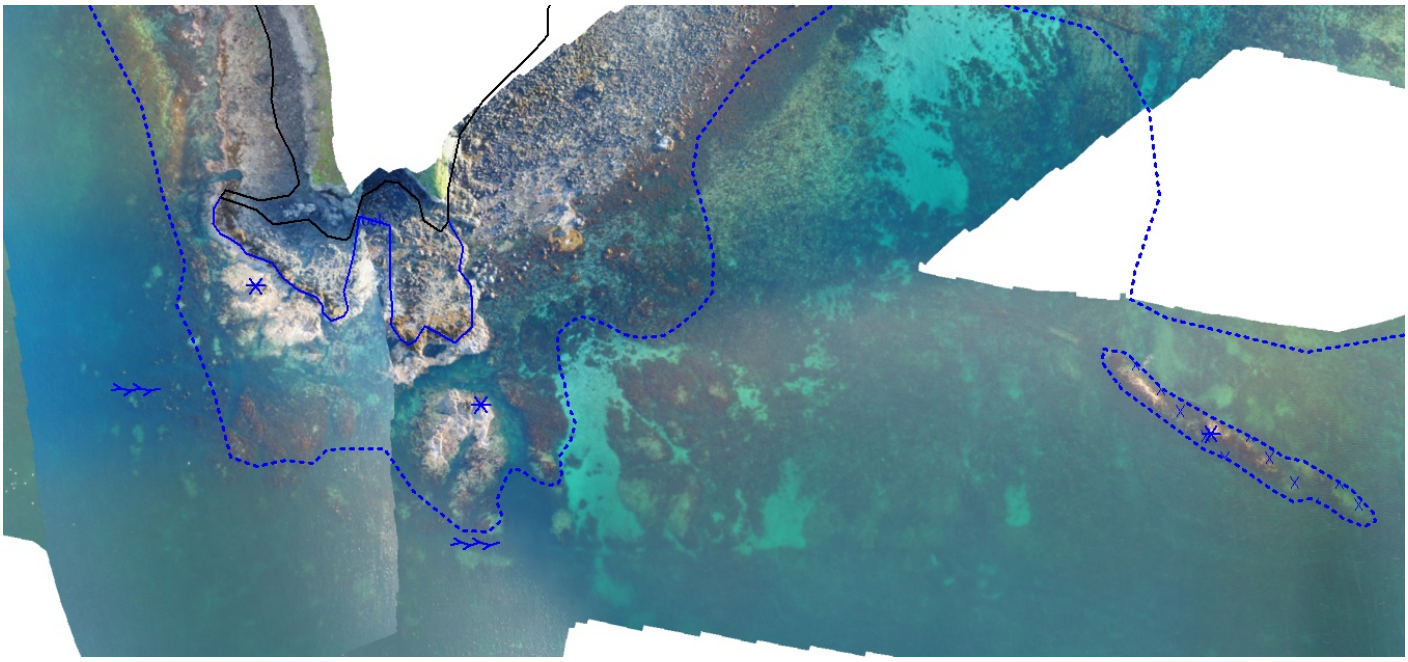

Figure 7: Example orthophotomosaic overlaid with the FFF (blue), showing revised foul limits, ledge lines, rocks, and kelp. MHW (black) from the CSF is shown as well.

D.2.2 Prior Surveys

Comparison with prior, contemporary surveys was undertaken. Results are described previously in this report under Junctions.

D.2.3 Aids to Navigation

One ATON existed in the survey area and was investigated. No uncharted ATONs were found in the area.

Seal Cape Light was investigated. The ATON was not serving its intended purpose: The westward-facing daymark was found to be damaged, and the light appeared to be out since it was not observed at night from sea during survey operations. This was reported as a DTON to PHB on 8/1/17 and subsequently to the USCG, District 17.

Seal Cape Light is listed in the USCG Light List (Volume 6) at 55-20-56.183 N, 161-15-15.923 W. The charted position on USAK56M is approximately 33 m NE of the Light List position. The Light List position was found to be more accurate than the charted position. It is recommended that the charted position be updated to the Light List position.

Figure 8: Damaged ATON (Seal Cape Light) found during this survey.

D.2.4 Overhead Features

No overhead features existed within the survey area.

D.2.5 Submarine Features

No submarine cables, pipelines, tunnels, or similar features of special note existed within the survey area.

D.2.6 Platforms

Platforms do not exist within the survey area.

D.2.7 Ferry Routes and Terminals

No established ferry routes or terminals exist within the survey area.

D.2.8 Abnormal Seafloor and/or Environmental Conditions

No abnormal seafloor or environmental conditions of special note were encountered.

D.2.9 Construction and Dredging

No construction or dredging was occurring within the survey extents, nor are there any known future plans for construction or dredging in the survey area.

D.2.10 New Survey Recommendation

No new surveys are recommended in this area.

D.2.11 Inset Recommendation

No new chart insets are recommended in this area.

E. Approval Sheet

Field operations contributing to the completion of survey H13036 were conducted under my direct supervision with frequent personal checks of progress, integrity, and adequacy.

This report, digital data, and all other accompanying records are approved. All records are respectfully submitted for final review and acceptance.

The survey data was collected in accordance with the Hydrographic Survey Project Instructions and Statement of Work, and meets or exceeds the requirements set in the 2017 NOS Hydrographic Surveys Specifications and Deliverables (HSSD) document. This data is adequate to supersede charted data in common areas. This survey is complete and no additional work is required with the exception of any deficiencies, if any, noted in this Descriptive Report. The Data Acquisition and Processing Report (DAPR) and Horizontal and Vertical Control Report (HVCR) were submitted concurrently with this report and the survey deliverables. Other significant reports and data packages submitted separately are listed below.

Report Name	Report Date Sent
OPR-P384-KR-17 Tide Zoning Report	2017-12-04
Coast Pilot Review Report	2017-11-30
Marine Mammal Observers Training Logsheet and Observation Logs	2017-11-30
Tides and Water Levels Package and Removal Reports for Zachary Bay (9459465)	2017-11-27
NCEI Sound Speed Data	2017-10-25
Tide Station Installation Report for Zachary Bay (9459465)	2017-08-17

Approver Name	Approver Title	Approval Date	Signature
Andrew Orthmann, C.H.	TerraSond Charting Program Manager	12/23/2017	Andrew Orthmann Digitally signed by Andrew Orthmann Date: 2017.12.23 19:35:41 -09'00'

F. Table of Acronyms

Acronym	Definition
AHB	Atlantic Hydrographic Branch
AST	Assistant Survey Technician
ATON	Aid to Navigation
AWOIS	Automated Wreck and Obstruction Information System
BAG	Bathymetric Attributed Grid
BASE	Bathymetry Associated with Statistical Error
CO	Commanding Officer
CO-OPS	Center for Operational Products and Services
CORS	Continually Operating Reference Staiton
CTD	Conductivity Temperature Depth
CEF	Chart Evaluation File
CSF	Composite Source File
CST	Chief Survey Technician
CUBE	Combined Uncertainty and Bathymetry Estimator
DAPR	Data Acquisition and Processing Report
DGPS	Differential Global Positioning System
DP	Detached Position
DR	Descriptive Report
DTON	Danger to Navigation
ENC	Electronic Navigational Chart
ERS	Ellipsoidal Referenced Survey
ERZT	Ellipsoidally Referenced Zoned Tides
FFF	Final Feature File
FOO	Field Operations Officer
FPM	Field Procedures Manual
GAMS	GPS Azimuth Measurement Subsystem
GC	Geographic Cell
GPS	Global Positioning System
HIPS	Hydrographic Information Processing System
HSD	Hydrographic Surveys Division
HSSD	Hydrographic Survey Specifications and Deliverables

Acronym	Definition
HSTP	Hydrographic Systems Technology Programs
HSX	Hypack Hysweep File Format
HTD	Hydrographic Surveys Technical Directive
HVCR	Horizontal and Vertical Control Report
HVF	HIPS Vessel File
IHO	International Hydrographic Organization
IMU	Inertial Motion Unit
ITRF	International Terrestrial Reference Frame
LNM	Linear Nautical Miles
MCD	Marine Chart Division
MHW	Mean High Water
MLLW	Mean Lower Low Water
NAD 83	North American Datum of 1983
NAIP	National Agriculture and Imagery Program
NALL	Navigable Area Limit Line
NM	Notice to Mariners
NMEA	National Marine Electronics Association
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NRT	Navigation Response Team
NSD	Navigation Services Division
OCS	Office of Coast Survey
OMAO	Office of Marine and Aviation Operations (NOAA)
OPS	Operations Branch
MBES	Multibeam Echosounder
NWLON	National Water Level Observation Network
PDBS	Phase Differencing Bathymetric Sonar
PHB	Pacific Hydrographic Branch
POS/MV	Position and Orientation System for Marine Vessels
PPK	Post Processed Kinematic
PPP	Precise Point Positioning
PPS	Pulse per second
PRF	Project Reference File

Acronym	Definition
PS	Physical Scientist
PST	Physical Science Technician
RNC	Raster Navigational Chart
RTK	Real Time Kinematic
SBES	Singlebeam Echosounder
SBET	Smooth Best Estimate and Trajectory
SNM	Square Nautical Miles
SSS	Side Scan Sonar
ST	Survey Technician
SVP	Sound Velocity Profiler
TCARI	Tidal Constituent And Residual Interpolation
TPE	Total Propagated Error
TPU	Topside Processing Unit
USACE	United States Army Corps of Engineers
USCG	United Stated Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positiong System timing message
ZDF	Zone Definition File

APPENDIX II

Supplemental Survey Records and Correspondence

Contents:

1. DTON recommendation(s) with NDB verification(s) (if any)

2. Other survey-related correspondence. See Appendix I for correspondence directly relating to tides and water levels.

Andrew Orthmann, CHS

From: Andrew Orthmann
Sent: Tuesday, August 01, 2017 09:25
To: 'phb.dton@noaa.gov'; 'Katrina Wyllie - NOAA Federal'
Cc: 'kathryn.pridgen@noaa.gov'; 'emily.clark@noaa.gov'; 'Christina Fandel - NOAA Federal'; Bart Buesseler; 'Matt Forney (matthew.forney@noaa.gov)'
Subject: H13036 DTON - Seal Cape Light
Attachments: H13036_DTON_SealCapeLight_ATON.zip

Please find attached a DTON for a damaged ATON found during survey of H13036. The SW facing daymark/beacon is blown down, and the light appears to not be functional as well.

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

H13036 Danger to Navigation Report

Registry Number: H13036
State: Alaska
Locality: Aleutian Islands
Sub-locality: Vicinity of Beaver Bay
Project Number: OPR-P384-KR-17
Survey Date: 07/31/2017

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
16551	10th	04/01/2008	1:80,000 (16551_1)	[L]NTM: ?
16540	12th	01/01/2005	1:300,000 (16540_1)	[L]NTM: ?
16011	37th	11/01/2007	1:1,023,188 (16011_1)	[L]NTM: ?
16006	35th	04/01/2008	1:1,534,076 (16006_1)	[L]NTM: ?
513	7th	06/01/2004	1:3,500,000 (513_1)	[L]NTM: ?
500	8th	06/01/2003	1:3,500,000 (500_1)	[L]NTM: ?
530	32nd	06/01/2007	1:4,860,700 (530_1)	[L]NTM: ?
50	6th	06/01/2003	1:10,000,000 (50_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	GP	[None]	55° 20' 56.7" N	161° 15' 13.4" W	---

1 - Dangers To Navigation

1.1) US 0000000056 00001 / H13036_DTON_SealCapeLight_ATON.000

DANGER TO NAVIGATION

Survey Summary

Survey Position:	55° 20' 56.7" N, 161° 15' 13.4" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2017-212.21:12:55.000 (07/31/2017)
Dataset:	H13036_DTON_SealCapeLight_ATON.000
FOID:	US 0000000056 00001(0226000000380001)
Charts Affected:	16551_1, 16540_1, 16011_1, 16006_1, 500_1, 513_1, 530_1, 50_1

Remarks:

BCNSPP/remrks: SW facing daymark/beacon at Seal Cape Light is broken, only half of the marker is still up, but hanging -- likely wind damage -- see photo. The light also appears to be out as it has NOT been observed at night. The SE facing daymark/beacon appears undamaged.

LIGHTS/remrks: SW facing daymark/beacon at Seal Cape Light is broken, only half of the marker is still up, but hanging -- likely wind damage -- see photo. The light also appears to be out as it has NOT been observed at night. The SE facing daymark/beacon appears undamaged.

DAYMAR/remrks: SW facing daymark/beacon at Seal Cape Light is broken, only half of the marker is still up, but hanging -- likely wind damage -- see photo. The light also appears to be out as it has NOT been observed at night. The SE facing daymark/beacon appears undamaged.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H13036_DTON_SealCapeLight_ATON.000	US 0000000056 00001	0.00	000.0	Primary

Hydrographer Recommendations

Forward to USCG to issue LNM and address repairs

S-57 Data

Geo object 1:	Beacon, special purpose/general (BCNSPP)
Attributes:	BCNSHP - 4:lattice beacon
	CATSPM - 27:general warning mark

OBJNAM - Seal Cape Light
SORDAT - 20170731
SORIND - US,US,graph,H13036
STATUS - 1:permanent

Geo object 2: Daymark (DAYMAR)

Attributes:
COLOUR - 1,3,1,1,3:white,red,white,white,red
COLPAT - 6,4:border stripes,squared
SORDAT - 20170731
SORIND - US,US,graph,H13036
TOPSHP - 12:rhombus (diamond)

Geo object 3: Light (LIGHTS)

Attributes:
COLOUR - 1:white
EXCLIT - 4:night light
HEIGHT - 22.8 m
LITCHR - 2:flashing
SECTR1 - 235.0 deg
SECTR2 - 172.0 deg
SIGGRP - (1)
SIGPER - 4.0 s
SIGSEQ - 00.4+(03.6)
SORDAT - 20170731
SORIND - US,US,graph,H13036
VALNMR - 6.0 NM

Feature Images

Figure 1.1.1

Figure 1.1.2

Figure 1.1.3

Andrew Orthmann, CHS

From: OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov>
Sent: Wednesday, August 02, 2017 08:06
To: Grant Froelich
Cc: Andrew Orthmann; Katrina Wyllie; Kathryn Pridgen - NOAA Federal; Emily Clark - NOAA Federal; Christina Fandel - NOAA Federal; Bart Buesseler - NOAA Federal; Matthew Forney; Steve Soherr; _NOS OCS PBA Branch; _NOS OCS PBB Branch; _NOS OCS PBC Branch; _NOS OCS PBD Branch; _NOS OCS PBE Branch; _NOS OCS PBG Branch; Castle E Parker; James M Crocker; Matt Kroll; NSD Coast Pilot; Pearce Hunt; PHB Chief; Tara Wallace
Subject: Fwd: Danger to Navigation Report for H13036 (OPR-P384-KR-17)
Attachments: H13036_DTON.zip

DD-28637 has been registered by the Nautical Data Branch and directed to Products Branch A for processing.

The DtoN reported is a damaged AtoN in the vicinity of Beaver Bay, Aleutian Islands, AK.

The following charts are affected:

16551 kapp 2536

16540 kapp 2528

16011 kapp 2415

16006 kapp 2411

500 kapp 2402

The following ENCs are affected:

US4AK56M

US3AK50M

US2AK5FM

US1WC04M

References:
H13036
OPR-P384-KR-17

Nautical Data Branch/Marine Chart Division/
Office of Coast Survey/National Ocean Service/
Contact: ocs.ndb@noaa.gov

---------- Forwarded message ----------
From: **Grant Froelich** <grant.froelich@noaa.gov>
Date: Tue, Aug 1, 2017 at 1:51 PM
Subject: Danger to Navigation Report for H13036 (OPR-P384-KR-17)
To: OCS Service Account <ocs.ndb@noaa.gov>
Cc: Andrew Orthmann <aorthmann@terrasond.com>, Katrina Wyllie <katrina.wyllie@noaa.gov>, Kathryn Pridgen <kathryn.pridgen@noaa.gov>, emily.clark@noaa.gov, Christina Fandel <christina.fandel@noaa.gov>, "Bart O. Buesseler" <bart.o.buesseler@noaa.gov>, Matthew Forney <matthew.forney@noaa.gov>, Steve Soherr <steve.soherr@noaa.gov>

Attached is a DTON report for a ATON that is damaged to the extent that it does not serve it's intended purpose. The damaged ATON was discovered by NOAA Contractor TerraSond during survey operations for survey H13036.

The Navigation Managers for Alaska are being CC'ed as per 2017 HSSD Section 7.3.5

--

Hydrographic Team Lead
NOAA's National Ocean Service
Office of Coast Survey, Hydrographic Surveys Division
Pacific Hydrographic Branch, N/CS34
7600 Sand Point Way N.E.
Seattle, WA 98115-6349

w: (206)526-4374 | grant.froelich@noaa.gov

Andrew Orthmann, CHS

From: Bart Buesseler - NOAA Federal <bart.o.buesseler@noaa.gov>
Sent: Tuesday, August 01, 2017 10:35
To: michael.d.newell@uscg.mil; kody.j.stitz@uscg.mil; david.m.seris@uscg.mil; Buck, Todd R CIV
Cc: Christina Fandel - NOAA Federal; Matthew Forney - NOAA Federal; Andrew Orthmann; Katrina Wyllie - NOAA Federal; Russell Quintero - NOAA Federal
Subject: ATON outage - Seal Cape Light
Attachments: H13036_DTON_SealCapeLight_ATON_DJI_0308_sm.JPG

Good Morning USCG D17,

I've just received word that Seal Cape Light is damaged and may be inoperable. This was discovered during survey work by Terrasond, who found the SW facing daymark/beacon blown down, and the light appearing to be non functional. I've attached a photo provided by Terrasond, and can provide a full resolution version (8 MB) upon request.

I'll also use this opportunity to introduce myself as the new Navigation Manager for Alaska here in Anchorage. I'm endeavoring to get up to speed as quickly as possible, but please don't hesitate to let me know if you have any questions or if there is any other information I can provide.

Very Respectfully,

LT Bart Buesseler, NOAA

Navigation Manager, Alaska
NOAA Office of Coast Survey
222 West 7th Ave, #43
Room 552
Anchorage, AK 99513

Office: 907.271.3327
Cell: 907.231.7112
Bart.O.Buesseler@noaa.gov

www.nauticalcharts.noaa.gov

Marine Mammal Training Video Logsheet
OPR-P384-KR-17 Pavlof Islands and Vicinity

List of those who have watched the Marine Species Awareness Training video:

Printed Name	Signature	Date
Alex Legan		7/14/17
Joseph Macaluso		7/14/17
Hanna Mikols		7/14/17
Caris Christensen		14 July 2017
S. Udy		14/7/17
Donald S Zabelski		7/14/17
Peter Kelly		7/15/17
Grant Cain		7/17/17
Andrew Orthman		7/14/17
David Maggio	David Maggio	7/17/17

Andrew Orthmann, CHS

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Tuesday, May 23, 2017 09:43
To: Andrew Orthmann
Cc: Emily Clark - NOAA Federal
Subject: Re: Request for Task Order Quote, Pavlof Islands, AK

Hi Andy,

1. Yes, this is a very dynamic seafloor. Complete coverage is acceptable over set-spacing in the deeper sections of the set line spacing sheets. We don't need to over-survey.
2. Yes, splits are required as well as feature developments/disprovals. We do not want to place a cap on the linear nautical miles in this project. If the irregularity of the seafloor and number of assigned features makes 100m set line spacing between ~4-20 fathoms less efficient than 100% MBES in certain areas, please indicate that in the proposal with the appropriate adjustment to number of linear miles. I will compare my IGCE to your technical and cost proposal and will ask for additional information/justification, as needed.

Thank you,
Katrina

On Mon, May 22, 2017 at 7:09 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina,
>
> Got the CSF and PRF files, thank you.
>
> Have done a quick look through all of this and things look pretty straight forward, but have a couple questions for now:
>
> 1. A lot of the area in the 100 m set-spacing regions appears deep enough so that 100 m line spacing would result in over-survey. When estimating this, should we assume that complete coverage is acceptable over set-spacing if complete coverage is being achieved? This will reduce the line mileage requirements. For example, for our estimates this will probably be at about the 40 m depth contour – shoaler than that would be 100 m set-spacing spacing, deeper than that would end up complete coverage but at variable line spacing of potentially up to 400 m.
>
> 2. For areas that are 100 m set-spacing, splits would be required to develop shoals. The bottom appears pretty dynamic here and we could end up using more mileage than estimated if there are a lot of apparent shoals between lines or if the charted soundings between lines differ significantly. Would NOAA consider a line budget for splits in the 100 m set-spacing areas, like we've done for similar projects in the past? Perhaps we could budget 5 or 10% of the set-line spacing mileage for splits, then we can work with you during ops to see how to best use that mileage for shoal-developments?

Andy

From: Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
Sent: Monday, May 22, 2017 8:32 AM
To: Emily Clark - NOAA Federal <emily.clark@noaa.gov>
Cc: Andrew Orthmann <aorthmann@terrasond.com>
Subject: Re: Request for Task Order Quote, Pavlof Islands, AK

Andy,

Attached are the accompanying draft Composite Source File and Project Reference File.

Thank you,

Katrina

On Mon, May 22, 2017 at 12:21 PM, Emily Clark - NOAA Federal <emily.clark@noaa.gov> wrote:

> Good Afternoon,
>
> Please see attached Statement of Work and Project Instructions requesting a hydrographic survey of Pavlof Islands, AK under contract EA-133C-14-CQ-0036.
>
> Katrina Wyllie will be acting as COR under the resulting task order.
>
> Please submit your approach and pricing no later than June 5, 2017. Any discussions, questions, or communication necessary to reach a final proposal shall be inclusive of myself and the COR from this point forward.

Thanks

--

v/r,

Emily Clark

Contract Specialist, NOAA AGO

Eastern Region Acquisition Division

Supporting National Ocean Service

200 Granby Street, Suite 815

Norfolk, VA 23510

Phone: 757-441-6875

Andrew Orthmann, CHS

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Wednesday, July 12, 2017 11:25
To: Andrew Orthmann
Cc: emily.clark@noaa.gov; Kathryn Pridgen - NOAA Federal
Subject: Re: files needed

Hi Andy,

Glad to hear the mobilization in Homer went well and I'm excited for the first day of acquisition! I wish you and your team a safe trip to Sand Point.

Separate topics but related:

1- Katy Pridgen (CC'ed) will be taking over as COR for this project. I accepted a position with USACE starting in mid-September out of Concord, MA. I plan to be in the office until August 25 at which time Katy will be your POC (and COR) for the remainder of this project. To help make the transition as seamless as possible, I do ask if you could please include Katy on all project correspondence starting now. I will be meeting with her soon to get her up to speed on the project details.

2- We just finished moving from one corner of the building to another and ended up with new phone numbers. My new number is 240-533-0035. And Katy can be reached at 240-533-0033.

Thank you,
Katrina

On Wed, Jul 12, 2017 at 12:06 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina,
>
> Thanks for the files; will begin using this with July's progress report.
>
> Speaking of progress, just got back from the mobilization in Homer. It went well, and the Q105 left yesterday on schedule for Sand Point. Half our folks are riding with the boat, and the rest of us are flying tomorrow afternoon to Sand Point to meet it. So, I expect the first data acquisition to occur tomorrow evening.
>
> Andy

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Thursday, July 6, 2017 6:39:11 AM
To: Andrew Orthmann
Cc: emily.clark@noaa.gov
Subject: Re: files needed

Hi Andy,

Yes, please consider the CSF/PRF the final versions. Nothing has changed from the draft versions. You can rename them to 'final' if you desire.

I attached an updated monthly report spreadsheet. Please let me know if you are missing anything else!

Thanks,
Katrina

On Wed, Jul 5, 2017 at 8:02 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina,
>
> The PRF and CSF files I have are named “draft”. Do you have final versions, or should we consider those final?
>
> Also, is there an updated progress sketch spreadsheet we should use this year?
>
> Thank you,
>
> Andy

Andrew Orthmann, CHS

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Monday, July 17, 2017 10:27
To: Andrew Orthmann
Cc: Kathryn Pridgen - NOAA Federal
Subject: Re: BMPG Install Question

Hi Andy,

Great, thank you!

Katrina

On Mon, Jul 17, 2017 at 1:31 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina,
>
> Negative, but we are planning to take a look at the planned deployment location today after our trip into Sand Point.
>
> Andy
>
> **From:** Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
> **Sent:** Monday, July 17, 2017 17:16
> **To:** Andrew Orthmann <aorthmann@terrasond.com>
> **Cc:** Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
> **Subject:** BMPG Install Question
>
> Hi Andy,
>
> Just wanted to check in with regards to the BMPG installation in Zachary Bay. Has that installation happened yet? CO-OPS was asking today as they haven't been contacted about the name and location in order to assign a Station Number.
>
> Thank you,
>
> Katrina

Andrew Orthmann, CHS

From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Sent: Tuesday, July 25, 2017 06:08
To: Andrew Orthmann
Subject: Re: DFR11_072317 - NOAA Pavlof Islands

Thank you. I have been following along with all progress. Katrina leave on Aug 25, so I will be taking over at that time. I hope the work is going well.

Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

On Tue, Jul 25, 2017 at 10:06 AM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katy, yes for sure. Sorry about that, Katrina had requested we include you on all correspondence relating to the project so I had added you to the daily report list. I will make the change with the next DFR.
>
> Thank you,
>
> Andy
>
> -------- Original message --------
> From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
> Date: 7/25/17 5:33 AM (GMT-09:00)
> To: Andrew Orthmann <aorthmann@terrasond.com>
> Subject: Re: DFR11_072317 - NOAA Pavlof Islands
>
> Andrew,
> Can I just receive the weekly report? I dont really need the daily one.
>
> Thanks,
> Katy
>
> ---
> Kathryn "Katy" Pridgen
> Physical Scientist
> NOAA-HSD OPS

240-533-0033
kathryn.pridgen@noaa.gov

On Tue, Jul 25, 2017 at 12:07 AM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Please find attached the Daily Field Report for the Pavlof Islands and Vicinity project.
>
> Andy

Andrew Orthmann, CHS

From: Bart Buesseler - NOAA Federal <bart.o.buesseler@noaa.gov>
Sent: Tuesday, August 01, 2017 10:35
To: michael.d.newell@uscg.mil; kody.j.stitz@uscg.mil; david.m.seris@uscg.mil; Buck, Todd R CIV
Cc: Christina Fandel - NOAA Federal; Matthew Forney - NOAA Federal; Andrew Orthmann; Katrina Wyllie - NOAA Federal; Russell Quintero - NOAA Federal
Subject: ATON outage - Seal Cape Light
Attachments: H13036_DTON_SealCapeLight_ATON_DJI_0308_sm.JPG

Good Morning USCG D17,

I've just received word that Seal Cape Light is damaged and may be inoperable. This was discovered during survey work by Terrasond, who found the SW facing daymark/beacon blown down, and the light appearing to be non functional. I've attached a photo provided by Terrasond, and can provide a full resolution version (8 MB) upon request.

I'll also use this opportunity to introduce myself as the new Navigation Manager for Alaska here in Anchorage. I'm endeavoring to get up to speed as quickly as possible, but please don't hesitate to let me know if you have any questions or if there is any other information I can provide.

Very Respectfully,

LT Bart Buesseler, NOAA

Navigation Manager, Alaska
NOAA Office of Coast Survey
222 West 7th Ave, #43
Room 552
Anchorage, AK 99513

Office: 907.271.3327
Cell: 907.231.7112
Bart.O.Buesseler@noaa.gov

www.nauticalcharts.noaa.gov

Andrew Orthmann, CHS

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Tuesday, August 01, 2017 08:11
To: Andrew Orthmann
Cc: kathryn.pridgen@noaa.gov; emily.clark@noaa.gov; Christina Fandel - NOAA Federal
Subject: Re: damaged ATON

Hi Andy,

Please select DTON for the sftype attribute.

Thank you,
Katrina

On Tue, Aug 1, 2017 at 12:08 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Katrina, on the ATON DTON, how is this best presented in our submitted DTON S-57 file?
>
> I'm assuming we pull the associated Light/Beacon/Daymark symbols from the ENC into the DTON S-57 and attribute with the required NOAA extended attributes, including observations, time of observation, and image(s).
>
> In NOAA extended attributes, options for sftype include "ATON" for ATON investigations, or "DTON". Since this is both—an ATON investigation resulting in a DTON--which is the best option?
>
> Andy
>
> ---
>
> **From:** Andrew Orthmann
> **Sent:** Tuesday, August 01, 2017 15:44
> **To:** 'Katrina Wyllie - NOAA Federal' <katrina.wyllie@noaa.gov>
> **Cc:** kathryn.pridgen@noaa.gov; emily.clark@noaa.gov; Christina Fandel - NOAA Federal <christina.fandel@noaa.gov>
> **Subject:** RE: damaged ATON
>
> Roger, will do. Found another DTON last night that I'll prioritize first, and get this ATON-DTON out after.
>
> Andy

From: Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
Sent: Tuesday, August 01, 2017 14:09
To: Andrew Orthmann <aorthmann@terrasond.com>
Cc: kathryn.pridgen@noaa.gov; emily.clark@noaa.gov; Christina Fandel - NOAA Federal <christina.fandel@noaa.gov>
Subject: Re: damaged ATON

Hi Andy,

Please do submit a DtoN. I would say perhaps not needed if the damaged side was obscured, but it looks like SW is visible to mariners.

Also, our Navigation Manager position is in the middle of transitioning to Bart but I don't know if he's started just yet. Please CC the following on the DtoN submission: bart.o.buesseler@noaa.gov, matthew.forney@noaa.gov, and christina.fandel@noaa.gov.

Thank you,

Katrina

On Mon, Jul 31, 2017 at 7:45 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina, this ATON appears damaged (See photos). This is the Seal Cape Light and Daymark, charted at 55-20-56.7 N, 161-15-13.4 W. The SW facing daymark appears to be damaged.
>
> Also, the actual position appears to be about 45 m west of the position on the ENC.
>
> I wanted to check with you to see if this warrants a DTON. Per Section 7.3.5 the apparent damage would appear to require a DTON, not sure if the position discrepancy is important at this scale.

Please advise.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Sent: Thursday, August 03, 2017 11:11
To: Andrew Orthmann
Cc: Katrina Wyllie - NOAA Federal; Corey Allen; Emily Clark - NOAA Federal; Russell Quintero - NOAA Federal
Subject: Re: COR Transition to Katy Pridgen

Andy,
I just wanted to introduce myself as your new COR for Pavlof Islands this year. I have been updated by Katrina on what has been happening so far. Will you please put me back on the distribution list for daily emails, so I can better track the progress of the survey. Please feel free to contact me often on any questions you have during this project and I will do my best to get an answer as quick as possible

Thank you and I am looking forward to working with you this year!

Katy Pridgen

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

On Thu, Aug 3, 2017 at 3:08 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Understood – thanks Katrina, its been great working with you as well.
>
> Do you want to be included on future correspondence including the daily field reports?
>
> Andy
>
> **From:** Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
> **Sent:** Thursday, August 03, 2017 17:05
> **To:** Andrew Orthmann <aorthmann@terrasond.com>
> **Cc:** Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>; Corey Allen <corey.allen@noaa.gov>; Emily Clark -

NOAA Federal <emily.clark@noaa.gov>; Russell Quintero - NOAA Federal <russell.quintero@noaa.gov>
Subject: COR Transition to Katy Pridgen

Hi Andy,

I met with Katy and Corey this week and passed off the Pavlof project and briefed them on it's current status. As of today, Katy will be your POC. Emily is aware of the change and is updating the COR assignment for this task order.

I will be in the office the next couple weeks to ensure a smooth transition. It has been a pleasure working with you on this project and last year's Etolin Strait project.

Take care,

Katrina

Andrew Orthmann, CHS

From: Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>
Sent: Thursday, August 03, 2017 04:51
To: Andrew Orthmann
Cc: emily.clark@noaa.gov; kathryn.pridgen@noaa.gov
Subject: Re: files needed

Hi Andy,

Right now Megan does not have them separated but she may change that in the future. So yes, a day at sea counts the same as one in the office for now.

Thanks for asking for clarification.

Katrina

On Wed, Aug 2, 2017 at 4:52 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Roger that – so a day at sea is also a day in the office (sometimes it feels that way)? Or should vessel days be tracked independent of office days?
>
> **From:** Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
> **Sent:** Wednesday, August 02, 2017 20:19
> **To:** Andrew Orthmann <aorthmann@terrasond.com>
> **Cc:** emily.clark@noaa.gov; kathryn.pridgen@noaa.gov
> **Subject:** Re: files needed
>
> Hi Andy,
>
> Here is the guidance as provided by Megan:
>
> 1. Yes, it is okay to make the unmanned/autonomous columns in the spreadsheet. There is no password on the document.
>
> 2. We would like to track any day (field work, office work, mob/demob) that you are working on this task order. Please do include any days that are specific to this task order.
>
> Let me know if you have any questions!

Thank you,

Katrina

On Tue, Aug 1, 2017 at 9:04 PM, Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov> wrote:

> Hi Andy,
>
> I'll check with Megan Greenaway on these questions because she manages all this document and I'll get back to you asap.
>
> Katrina
>
> On Tue, Aug 1, 2017 at 8:25 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:
>
> > Oh, and an additional question on the monthly progress sketch: For days at sea, the instructions say a day at sea is "any day the contractor is working on the task order". I assume this excludes office-only work (correct me if wrong) when no vessel is involved. But does it include dockside mob, transit, and dockside demob? In the past we've taken this to mean on-site days with the vessel and excluded mob/demob/transit, but can certainly include those as well.
> >
> > Andy
> >
> > ---
> >
> > **From:** Andrew Orthmann
> > **Sent:** Wednesday, August 02, 2017 00:22
> > **To:** 'Katrina Wyllie - NOAA Federal' <katrina.wyllie@noaa.gov>
> > **Cc:** emily.clark@noaa.gov; 'kathryn.pridgen@noaa.gov' <kathryn.pridgen@noaa.gov>
> > **Subject:** RE: files needed
> >
> > Hi Katrina,
> >
> > Starting to form up this monthly progress sketch spreadsheet. It looks like a couple categories are skipped:

There is no “Unmanned/Autonomous MBES”, which would apply to us this year.

There is also no “Unmanned/Autonomous Concurrent SSS/MBES”, which would have applied last year.

Is it okay to make these columns in the spreadsheet? I wasn’t sure how locked down your downstream processes are with these.

Andy

From: Katrina Wyllie - NOAA Federal [mailto:katrina.wyllie@noaa.gov]
Sent: Thursday, July 06, 2017 14:39
To: Andrew Orthmann <aorthmann@terrasond.com>
Cc: emily.clark@noaa.gov
Subject: Re: files needed

Hi Andy,

Yes, please consider the CSF/PRF the final versions. Nothing has changed from the draft versions. You can rename them to 'final' if you desire.

I attached an updated monthly report spreadsheet. Please let me know if you are missing anything else!

Thanks,

Katrina

On Wed, Jul 5, 2017 at 8:02 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Hi Katrina,

The PRF and CSF files I have are named “draft”. Do you have final versions, or should we consider those final?

Also, is there an updated progress sketch spreadsheet we should use this year?

Thank you,

Andy

Andrew Orthmann, CHS

From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Sent: Tuesday, August 08, 2017 11:09
To: Andrew Orthmann
Subject: Re: Weekly Progress Report

Andy,
That is ok. If that does happen again, we will just use the last daily progress report for the time being and then use the weekly one when we get it. We send out a weekly report (to our office only) with updates on all projects, this is why we were specifically looking for it.

Thanks,
Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

On Tue, Aug 8, 2017 at 3:03 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Just sent – sorry for the delay; had this ready to go last evening and had internet issues on the ship again, not uncommon out here. When that happens I send it as soon as possible. Would you like me to give you a phone call next time if appears it may be delayed for any reason?
>
> Thank you,
>
> Andy
>
> **From:** Kathryn Pridgen - NOAA Federal [mailto:kathryn.pridgen@noaa.gov]
> **Sent:** Tuesday, August 08, 2017 18:43
> **To:** Andrew Orthmann <aorthmann@terrasond.com>
> **Subject:** Weekly Progress Report

Andrew,

Could you please send the weekly progress report to progress.sketches@noaa.gov? We did not receive one from you this week.

Thank you,

Katy

Kathryn "Katy" Pridgen

Physical Scientist

NOAA-HSD OPS

240-533-0033

kathryn.pridgen@noaa.gov

Andrew Orthmann, CH

From: Andrew Orthmann
Sent: Thursday, August 10, 2017 11:40
To: 'phb.dton@noaa.gov'; 'Kathryn Pridgen - NOAA Federal'
Cc: emily.clark@noaa.gov; Christina Fandel - NOAA Federal; Bart Buesseler; 'Matt Forney (matthew.forney@noaa.gov)'; 'Katrina Wyllie - NOAA Federal'
Subject: H13039 ATON-DTON
Attachments: H13039_DTON_UngaSpitLight_ATON.zip

Please find attached a DTON for an additional damaged ATON, found during survey H13039.

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
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1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: LT Bart O. Buesseler, NOAA <bart.o.buesseler@noaa.gov>
Sent: Friday, August 11, 2017 15:11
To: Toshi Wozumi - NOAA Federal; Andrew Orthmann
Cc: Peter Holmberg; Grant Froelich; Kathryn Pridgen - NOAA Federal; Katrina Wyllie - NOAA Federal; Matt Forney (matthew.forney@noaa.gov)
Subject: Re: H13039 ATON DTON

All,

I'll reach out to D17 and let them know, thanks for passing this along Andy!

Very Respectfully,

LT Bart Buesseler, NOAA

Navigation Manager, Alaska
NOAA Office of Coast Survey
222 West 7th Ave, #43
Room 552
Anchorage, AK 99513

Office: 907.271.3327
Cell: 907.231.7112
Bart.O.Buesseler@noaa.gov

www.nauticalcharts.noaa.gov

On 8/11/2017 2:40 PM, Toshi Wozumi - NOAA Federal wrote:

> Hi Andrew,
>
> Please notify the Navigation Manager of the damaged ATON so that it can be reported to USCG.
>
> Thanks,
> Toshi
>
> On Fri, Aug 11, 2017 at 3:02 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:
>
> > Hi Toshi,
> >
> > Yes, Bart Buesseler and Matt Forney were on the cc line of the original DTON email sent to PHB (added to this email as well).
> >
> > If this daymark is intended to be visually unobscured, then it is no longer serving its intended purpose because the lower half has fallen off, making it only partially visible. Therefore I believe it is no longer serving its intended purpose, but perhaps there is criteria for these ATON-DTONs that I'm unaware of.

Please let me know if I can help with this in any way.

Thank you,

Andy

From: Toshi Wozumi - NOAA Federal [mailto:toshi.wozumi@noaa.gov]
Sent: Friday, August 11, 2017 21:52
To: Andrew Orthmann <aorthmann@terrasond.com>
Cc: Peter Holmberg <peter.holmberg@noaa.gov>; Grant Froelich <grant.froelich@noaa.gov>
Subject: H13039 ATON DTON

Hi Andrew,

Has the USCG been contacted via the Nav manager (Bart Buesseler)?

In the picture the ATON does not look damaged to the point where it's not serving its intended purpose. However the CG should definitely be alerted about the condition of the ATON.

Thanks,

Toshi

Andrew Orthmann, CHS

From: LT Bart O. Buesseler, NOAA <bart.o.buesseler@noaa.gov>
Sent: Friday, August 11, 2017 15:21
To: michael.d.newell@uscg.mil; kody.j.stitz@uscg.mil; Seris, David M CIV; Buck, Todd R CIV
Cc: Christy Fandel; Matt Forney; Andrew Orthmann; Katrina Wyllie - NOAA Federal; Russell Quintero
Subject: Damaged ATON - Unga Spit Light
Attachments: H13039_DTON_UngaSpitLight_DJI_0379a.jpg; H13039_DTON_UngaSpitLight_DJI_0377b.jpg

Greetings D17,

I've received another report from our friends at Terrasond who have found that the Unga Spit Light has been damaged (attached images). The lower half of the mark has fallen off, making it only partially visible to traffic in the area.

Please let myself or Mr. Andy Orthmann from Terrasond know if you have any additional questions for us.

Very Respectfully,

LT Bart Buesseler, NOAA

--
Navigation Manager, Alaska
NOAA Office of Coast Survey
222 West 7th Ave, #43
Room 552
Anchorage, AK 99513

Office: 907.271.3327
Cell: 907.231.7112
Bart.O.Buesseler@noaa.gov

www.nauticalcharts.noaa.gov

Andrew Orthmann, CHS

-----Original Message-----
From: Buck, Todd R CIV [mailto:Todd.R.Buck@uscg.mil]
Sent: Tuesday, August 15, 2017 14:24
To: Andrew Orthmann <aorthmann@terrasond.com>
Subject: RE: LNM Notice for Pavlof Islands / Unga Strait survey

Andrew,

Okay. Thanks for the heads up. I'll take it out of the LNM beginning with 33/17 which will be issued tomorrow.

Take care,

Todd

Todd R. Buck
Marine Information Specialist
District 17 Waterways Management Branch

Phone: 907-463-2269
todd.r.buck@uscg.mil
Mailing Address:
Commander (dpw)
PO Box 25517
Juneau, Alaska 99802-5517

-----Original Message-----
From: Andrew Orthmann [mailto:aorthmann@terrasond.com]
Sent: Tuesday, August 15, 2017 12:17 PM
To: Buck, Todd R CIV
Subject: [Non-DoD Source] Re: LNM Notice for Pavlof Islands / Unga Strait survey

Hi Todd, we wrapped up the hydrographic survey of the Pavlof Islands / Unga Strait area yesterday. Please feel free to remove the notice from the next LNM.

Thank you for your help as always,

Andy

_____

From: Andrew Orthmann
Sent: Wednesday, July 12, 2017 7:45:20 AM
To: Buck, Todd R CIV
Subject: Re: LNM Notice for Pavlof Islands / Unga Strait survey

Thanks Todd.

Andy

-------- Original message --------
From: "Buck, Todd R CIV" <Todd.R.Buck@uscg.mil>
Date: 7/6/17 2:49 PM (GMT-09:00)
To: Andrew Orthmann <aorthmann@terrasond.com>
Subject: RE: LNM Notice for Pavlof Islands / Unga Strait survey

Andy,

Yes, I'm still the person. I'll get this out in next week's LNM.

Take care,

Todd

Todd R. Buck
Marine Information Specialist
District 17 Waterways Management Branch

Phone: 907-463-2269
todd.r.buck@uscg.mil
Mailing Address:
Commander (dpw)
PO Box 25517
Juneau, Alaska 99802-5517

-----Original Message-----
From: Andrew Orthmann [mailto:aorthmann@terrasond.com]
Sent: Thursday, July 06, 2017 1:46 PM
To: Buck, Todd R CIV
Subject: [Non-DoD Source] LNM Notice for Pavlof Islands / Unga Strait survey

Hi Todd, hello for 2017. We're getting ready for another hydrographic survey starting very soon. Assuming you are still the correct person to contact regarding LNM updates for District 17, is it possible to put the following in the next update?

ALASKA - PAVLOF ISLANDS AND UNGA STRAIT HYDROGRAPHIC SURVEY

Terrasond Limited will be conducting a hydrographic survey north and west of Sand Point, Alaska from approximately July 13th through August 25th, 2017 for the purpose of nautical chart updating for NOAA. The survey area extends from northern Ukolnoi Island on its west side through Unga Strait to Korovin Island on its east side. Adjoining bays such as Zachary Bay, Balboa Bay, Beaver Bay, and Coal Bay are also included in the survey area. The survey will be conducted by the R/V QUALIFIER 105 (Q105), a 105' survey vessel, white in color and marked "RESEARCH". The vessel will be monitoring VHF Channel 16. An 18' unmanned vessel, yellow in color, will be also be deployed and will be remotely controlled and monitored from the Q105. Both vessels will work in close proximity to each other and will have limited maneuverability. Mariners are requested to transit the area with caution and to remain clear of the vessels while surveying is in progress, and to contact the Q105 with any immediate navigation concerns. Please direct questions to the TerraSond Charting Program Manager, Andrew Orthmann at (907) 745-7215, or by email at aorthmann@terrasond.com.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond Limited
Precision Geospatial Solutions (r)
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Sent: Tuesday, August 22, 2017 05:58
To: Andrew Orthmann
Subject: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 082117

Andy,
I would like to still receive the weekly progress reports just so I can keep up with all parts of the project. You do not need to keep sending the tif's if no additional coverage is being acquired.

Thank you,
Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

On Mon, Aug 21, 2017 at 9:57 PM, Andrew Orthmann <aorthmann@terrasond.com> wrote:

> Attached is the Weekly Progress Report for Pavlof Islands. Please note the coverage TIF is the same as last week since there was no significant change in coverage.
>
> Katy, do you require a weekly progress report next Monday (8/28)? We have do not have ops planned until we return to the survey site for the bottom samples and tide gauge, approximately 2-3 weeks from now.
>
> Thank you,
>
> Andy
>
> Andrew Orthmann, C.H.
> Charting Program Manager
>
> **TerraSond**

Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Wednesday, October 25, 2017 10:26
To: 'NODC.submissions@noaa.gov'
Cc: 'kathryn.pridgen@noaa.gov'
Subject: sound speed profile data submission for OPR-P384-KR-17
Attachments: OPR-P384-KR-17_20171025.zip

Hello,

Please find attached the sound speed profile data for nautical charting project OPR-P384-KR-17. These were taken by TerraSond in July-August 2017 aboard the RV Qualifier 105, MMSI # 338192000.

Please feel free to contact me with any questions.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Friday, October 27, 2017 08:50
To: 'Corey Allen - NOAA Federal'
Cc: Kathryn Pridgen - NOAA Federal
Subject: RE: Caris support files

Great, thank you very much Corey.

Andy

From: Corey Allen - NOAA Federal [mailto:corey.allen@noaa.gov]
Sent: Friday, October 27, 2017 08:05
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Cc: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Subject: Re: Caris support files

Andy,
Please find attached the latest version of the CARIS support files. My apologies these were not provided sooner in the award process.

Regards, Corey

On Thu, Oct 26, 2017 at 2:08 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Hi Katy, no problem, figured you were probably offshore or in the field. Just want to make sure we are using the latest CARIS Support Files; whenever we get those we can continue work on the S57 deliverables.
>
> In addition to the latest CARIS Support Files, would it be possible to get the survey extents/outlines for the following junctioning sheets? The project instructions require junction analysis for these prior contemporary surveys, so I'd like to show their extents on the junction chartlet in the DRs. I see that the BAG surfaces are available on the NCEI website but I don't see where to get just extents (SHP or 000 format would be great).
>
> Thank you,
>
> Andy

Junctions:

Perform a junction analysis with the surveys listed below and between current project sheets. Refer to HSSD Section 7.2.2.

Registry Number	*Scale*	*Year*	*Platform*	*Relative Location*
H12078	40000	2009	NOAA Ship *Rainier*	W
H11278	10000	2004	Fugro Pelagos, Inc.	S
H11330	10000	2004	NOAA Ship *Rainier*	S
W00245	20000	2011	NOAA Ship *Oscar Dyson*	-

From: Kathryn Pridgen - NOAA Federal [mailto:kathryn.pridgen@noaa.gov]
Sent: Wednesday, October 25, 2017 15:25
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Cc: Corey Allen - NOAA Federal <corey.allen@noaa.gov>
Subject: Re: Caris support files

Andy

Im sorry I didnt see your email, I am currently at sea. Let me check with Corey and Ill have him send you those Caris Support Files.

Sorry about the delay,

Katy

Kathryn "Katy" Pridgen

Physical Scientist

NOAA-HSD OPS

240-533-0033

kathryn.pridgen@noaa.gov

On Wed, Oct 25, 2017 at 3:24 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

Hi Russell, I emailed Katy a couple times on this question and haven't heard back; perhaps she is out of the office. Could you please help me with this, or refer me to somebody who might know? Thank you very much,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

From: Andrew Orthmann, CHS
Sent: Monday, October 23, 2017 09:12
To: 'kathryn.pridgen@noaa.gov' <kathryn.pridgen@noaa.gov>
Subject: RE: Caris support files

Hi Katy, have you had a chance to look into this?

Thank you,

Andy

From: Andrew Orthmann, CHS
Sent: Wednesday, October 18, 2017 11:27
To: kathryn.pridgen@noaa.gov
Subject: FW: Caris support files

Hi Katy,

As you know we're working away on the deliverables for the Pavlof Islands project.

I wanted to make sure we are using the latest Caris Support Files – I looked back and it appears this is the latest I have, all the way from last year (June 2016 – version 5.4).

Do you know if that's the version we should be using? Also, this had installation instructions up through CARIS HIPS 9.1, but we are on to CARIS 10.3 at this point – do you have an updated version that installs for 10.3 ?

Thank you very much,

Andy

From: Mark Lathrop - NOAA Federal [mailto:mark.t.lathrop@noaa.gov]
Sent: Thursday, June 02, 2016 06:24
To: Evans, Rhodri E. <RHODRI.E.EVANS@leidos.com>; George Reynolds <ggr@oceansurveys.com>; Andrew Orthmann <aorthmann@terrasond.com>; Arthur Wright <artw@wassoc.com>; David Neff <david@etracinc.com>; David Millar <dmillar@fugro.com>; Jon Dasler <jld@deainc.com>; Tara Levy <tlevy@oceaneering.com>
Cc: Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>; _NOS OCS HSD OPS <hsd.ops@noaa.gov>
Subject: Caris support files

NOAA Hydrographic Contractors

Please find attached the latest version (5.4) of the Caris Support Files. The 'zip' extension was changed to 'piz' for email purposes. The updates for this version can be found in the included change list. NOAA provides these support

> files to all of our NOAA hydrographic contractors as a convenience, whether they are Caris users or not. Use of these files is not required, but may aid users in meeting the 2016 HSSD. Please contact your COR with any questions.
>
> Regards,
>
> Mark

--
J. Corey Allen
Chief (acting), Operations Branch
Office of Coast Survey, NOAA
Corey.Allen@noaa.gov
240.533.0037 (Office)
301.717.7271 (Cell)
Click here for information on our planned survey activities
Find us on Facebook, Twitter and the NOAA Coast Survey blog

Andrew Orthmann, CHS

From: NCEI archive manager <archivist@nodc.noaa.gov>
Sent: Friday, October 27, 2017 05:05
To: NODC.submissions@noaa.gov; Andrew Orthmann, CHS
Cc: John.Relph@noaa.gov
Subject: NOAA Office of Coast Survey Profile Data accession 0167647 published

NCEI has archived and published the following NOAA Office of Coast Survey Profile data set:

Oceanographic profile data collected from sound velocimeter - moving vessel profiler casts aboard Qualifier 105 as part of project OPR-P384-KR-17 in the Gulf of Alaska and North Pacific Ocean from 2017-07-13 to 2017-08-15 (NODC Accession 0167647)

You can find your new data set and associated metadata at
https://accession.nodc.noaa.gov/0167647

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Wednesday, November 15, 2017 15:55
To: 'Corey Allen - NOAA Federal'
Cc: Kathryn Pridgen - NOAA Federal
Subject: RE: SORDAT date

Okay, will do – thanks Corey.

From: Corey Allen - NOAA Federal [mailto:corey.allen@noaa.gov]
Sent: Wednesday, November 15, 2017 15:52
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Cc: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Subject: Re: SORDAT date

I would put the collection of the bottom samples into the category of acquisition, so let's go with the date of bum collection for SORDAT.

Thanks Andy.

Corey

On Wed, Nov 15, 2017 at 7:45 PM Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Hi Cory, I was wondering if you could help me with the question below about the SORDAT for this survey. We're at the point where we're encoding the S-57 products now, so this would be good to be certain at this point: The HSSD indicates SORDAT should be the last day of survey acquisition – is that meant to be the last day of bathy collection or does that include bottom samples if they were taken later than the bathy? I lean towards using the date the bottom samples were collected as the last day of the surveys, but want to make sure that's right. I've not heard back from Katy on this so I am guessing she may still be offshore.
>
> Thank you,
>
> Andy
>
> ---
>
> **From:** Andrew Orthmann, CHS
> **Sent:** Monday, October 30, 2017 12:51
> **To:** kathryn.pridgen@noaa.gov
> **Subject:** RE: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

Hi Katy, wondering if you had had a chance to look into the question about SORDAT? Starting in on some of the S-57 data now, so it would be helpful to be certain about what date that correspond to (hydro or bottom sampling).

Thank you,

Andy

From: Andrew Orthmann, CH
Sent: Thursday, September 28, 2017 07:37
To: kathryn.pridgen@noaa.gov
Subject: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

Hi Katy,

Back on a regular connection now.

Field work was completed on Tuesday, September 26th. Now it's off to final processing and reporting.

Question: what do you want to consider the completion date on these surveys, for purpose of the monthly process sketch as well as the SORDAT in the S57 deliverables? Last day of multibeam acquisition, which was mid-August, or should it be when we did bottom samples, over a month later?

Thank you,

Andy

-------- Original message --------

From: "Support Vessels of Alaska, Inc." <qualifier105@gmn-usa.com>

Date: 9/26/17 5:04 PM (GMT-09:00)

To: "Andrew Orthmann, CH" <aorthmann@terrasond.com>

Subject: Fw: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

---------- Original Message ----------
To: Support Vessels of Alaska, Inc. (qualifier105@gmn-usa.com)
From: Kathryn Pridgen - NOAA Federal (kathryn.pridgen@noaa.gov)
Subject: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517
Date: 9/26/2017 10:09:01a

> Andrew,Thank you for the update. I totally understand the issues with
> internet connections while out in the field. I am glad to hear that all
> field work is almost complete! Please let me know if you have any
> issues or concerns, and I will do my best to address them.
>
> Thank you
> Katy
>
> ---
> Kathryn "Katy" Pridgen
> Physical Scientist
> NOAA-HSD OPS
> 240-533-0033
> kathryn.pridgen@noaa.gov
>
> On Mon, Sep 25, 2017 at 11:23 PM, Support Vessels of Alaska, Inc.
> <qualifier105@gmn-usa.com> wrote:
> Hello, I apologize for not sending this from my regular email address and
> without using our regular format - I am offshore without conventional
> internet access, for at least a few more days. I'll return to the
> standard format weekly progress report next week.
>
> Last Week 9/19 to 9/25 - little project activity, however did commence
> bottom samples on site today, 9/25, aboard the Q105.
>
> Next Week 9/26 to 10/2 - finish bottom sampling and therefore all field
> effort will be complete. Q105 transits to Homer. Some office work.
>
> Thank you,
>
> Andrew Orthmann
> TerraSond Limited
>
> ----
> This e-mail was delivered via satellite phone using Global Marine

> Networks, LLC's XGate software.
> Please be kind and keep your replies short.
>
>

This e-mail was delivered via satellite phone using Global Marine Networks, LLC's XGate software.
Please be kind and keep your replies short.

--
J. Corey Allen
Chief (acting), Operations Branch
Office of Coast Survey, NOAA
Corey.Allen@noaa.gov
240.533.0037 (Office)
301.717.7271 (Cell)
Click here for information on our planned survey activities
Find us on Facebook, Twitter and the NOAA Coast Survey blog

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, November 16, 2017 08:49
To: 'Kathryn Pridgen - NOAA Federal'
Subject: RE: SORDAT date

Hi Katy,

The closeout documentation should be submitted soon; after your last email on that subject I talked to Nathan at JOA. He said they were starting on it and thought they should be able to send it late this week or next. Is there a rush for that?

Processing is going well, no issues. Right now we have all final corrections applied (including tides) and are probably 20% through surface review. DAPR is completed. Just starting on encoding S-57 shoreline deliverables. Still need to put together the DRs. Deliverables are due 12/31 but my aim is to send them earlier, hopefully 12/15 if I can.

I can't think of anything offhand for the HSSD. Is there a deadline for suggested changes?

Also, I noticed Emily Clark was dropped from cc's awhile back. Should she still be included on these communications? It was something Katrina had requested quite a while ago, and I'm not sure if its still required.

Thank you,

Andy

From: Kathryn Pridgen - NOAA Federal [mailto:kathryn.pridgen@noaa.gov]
Sent: Thursday, November 16, 2017 05:39
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Subject: Re: SORDAT date

Andrew,
I am sorry, I seemed to have just missed this question all together. Thank you to Corey for the answer. I also wanted to check in and see if you were about to get the removal documentation for the tide gauge submitted? How is the processing going, any issues?

We are also looking to all contractors for any suggested changes for the HSSD 2018. Were there any issues you ran into during the survey in regards to the HSSD? If you would like me to submit a ticket for a change or clarification to the next year's HSSD, please email me your suggestions.

Thank you,
Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

On Wed, Nov 15, 2017 at 7:54 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Okay, will do – thanks Corey.
>
> **From:** Corey Allen - NOAA Federal [mailto:corey.allen@noaa.gov]
> **Sent:** Wednesday, November 15, 2017 15:52
> **To:** Andrew Orthmann, CHS <aorthmann@terrasond.com>
> **Cc:** Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
> **Subject:** Re: SORDAT date
>
> I would put the collection of the bottom samples into the category of acquisition, so let's go with the date of bum collection for SORDAT.
>
> Thanks Andy.
>
> Corey
>
> On Wed, Nov 15, 2017 at 7:45 PM Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:
>
> > Hi Cory, I was wondering if you could help me with the question below about the SORDAT for this survey. We're at the point where we're encoding the S-57 products now, so this would be good to be certain at this point: The HSSD indicates SORDAT should be the last day of survey acquisition – is that meant to be the last day of bathy collection or does that include bottom samples if they were taken later than the bathy? I lean towards using the date the bottom samples were collected as the last day of the surveys, but want to make sure that's right. I've not heard back from Katy on this so I am guessing she may still be offshore.
> >
> > Thank you,
> >
> > Andy

From: Andrew Orthmann, CHS
Sent: Monday, October 30, 2017 12:51
To: kathryn.pridgen@noaa.gov
Subject: RE: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

Hi Katy, wondering if you had had a chance to look into the question about SORDAT? Starting in on some of the S-57 data now, so it would be helpful to be certain about what date that correspond to (hydro or bottom sampling).

Thank you,

Andy

From: Andrew Orthmann, CH
Sent: Thursday, September 28, 2017 07:37
To: kathryn.pridgen@noaa.gov
Subject: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

Hi Katy,

Back on a regular connection now.

Field work was completed on Tuesday, September 26th. Now it's off to final processing and reporting.

Question: what do you want to consider the completion date on these surveys, for purpose of the monthly process sketch as well as the SORDAT in the S57 deliverables? Last day of multibeam acquisition, which was mid-August, or should it be when we did bottom samples, over a month later?

Thank you,

Andy

-------- Original message --------

From: "Support Vessels of Alaska, Inc." <qualifier105@gmn-usa.com>

Date: 9/26/17 5:04 PM (GMT-09:00)

To: "Andrew Orthmann, CH" <aorthmann@terrasond.com>

Subject: Fw: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517

---------- Original Message ----------
To: Support Vessels of Alaska, Inc. (qualifier105@gmn-usa.com)
From: Kathryn Pridgen - NOAA Federal (kathryn.pridgen@noaa.gov)
Subject: Re: OPR-P384-KR-17 Pavlof Islands Weekly Progress 092517
Date: 9/26/2017 10:09:01a

> Andrew,Thank you for the update. I totally understand the issues with
> internet connections while out in the field. I am glad to hear that all
> field work is almost complete! Please let me know if you have any
> issues or concerns, and I will do my best to address them.
>
> Thank you
> Katy
>
> ---
> Kathryn "Katy" Pridgen
> Physical Scientist
> NOAA-HSD OPS
> 240-533-0033
> kathryn.pridgen@noaa.gov
>
> On Mon, Sep 25, 2017 at 11:23 PM, Support Vessels of Alaska, Inc.
> <qualifier105@gmn-usa.com> wrote:
> Hello, I apologize for not sending this from my regular email address and
> without using our regular format - I am offshore without conventional
> internet access, for at least a few more days. I'll return to the
> standard format weekly progress report next week.
>
> Last Week 9/19 to 9/25 - little project activity, however did commence
> bottom samples on site today, 9/25, aboard the Q105.
>
> Next Week 9/26 to 10/2 - finish bottom sampling and therefore all field

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>
> Thank you,
>
> Andrew Orthmann
> TerraSond Limited
>
> ----
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> Networks, LLC's XGate software.
> Please be kind and keep your replies short.
>
>

This e-mail was delivered via satellite phone using Global Marine Networks, LLC's XGate software.
Please be kind and keep your replies short.

--

J. Corey Allen

Chief (acting), Operations Branch

Office of Coast Survey, NOAA
Corey.Allen@noaa.gov
240.533.0037 (Office)

301.717.7271 (Cell)

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Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Monday, November 27, 2017 09:09
To: Corey Allen - NOAA Federal (corey.allen@noaa.gov)
Cc: Kathryn Pridgen - NOAA Federal
Subject: FW: xml DR

Hi Corey, wondering if you could answer the question below about the latest XML DR files? I tried the link in the HSSD again this morning and no go.

Thank you,

Andy

From: Andrew Orthmann, CHS
Sent: Monday, November 20, 2017 10:37
To: 'Kathryn Pridgen - NOAA Federal' <kathryn.pridgen@noaa.gov>
Subject: xml DR

Hi Katy,

Do you have the latest XML DR files that we should be using for the DRs? The HSSD mentions they can be obtained at https://www.nauticalcharts.noaa.gov/hsd/xmldr but that link appears to not be working, at least at the moment.

Thank you,

Andy

Andrew Orthmann, CHS

From: Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Sent: Wednesday, November 29, 2017 11:34
To: Andrew Orthmann, CHS
Subject: New OCS Website

Andy,
A new website has been published for the HSD Standards and Requirements webpage:

https://www.nauticalcharts.noaa.gov/publications/standards-and-requirements.html

On this webpage you will find the following downloads:

- NOAA Hydrographic Specifications and Deliverables
- XML Descriptive Report schema release package

Please refer to the documents on this webpage for your current 2018 task order.

Thanks,
Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, November 30, 2017 09:00
To: 'ocs.ecc@noaa.gov'; 'pop.information@noaa.gov'
Cc: 'Kathryn Pridgen - NOAA Federal'
Subject: Marine Mammal Observation logs for OPR-P384-KR-17
Attachments: Marine_Mammal_Obs_Logs.pdf

Hello,

Please find attached the completed Marine Mammal Observation logs for OPR-P384-KR-17, Pavlof Islands and Vicinity. This is sent to you per section 1.5 in the 2017 HSSD.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, November 30, 2017 08:56
To: 'ocs.ecc@noaa.gov'
Cc: 'Kathryn Pridgen - NOAA Federal'
Subject: Marine Species Training Logsheet for OPR-P384-KR-17
Attachments: Marine_Species_Awareness_Training_Logsheet.pdf

Hello,

Please find attached the completed Marine Species Awareness Training logsheet for OPR-P384-KR-17, Pavlof Islands and Vicinity. This is sent to you per section 1.5 in the 2017 HSSD.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, November 30, 2017 09:05
To: 'Kathryn Pridgen - NOAA Federal'
Subject: RE: New OCS Website

Hi Katy,

Thank you. I successfully downloaded the 2017 XML files.

Andy

From: Kathryn Pridgen - NOAA Federal [mailto:kathryn.pridgen@noaa.gov]
Sent: Wednesday, November 29, 2017 11:34
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Subject: New OCS Website

Andy,
A new website has been published for the HSD Standards and Requirements webpage:

https://www.nauticalcharts.noaa.gov/publications/standards-and-requirements.html

On this webpage you will find the following downloads:

- NOAA Hydrographic Specifications and Deliverables
- XML Descriptive Report schema release package

Please refer to the documents on this webpage for your current 2018 task order.

Thanks,
Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, November 30, 2017 09:19
To: 'Kathryn Pridgen - NOAA Federal'
Subject: TOMIS entry for December progress report

Hi Katy, I just submitted our November progress report to TOMIS.

I noticed November was the last slot open for progress reports, but there will be a final one in late December. Could you create an open entry for December, which I believe would be due by January 5th?

Thank you,

Andy

Andrew Orthmann, CHS

From: Richard Powell - NOAA Federal <richard.powell@noaa.gov>
Sent: Friday, December 01, 2017 06:06
To: Andrew Orthmann, CHS
Subject: Re: Coast Pilot Review for OPR-P384-KR-17

Andy,
Thanks for the report and the images. I will place one of the images into chapter 6 (the one farthest out). The report will be registered as a source document for Coast Pilot 9.

Sincerely,

Richard Hodge Powell
Cartographer / Marine Information
Nautical Publications Branch

National Oceanic and Atmospheric Administration
301-713-2750 ext.169

On Thu, Nov 30, 2017 at 6:28 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Hello,
>
> Please find attached the Coast Pilot Review for the hydrographic survey OPR-P384-KR-17, Pavlof Islands and Vicinity. This pertains to the 35th edition (11/26/17) of Coast Pilot 9, Chapter 6.
>
> Also attached are two photos of the Sand Point harbor area which we took for the Coast Pilot. If published, these could be of benefit to mariners who are unfamiliar with the harbor.
>
> Feel free to contact me with any questions.
>
> Thank you,
>
> Andy

Andrew Orthmann, C.H.
Charting Program Manager

TerraSond
Precision Geospatial Solutions ®
1617 South Industrial Way Suite 3, Palmer, Alaska 99645
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aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

From: Grant Froelich <grant.froelich@noaa.gov>
Sent: Tuesday, December 05, 2017 05:43
To: Andrew Orthmann, CHS
Cc: Kathryn Pridgen; Ben Evans; Olivia Hauser
Subject: Re: OPR-P384-KR-17 data volume

Andy,

Thanks for the heads up. I've let our data manager know so she can clear off some space on the network. Also FYI, Ben is no longer the Chief of PHB. He has rotated to his next billet as Commanding Officer of Rainier. LCDR Olivia Hauser (cc'd on this) will be the Chief of PHB for the next three years.

thanks
grant

--

Hydrographic Team Lead
NOAA's National Ocean Service
Office of Coast Survey, Hydrographic Surveys Division
Pacific Hydrographic Branch, N/CS34
7600 Sand Point Way N.E.
Seattle, WA 98115-6349

w: (206)526-4374 | grant.froelich@noaa.gov

On 12/4/2017 10:53:53 AM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

Hi Grant,

Wanted to let you know that it won't be long until we submit OPR-P384-KR-17 (Pavlof Islands and Vicinity). This will be delivered to PHB before the end of the month.

Data volume will total approximately 6.3 TB. It's about 5 TB raw, and 1.3 TB of processed data.

Please let me know if you need additional breakdown by data type or by survey.

Delivery method will be via a single 8 TB USB hard drive.

Will let you know once we ship.

Thank you,

Andy

Andrew Orthmann, C.H.
Charting Program Manager

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(907) 745-7215 Office (907) 745-7273 FAX (907) 982-5231 Cell
aorthmann@terrasond.com www.terrasond.com

Andrew Orthmann, CHS

Subject: FW: xml DRs

From: Andrew Orthmann, CHS
Sent: Thursday, December 07, 2017 09:47
To: 'Kathryn Pridgen - NOAA Federal' <kathryn.pridgen@noaa.gov>
Subject: RE: xml DRs

Hi Katy, its coming along. Still a lot to do, but things are wrapping up one by one. We will deliver before the end of the month. I will definitely let you know when we have sent the deliverables to PHB.

Thank you,

Andy

From: Kathryn Pridgen - NOAA Federal [mailto:kathryn.pridgen@noaa.gov]
Sent: Thursday, December 07, 2017 06:59
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Subject: Re: xml DRs

Andy
I just wanted to check in and see how processing is going. I saw your documentation for the tide guague in Zachary Bay come through, thank you, and the xml question as well. Anything I can help with?

Katy

Kathryn "Katy" Pridgen
Physical Scientist
NOAA-HSD OPS
240-533-0033
kathryn.pridgen@noaa.gov

Andrew Orthmann, CHS

From: Andrew Orthmann, CHS
Sent: Thursday, December 07, 2017 08:34
To: 'Douglas Wood - NOAA Federal'
Subject: RE: xml DRs

Thank you Doug! Good to know it works.

Andy

From: Douglas Wood - NOAA Federal [mailto:douglas.wood@noaa.gov]
Sent: Wednesday, December 06, 2017 11:31
To: Andrew Orthmann, CHS <aorthmann@terrasond.com>
Cc: Christy Fandel <christina.fandel@noaa.gov>; Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>
Subject: Re: xml DRs

Hi Andrew,

I just opened your H13034_DR.xml in our *XMLDR* version 17.11 and it appeared to just work. I ran the verification tool and printed out a .pdf.

Except for some areas where it appears that you are still organizing the details and editing the prose it worked.

Doug

On Wed, Dec 6, 2017 at 2:24 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Great, thanks Christy.
>
> Here is one attached. This is based on the 2017_01 schema, or should be anyway. Please ignore the content – still working on that, just interested to see if the structure is okay – if it validates in Pydro or not. It validates in XMLSpy but we've seen it do that before and then have problems later in Pydro.
>
> Thanks again,
>
> Andy
>
> **From:** Christy Fandel [mailto:christina.fandel@noaa.gov]
> **Sent:** Wednesday, December 06, 2017 04:34
> **To:** Andrew Orthmann, CHS <aorthmann@terrasond.com>
> **Cc:** Kathryn Pridgen - NOAA Federal <kathryn.pridgen@noaa.gov>; Douglas Wood - NOAA Affiliate

<douglas.wood@noaa.gov>
Subject: Re: xml DRs

Hi Andy,

My colleague, Doug Wood who is copied here, has taken over the reigns of the XML DR project, but I am still helping in a more limited capacity.

Please feel free to pass your XML file along and one of us can check to verify it validates in Pydro.

Thank you,

Christy

On Tue, Dec 5, 2017 at 6:07 PM, Andrew Orthmann, CHS <aorthmann@terrasond.com> wrote:

> Hi Christina,
>
> Are you still working with XML DRs? I was wondering if I could send an XML DR file to you to test to ensure it validates within Pydro on your end?
>
> Thank you,
>
> Andy
>
> Andrew Orthmann, C.H.
> Charting Program Manager
>
> **TerraSond**
> **Precision Geospatial Solutions ®**

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Acting

Chief, Customer Affairs Branch / COR III

Navigation Services Division

Office of Coast Survey, NOAA

240-533-0032 (New Number)

704-995-6481 (Cell)

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Douglas Wood
Physical Scientist
Hydrographic Surveys Division
Office of Coast Survey
National Oceanic and Atmospheric Administration
1315 East West Highway
Silver Spring, MD 20910
240-533-0042

APPROVAL PAGE

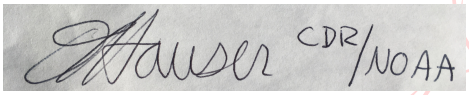
H13036

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Collection of backscatter mosaics
- Processed survey data and records
- Bottom Samples
- GeoPDF of survey product

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: 

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Commander Olivia Hauser, NOAA
Chief, Pacific Hydrographic Branch