

DESCRIPTIVE REPORT MEMO

July 23, 2018

MEMORANDUM FOR: Pacific Hydrographic Branch

FROM: Tyanne Faulkes
Physical Scientist, Pacific Hydrographic Branch

SUBJECT: Submission of Survey W00425

Survey W00425 was provided to the Pacific Hydrographic Branch by the NW Navigation Manager, Crescent Moegling. The data was originally collected by the University of Washington. No additional documentation was provided by the data provider.

During the External Source Data Review process products were created including a variable resolution surfaces to represent the multibeam data provided by the Navigation Manager.

Soundings were reduced to Mean Lower Low Water (MLLW) using verified tides from the Seattle tide station (944-7130).

As this is an external data source no DAPR was provided.

There were no DTONs created for this survey.

University of Washington acquired the data outlined in this report.

Survey W00425 has some uncertainty information in the grid metadata, but lack of documentation prevented a full review of the values. The compute TPU dialog was not completed for the data prior to submission and the reviewer estimated the SVP and Tides values using the most conservative values from the 2014 Field Procedures Manual.

The surface intended for archive and public release was analyzed for data density and uncertainty. It was found that 98% of nodes meet the density specifications outlined in the 2018 HSSD. Additionally, total vertical uncertainty was analyzed and found that 97% of nodes pass per the 2018 HSSD. Areas that failed uncertainty specifications were in the outer beams where motion appears to have a greater impact on the data.

A junction analysis was performed between W00425 and five recent surveys in the area that were used to compile the chart. On average, 96% of junctioning nodes agree within the allowable total vertical uncertainty

at that depth. These data indicate that the depths on the chart have not changed, and there are no significant features in the survey.

This survey does meet charting specifications and is adequate to supersede prior data. Based on the general agreement with the charted data, this survey does not appear to provide substantial improvements to the chart. While the data is adequate to supercede the chart, it is not recommended that this survey be compiled to the chart but be used as a validation of the current charted data. In addition, it is recommended that this survey be used for the NBS project.

| Metadata for Survey W00425 | |
|-----------------------------------|--------------------------------------|
| Project | OSD-PHB-17 |
| Survey | W00425 |
| State | Washington |
| Locality | Puget Sound |
| Sub-Locality | Vicinity of Rich Pass |
| Scale of Survey | 1:25000 |
| Sonars Used | Kongsberg Maritime EM 710-MK2 (MBES) |
| Horizontal Datum | North American Datum 1983 |
| Vertical Datum | Mean Lower Low Water |
| Vertical Datum Correction | Discrete Zoning |
| Projection | Projected UTM 10 |
| Field Unit | University of Washington |
| Survey Dates | 10/30/2016 |
| Chief of Party | Tyanne Faulkes |
| Submission Date | 10/26/2017 |

APPROVAL PAGE

W00425

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
- One Bathymetric Attributed Grid (BAG)
- Processed survey data and records
- GeoPDF of survey products

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: _____

Commander Olivia Hauser, NOAA
Chief, Pacific Hydrographic Branch