

3. Corrections to Echo Soundings

A Patch Test was conducted on January 16, 2013 in the vicinity of La Push, WA. Corrections were computed in CARIS and entered into the CARIS HVF file for application to the sounding data.

Dynamic draft was applied to the sounding data. The dynamic draft measurements were observed on June 27, 2011 by using a level set up on Hollywood Beach in Port Angeles, WA and observing a staff on the R/V TATOOSH while approaching the level at varying speeds.

Sound velocity (SV) casts were conducted approximately every two hours. SV casts were processed with Seabird proprietary software. SV cast data were manually extended 20% using the last value in the cast. Due to a thin fresh water layer on the surface from the proximity of Mosquito Creek

and Hoh River and a high pressure system with little to no wind for mixing some sound velocity artifacts were seen in the data in the form of smiley face profiles in the CARIS swath editor. Due in part to fresh water on the surface and averaging in values as the CTD is equalizing at the surface the top 1-m bin value is believed to be skewed and not representative of the SV at the transducer face. The surface 1-m bin sound velocity value was edited using the best slope method of the top 3-5 meters of each SV profile which corrected the sound velocity artifacts seen in the data.

| Date | Time(GMT) | Lat | Long |
|----------|------------|----------|------------|
| 2013-016 | 20:42:43 | 47:47:58 | -124:32:48 |
| 2013-016 | 23:00:46 | 47:48:20 | -124:31:45 |
| 2013-017 | 17:32:50 | 47:48:18 | -124:32:01 |
| 2013-017 | 20:47:51 | 47:47:38 | -124:30:45 |
| 2013-017 | 22:57:16 | 47:47:42 | -124:30:35 |
| 2013-018 | 16:47:00 | 47:48:01 | -124:32:18 |
| 2013-018 | 18:52:00 | 47:47:48 | -124:31:05 |
| 2013-018 | 20:27:00 | 48:48:01 | -124:31:21 |
| 2013-018 | 22:20:08 | 47:47:36 | -124:30:40 |

List of SV casts taken