

C. Vertical and Horizontal Control

Field installed tide of GPS stations were not utilized for this survey; there is no HVCR report included with submission of F00739.

C.1 Vertical Control

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

ERS Datum Transformation

The following ellipsoid-to-chart vertical datum transformation was used:

Method	Ellipsoid to Chart Datum Separation File
ERS via VDATUM	S-N918-NRt3-18_Vdatum Limits_xyNAD83-MLLW_geoid12b_xyNAD83-MLLW_geoid12b

Table 11: ERS method and SEP file

Sounding elevations relative to the ellipsoid were collected through Ellipsoidal Referenced Survey (ERS) with post-processing of the daily logger POSpac data to create a statistical best estimate of trajectory (SBET) file, as detailed in the DAPR. All F00739 meets HSSD vertical accuracy requirements.

Minimum depths are given at mean lower low water from the entrance to the Columbia River to Harrington Point, thence at the Columbia River Datum to Bonneville Dam on the Columbia River and Willamette Falls Locks at Oregon City on the Willamette River. The staff gage at the Columbia River Datum is the mean lower low water during lowest river stages. The staff gage at the Columbia River Pilots' Office, at the foot of 14th Street at Astoria, OR is set with zero at mean lower low water. Columbia River Datum is the mean lower low water during lower river stages.

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD 83).

The projection used for this project is Universal Transverse Mercator (UTM) Zone 10.

RTK

Precise Positioning-Real Time Extended (PP-RTX) processing methods were used in Applanix POSpac MMS 8.3 software to produce SBETs for post-processing horizontal correction. All of F00739 meets HSSD horizontal accuracy requirements.