

## Vertical Control

All sounding data were initially reduced to mean lower low water (MLLW) using preliminary tidal data. It should be noted that preliminary tides were used in the field for preliminary processing only.

**Table 2 – Tide Gauges**

<b>Gauge</b>	<b>Location</b>	<b>Latitude</b>	<b>Longitude</b>
9419750	Crescent City, CA	41° 44.7' N	124° 10.9' W
9418767	North Spit, CA	40° 46.0' N	124° 13.0' W

Final tidal corrections were generated using PPK processing methods in conjunction with NOAA's VDATUM model and the CARIS GPSTide routine. Applanix POSPac software produced a smoothed best estimate of trajectory (SBET) file that, among other data, contained GPS altitudes based on the NAD83 ellipsoid (GRS 80). The SBET altitudes were loaded into every line in CARIS HIPS, and HIPS' GPSTide routine then run to compute a GPS-based tide. The GPSTide routine used a VDatum NAD83 to MLLW offset grid to produce MLLW tide correctors. This grid is an XYZ text file and is included with the CARIS data under the tide directory.

See M-L906-KR-08 Horizontal and Vertical Control Report for a more detailed description of the GPSTide methods.