H13407 NOAA Ship Rainier

# C. Vertical and Horizontal Control

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

#### 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	OPR-O392-
	FA-20_VDATUM_100m_NAD83_2011-MHW.csar
	OPR-O392-
	FA-20_VDATUM_100m_NAD83_2011-MLLW.csar

Table 13: ERS method and SEP file

Ellipsoid referenced GNSS derived heights were used and a separation model was applied to reduce soundings to chart datum.

## **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 9.

The following PPK methods were used for horizontal control:

• RTX

#### **WAAS**

The Wide Area Augmentation System (WAAS) was used for real-time horizontal control during data acquisition.