# C. Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR. Processing methods are listed in the 2019 HSSD, Section C.1.

#### 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-K928_Vdatum_Limits_xyNAD83-MLLW_geoid12b

#### Table 11: ERS method and SEP file

The vertical uncertainty for this project is 12.6 centimeters, Mean Lower Low Water (MLLW). Soundings were reduced from NAD83 to MLLW using Vdatum file "S-K928\_Vdatum\_Limits\_xyNAD83-MLLW\_geoid12b" located in the survey "Water\_Levels" folder. This value was applied in Charlene v3.1.5.

## **C.2 Horizontal Control**

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