


C. Vertical and Horizontal Control

The final products of this survey are referenced to MLLW for a vertical datum, and uses a horizontal projection of WGS-84 UTM Zone 19N. Horizontal and vertical field controls were established using a Trimble RTK base station/rover pair. More information can be found in the DAPR and HVCR.

C.1 Vertical Control

Since this survey is referenced to the ellipsoid, the vertical motion of the RVGS is accurately recorded using the RTK GNSS system. The corrections were provided via a base station located at the seacoast science center at Fort Point, NH. This method accounts for the settlement and squat of the vessel, so these values were not measured.

Data was acquired with respect to the ellipsoid WGS-84 datum and transformed to MLLW using a static offset computed using VDatum. A vertical offset of -29.208 m was applied to the acquired data in Qimera. This offset was calculated using NOAA's online VDatum program, with a source year of 2016 and a target year of 2018 (see Figure 16, below). Since the survey fell within one tide zone, NA169, the offset did not vary significantly within the region. More information can be found in the DAPR and HVCR submitted with these data.



NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

ONLINE VERTICAL DATUM TRANSFORMATION

INTEGRATING AMERICA'S ELEVATION DATA

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Horizontal Information

Source

Target

Reference Frame: NAD83(2011/2007/CORS96(HARN) - North American tech ▼ WGS84(G1674) - use ITRF2008 ▼

Coor. System: Geographic (Longitude, Latitude) ▼ Geographic (Longitude, Latitude) ▼

Unit: meter (m) ▼ meter (m) ▼

Zone: AL E - 0101 ▼ AL E - 0101 ▼

Vertical Information

Source

Target

Reference Frame: MLLW ▼ WGS84(G1674) - use ITRF2008 ▼

Unit: meter (m) ▼ meter (m) ▼

☒ Height
 ☐ Sounding

☒ Height
 ☐ Sounding

☐ GEOID model: GEOID12B ▼

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[Point Conversion](#)
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Input

Output

Longitude: -70.638517
Latitude: 43.103990
Height:

Convert

Reset

DMS

Longitude: -70.6385219
Latitude: 43.1040002
Height: -29.208

[Drive to on map](#)
[Reset Map](#)

☐ to DMS
 Vertical Uncertainty: 13.0545 cm

Vertical_Area: MENHMAgome13_8301:3:1

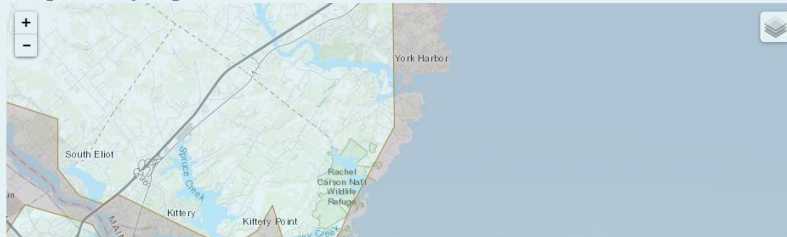


Figure 16: Vertical offset as calculated from VDatum online (2016 to 2018).