

## 4.1 Horizontal Datum

The horizontal datum for these data is WGS 84 projected in UTM zone 19N (meters).

## 4.2 Vertical Datum and Water Level Corrections

The vertical datum for these data is mean lower-low water (MLLW) level in meters. Water level corrections referenced to MLLW were applied to two zones (Figure 7). The first zone included all data collected seaward of the river mouth at Fort Popham. These data fell within zone NA149 of a discrete tidal zoning file (.zdf) provided by NOAA CO-OPS, which was used to apply verified tide data with time and range corrections referenced to Portland station 8418150. The second zone included all data collected upstream of Fort Popham. Since no time and/or range corrections for a known reference station currently exist for this zone, predicted tide data (6-minute intervals) spanning the range of survey dates (May 1, 2016 – May 24, 2016; and June 2, 2016) were applied for this zone with a linear co-tidal interpolation strategy using the following two stations: Bath, ME (8417227) and Fort Popham, Hunniwell Point, ME (8417177). Time corrections, tide height offsets, and tide scale (range) for each zone are listed in Table 8.

Table 8 – Tide zones, reference stations, and corrections

<b>Zone ID</b>	<b>Time Correction (mins.)</b>	<b>Tide Offset (m)</b>	<b>Tide Scale</b>	<b>Reference Station(s)</b>
NA149	-6	0	0.96	Portland (8418150)
Co-tidal	Linear co-tidal interpolation			Bath (8417227) and Fort Popham (8417177)