

## **C.1 VERTICAL CONTROL**

The vertical datum for H12093 is Mean Lower-Low Water (MLLW). NOAA tide station 8651370 Duck, NC (latitude 36° 11'N, longitude 075° 44.8'W) was the source of all verified water level heights for determining correctors to soundings. All data for H12093 were contained within one tide zone, SA46A; which was provided from NOAA.

The primary means for analyzing the adequacy of zoning was by entering the observed verified water level correctors at 6-minute intervals from 22 September 2010 to 19 November 2010 from adjacent zones into a spreadsheet. As the H12093 data were all contained within the one tide zone, crossing zone boundaries was not an issue within the data. Adequacy of zoning was determined by analyzing data within the navigated swath editor, SAIC's **Multi View Editor (MVE)**, for differences between overlapping swath data as well as crossline versus main scheme data. In addition sun illuminated coverage grids were viewed within **SABER** and examined for any vertical offsets which may be a result of tidal zoning impacts. As a result of these analyses SAIC did not revise the delivered tide zone for H12093. The water level zoning parameters provided by NOS, Table C-1, were adequate for application of the observed verified water levels, and they were accepted as final and applied to all H12093 multibeam data.

**Table C-1. Water Level Zoning Parameters Applied on Sheet H12093**

<b>Zone</b>	<b>Time Corrector (minutes)</b>	<b>Range Ratio</b>	<b>Reference Station</b>
SA46A	00:00	1.08	8651370

No final tide note was provided by NOAA Center for Operational Oceanographic Products and Services (CO-OPS). SAIC is not required to have a final tide note from CO-OPS. SAIC has provided a final tide note in Appendix IV.