

**Table 7**  
**Vertices of Zone CGM 23 with the added vertex shown in green.**

<b>Latitude (NAD 83)</b>	<b>Longitude (NAD 83)</b>
30.327949	87.314739
30.326650	87.316817
30.325427	87.318511
30.325427	87.322416
30.333044	87.322416
30.333790	87.319977
30.334368	87.313575
30.333245	87.305255
30.330361	87.298682
30.329605	87.301612
30.329247	87.308503
30.327949	87.314739

OSI home office and field personnel monitored the posted preliminary tide data on the NOAA CO-OPS website. The NOAA Pensacola (872-9840) gauge experienced 65 preliminary data gaps of duration greater than one hour during the survey, with the largest gap of 13 hours and 54 minutes occurring on November 15, 2009 (DN 319). The majority of the gaps occurred outside periods of data acquisition. All gaps were filled by CO-OPS prior to issuance of verified tide data.

Observed tide values deviated from predicted tide values on occasion during the survey. These deviations appear to be dependent on local weather conditions and were only observed during periods of high winds and high surf (Figure 12).

***Verified tides and zoning were applied during field operations.***

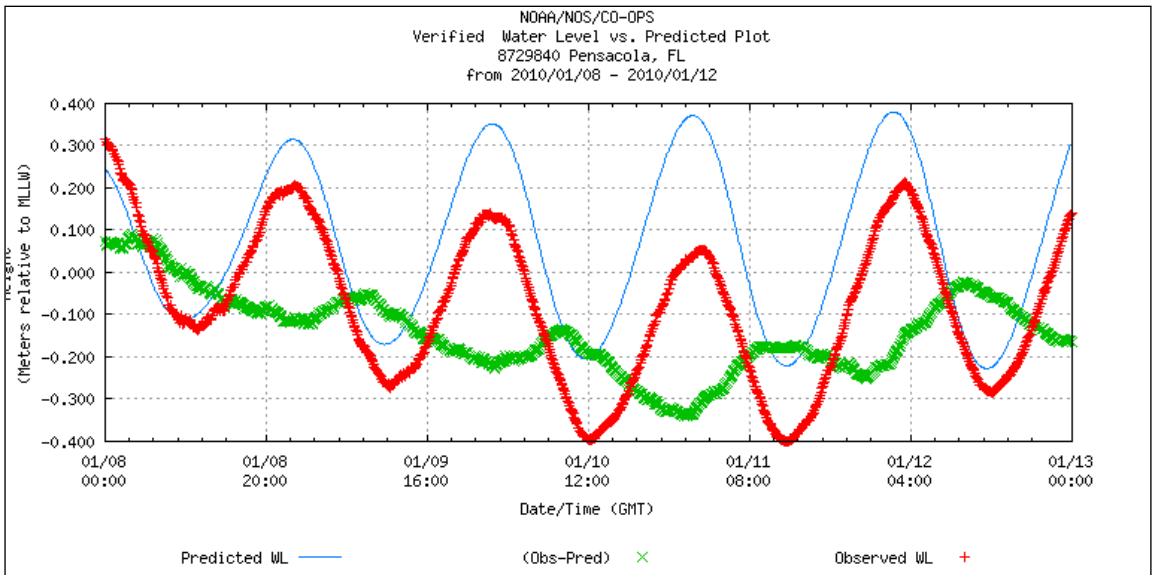
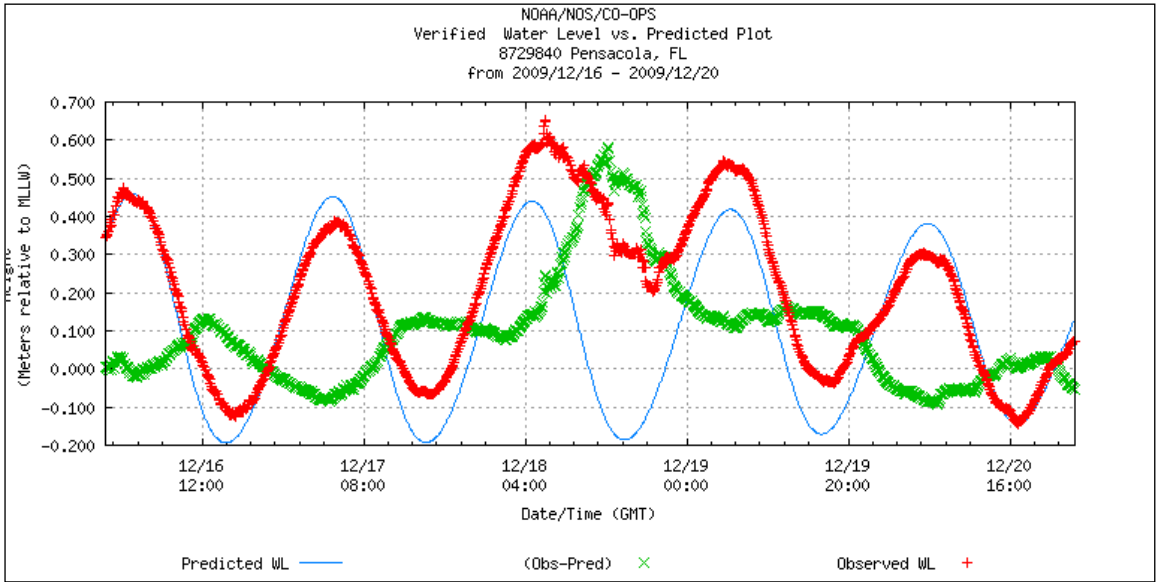


Figure 12. Top: Deviation of verified tide data from predicted tide during a period of strong onshore winds. Bottom: Deviation of verified tide data from predicted tide during a period of strong offshore winds.

### C.2 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). All data products are referenced to Latitude/Longitude or Universal Transverse Mercator (UTM) Zone 16, meters.

All primary position data were acquired using an Applanix POS MV operating in Differential GPS (DGPS) mode. The unit was configured to receive USCG Differential beacon correctors from Eglin Air Force Base, FL. Differential beacon correctors from the U.S.

Coast Guard station in Mobile Point, AL, were used by the secondary navigation system to facilitate real-time horizontal control confidence checks.

OSI established a horizontal control point, “Sherman Cove Gas Dock PK,” adjacent to the survey vessel’s berth at Sherman Cove Marina in Pensacola, FL, using the National Geodetic Survey’s Online Positioning Users Service (OPUS) technology. The control point position was used as a reference for daily navigation system confidence checks. Refer to the DAPR\* and Horizontal and Vertical Control Report (HVCR)\* for additional details.