

A. VERTICAL CONTROL

A.1 Tide Station

Tide/water levels for this project were provided exclusively by NOAA as verified data from NOAA Tide Station 876-2075, Port Fourchon, LA. The project is located within zones indicated by preliminary tidal zoning data included in the project Statement of Work. Time and range corrections were applied to all Port Fourchon (876-2075) verified data according to Table 1. Figure 1 depicts the project and survey area, tide zone delimiters and the location of the Port Fourchon tide gauge.

Table 1
Tide Zones Associated with Project OPR-K339-KR-12

Zone	Time Correction	Range Correction
CGM364	-12 min	1.09
CGM369	-12 min	1.09
CGM370	-24 min	1.09
CGM372	-18 min	1.09
CGM389	-6 min	1.09
CGM390	-12 min	1.09
CGM727	-18 min	1.09

Based on the results of cross line analysis, it appears that the time and range factors as provided in the preliminary zoning scheme are adequate.

Coordinated Universal Time (UTC) was used to annotate the tide records and all other data obtained in this project.

Preliminary tide correctors were retrieved daily from the CO-OPS website. Verified tides were retrieved on a weekly basis once they were made available by CO-OPS. Tide data were applied to processed soundings employing the CARIS “apply tides” function. The CARIS “multiple station” sub function was also employed to facilitate the application of final tide zoning scheme factors.

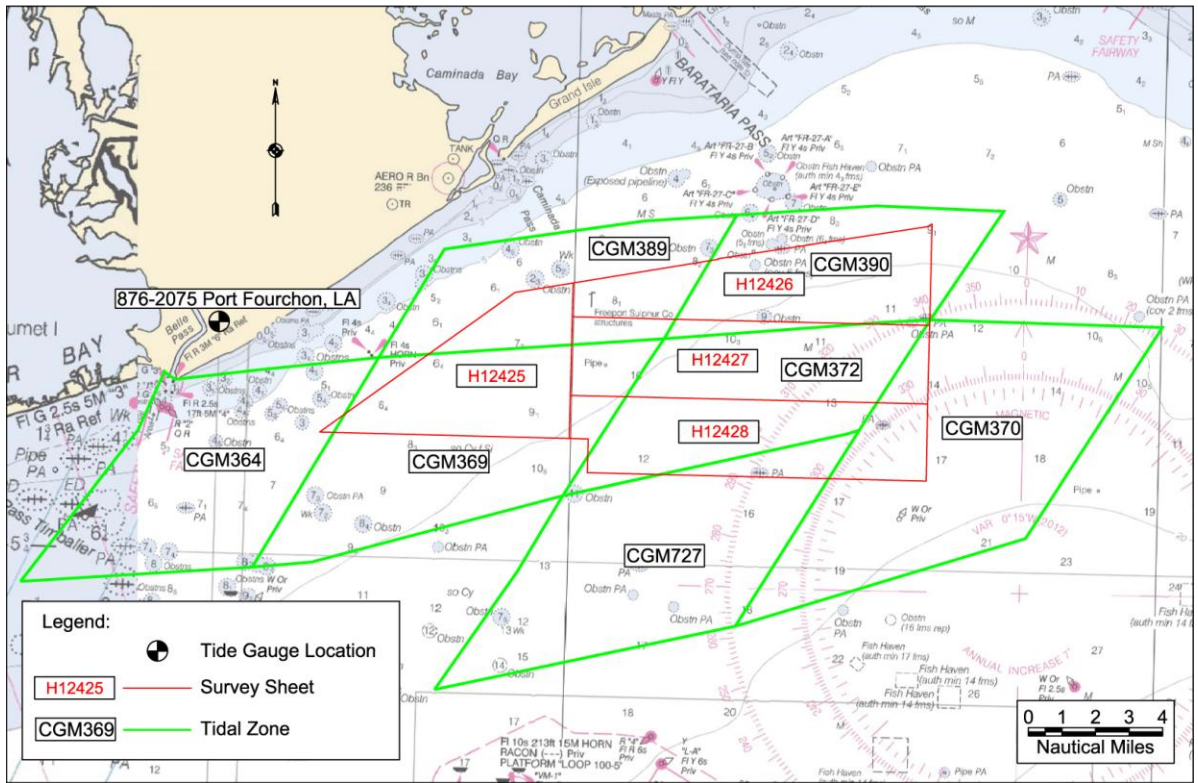


Figure 1. Project survey boundaries (red lines), tidal zone boundaries (green lines), and the Port Fourchon tide station location.

A.2 Unusual Tide Conditions

Specific information pertaining to individual surveys of project OPR-K339-KR-12 will be documented in each survey's respective Descriptive Report. In general, there are no exceptional tide issues to report.

1.4. Zoning

1.4.1. The water level station at Port Fourchon, LA (8762075) is the reference station for predicted tides for hydrography Approaches to Barataria Bay, AL. The time and height correctors listed below for applicable zones should be applied to the predicted tides at the station indicated during the acquisition and preliminary processing phases of this project.

Predictions may be retrieved in one month increments over the Internet from CO-OPS SOAP web services at <http://opendap.co-ops.nos.noaa.gov/axis/text.html>. The contractor must notify the COTR or the COTR's authorized representative immediately of any problems concerning the predicted tides. Predictions are six-minute time series data relative to MLLW in metric units on Greenwich Mean Time. For the time corrections, a negative (-) time correction indicates that the time of tide in that zone is earlier than (before) the predicted tides at the reference station. A positive (+) time correction indicates that the time of tide in that zone is later than (after) the predicted tides at the reference station. For height corrections, the water level heights **relative to MLLW** at the reference station are multiplied by the range ratio to estimate the water level heights relative to MLLW in the applicable zone.

<u>Zone</u>	<u>Time Corrector (min)</u>	<u>Range Ratio</u>	<u>Predicted Reference Station</u>
CGM364	-12	x1.09	8762075
CGM369	-12	x1.09	8762075
CGM370	-24	x1.09	8762075
CGM372	-18	x1.09	8762075
CGM389	-6	x1.09	8762075
CGM390	-12	x1.09	8762075
CGM727	-18	x1.09	8762075

1.4.2. Polygon nodes and water level corrections referencing Port Fourchon, LA (8762075) are provided in ASCII format denoted by a *.zdf extension file name. Zoning diagrams, created in MapInfo, are provided in both digital and hard copy format to assist with the zoning. Longitude and latitude coordinates are in decimal degrees. Negative (-) longitude is a MapInfo representation of West longitude.

“Preliminary” data for the control water level station, Port Fourchon, LA (8762075), are available in near real-time and verified data will be available on a weekly basis for the previous week. **These water level data may be obtained from CO-OPS SOAP web services at <http://opendap.co-ops.nos.noaa.gov/axis/text.html>.**

1.4.3 Zoning Diagram(s)

Zoning diagrams, created in MapInfo[®] and Adobe PDF, are provided in digital format to assist with the zoning in section 1.4.1.

1.5. Final Zoning

1.5.1. For final processing, apply tidal zoning correctors to “verified” observed data of the NOS control station and/or the final processed data of the subordinate stations.