

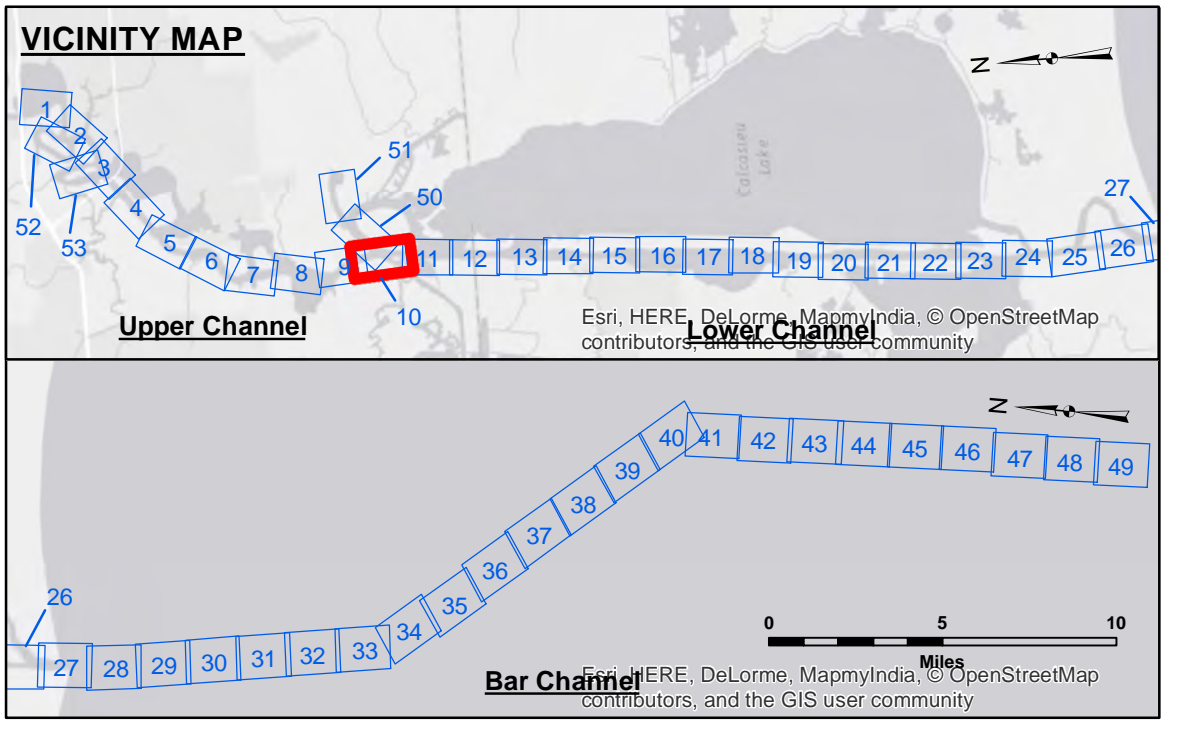
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Data Constraints: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to: changing hydrographic conditions, changes in bathymetry, and changes in the hydrographic conditions which develop after the date of the survey. The user is responsible for the results of their use of the data. The user is not responsible for the results of their use of the data for other than its intended purpose.

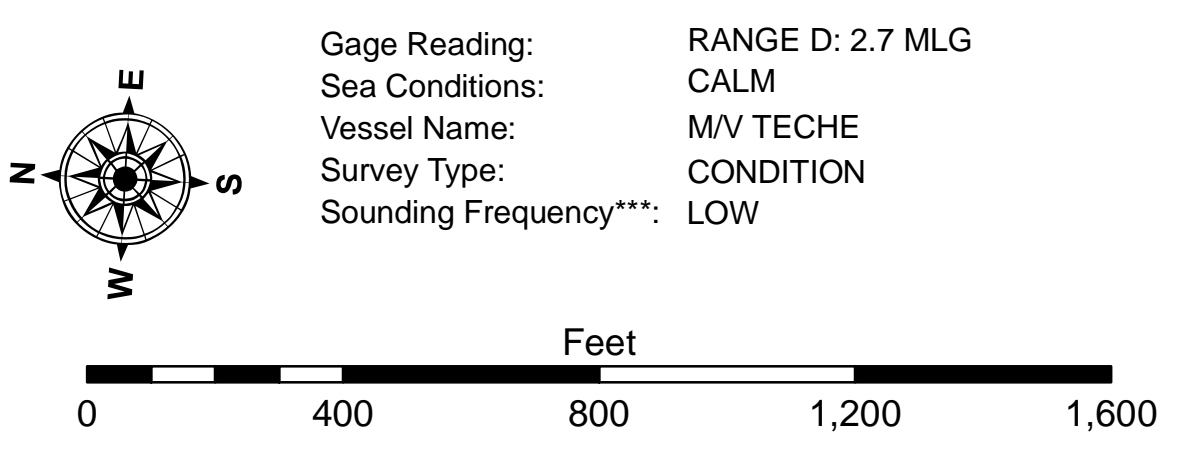
Access Constraints: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data are not to be used for any purpose other than that for which they were collected, and that the data are not to be used for any purpose other than that for which they were collected, and that the data are not to be used for any purpose other than that for which they were collected.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	
Submitted:	Surveyed By: SPS/JH
Recommended:	Plotted By: BD
Approved:	Checked By: AC

**CALCASIEU SHIP CHANNEL
UPPER SHEET 10
CR_10_UPR_20160920
20 September 2016**



LEGEND	
--- Federal Navigation Channel	○ Cable Area
— Federal Navigation Center Line	□ Placement Area
— As-built Pipeline/Cable	□ Anchorage Area
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point
— Project Depth Contour	⚓ Wrecks-Submerged
3 Fluff Thickness (feet)*	★ Beacon, General
● Shoalest Sounding**	◆ Red Navigation Buoy
○ Green Navigation Buoy	◆ Green Navigation Buoy



NOTES:
 Horizontal Coordinate System: North American Datum of 1983 (NAD83), projected to the State Plane Coordinate System (SPCS), Louisiana South Zone. Distance units in U.S. Survey Feet.
 Vertical Datum: Soundings are shown in feet and indicate depths below Mean Low Gulf Datum (MLG). Datum Relationships for gage 73585 as of December 2013: 0.0 NAVD83 (OPUS 2013) = 0.8' MLLW = 1.8' MLG or 0.0' MLLW = 1.0' MLG
 Distances on the Calcasieu River are shown at 1 mile intervals.
 The location of navigation aids are based on and provided by the U.S. Coast Guard and USACE survey crews.
 2015 Aerial Photography data source: NAIP
 Reference is N.O.A.A. Navigation Chart No. 11339.
 * Difference between high and low frequency elevations where greater than 1.0'.
 ** Shoalest Sounding per Quarter per Reach.
 *** High frequency (200 kHz) survey data represents the first signal return at a sounding location and will include suspended solids, known as "fluff", if present. Low frequency (20 kHz) survey data normally penetrates through this "fluff" layer to depict elevations of consolidated bottom material. Low frequency accuracies may vary depending on channel conditions and fathometer settings.

**Sheet Reference Number
10 of 53**