

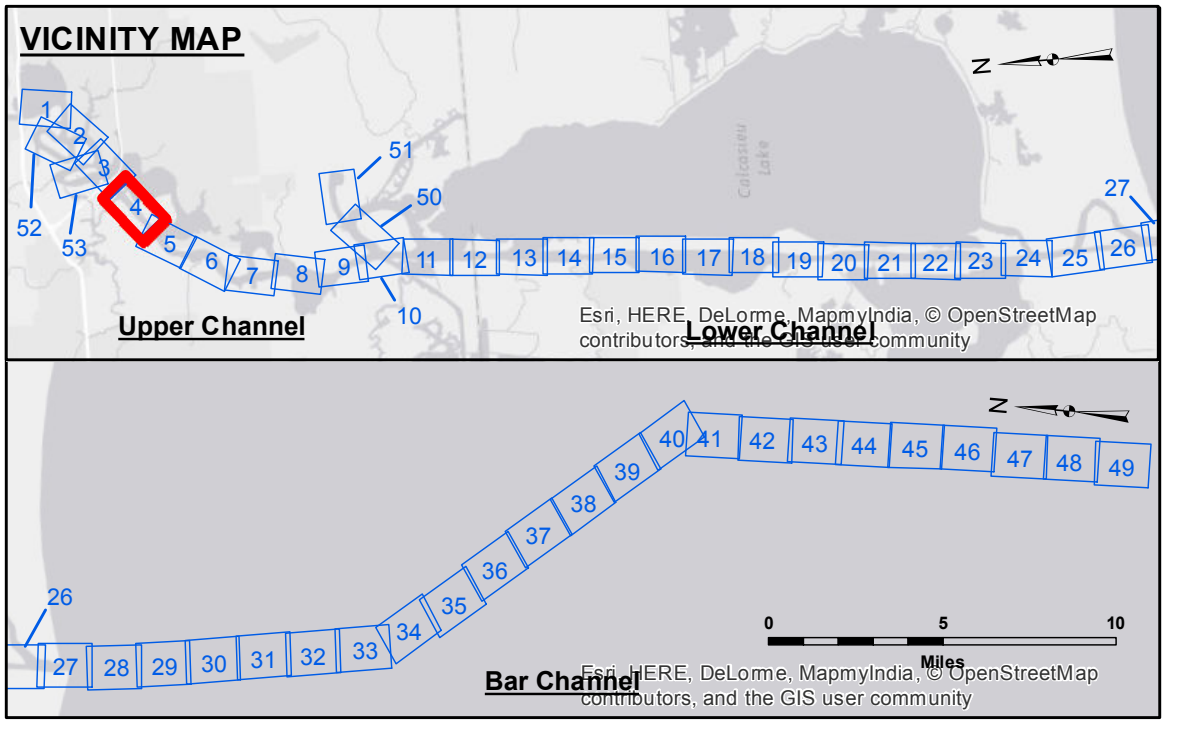
DISCLAIMER
 The information depicted on this map represents the results of a hydrographic survey conducted by the U.S. Army Corps of Engineers. The user is responsible for the accuracy, completeness, and reliability of the data for its intended use. The Corps of Engineers does not warrant the accuracy or completeness of the data for any purpose other than that for which it was collected. The Corps of Engineers does not accept responsibility for changes in the hydrographic conditions when developed after the date of the survey. The Corps of Engineers does not accept responsibility for changes in the hydrographic conditions when developed after the date of the survey. The Corps of Engineers does not accept responsibility for changes in the hydrographic conditions when developed after the date of the survey.

Submitted:	Surveyed By: SP/PM
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U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT

**CALCASIEU SHIP CHANNEL
 UPPER SHEET 4
 CR_04_UPR_20161027
 27 October 2016**

**Sheet Reference Number
 4 of 53**



LEGEND

--- Federal Navigation Channel	○ Cable Area	3 Fluff Thickness (feet)*	■ -15' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	■ -15' to -20'
— As-built Pipeline/Cable	⊗ Anchorage Area	★ Beacon, General	■ -20' to -25'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	■ -25' to -32'
— Project Depth Contour	⊗ Wrecks-Submerged	◆ Green Navigation Buoy	■ -32' to -38'
			■ -38' to -40'
			■ -40' to -42'
			■ -42' and below

Gage Reading: DM 114: 2.25 MLG
 Sea Conditions: CALM
 Vessel Name: OB-167
 Survey Type: CONDITION
 Sounding Frequency***: LOW

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 73565 as of December 2013:
 0.0' NAVD83 (OPUS 2013) = 0.6' MLLW = 1.6' 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. 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.