

Access/Obstruction: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data is not to be used for any purpose other than that for which it was originally intended. The user is responsible for the results of any use of the data for other than its intended purpose.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project. It is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results of any use of the data for other than its intended purpose.

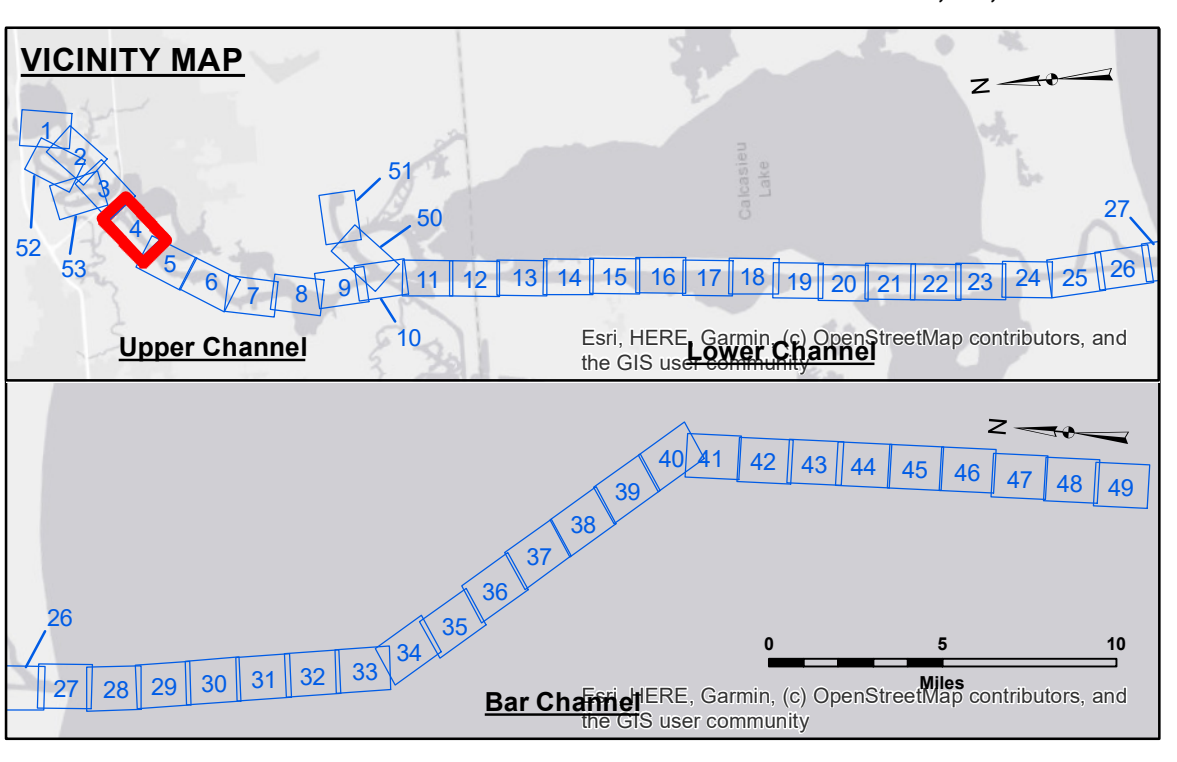
Data Constraints: Hydrographic survey data is subject to change due to several factors including but not limited to changing hydrographic conditions which develop after the date of the survey. The user is responsible for the results of any use of the data for other than its intended purpose.

Disclaimer: The information depicted on this map represents the results of a survey. It is not to be used for any purpose other than that for which it was originally intended. The user is responsible for the results of any use of the data for other than its intended purpose.

Submitted:	Surveyed By: SP-SR	Plotted By: AO	Checked By: AC
Recommended:	Chart, Survey Section		
Approved:	Chart, Waterways Maintenance Section		

**CALCASIEU SHIP CHANNEL
UPPER SHEET 4
CR_04_UPR_20191121_CS
21 November 2019**

**Sheet Reference Number
4 of 53**



LEGEND		
--- Federal Navigation Channel	○ Cable Area	3 Fluff Thickness (feet)*
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**
— As-built Pipeline/Cable	⊗ Anchorage Area	★ Beacon, General
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy
— Project Depth Contour	⊗ Wrecks-Submerged	◆ Green Navigation Buoy
		■ -16' and above
		■ -16' to -21'
		■ -21' to -26'
		■ -26' to -33'
		■ -33' to -39'
		■ -39' to -41'
		■ -41' to -43'
		■ -43' and below

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 Lower Low Water Datum (MLLW).
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 base 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.

Gage Reading: DM 114: 1.4 MLLW
Sea Conditions: CALM
Vessel Name: OB-167
Survey Type: CONDITION, VRS
Sounding Frequency***: LOW