

US Army Corps of Engineers District: CEMV

Access/Consent: 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 originally collected, and that the user is responsible for the results of any use of the data for other than its intended purpose.

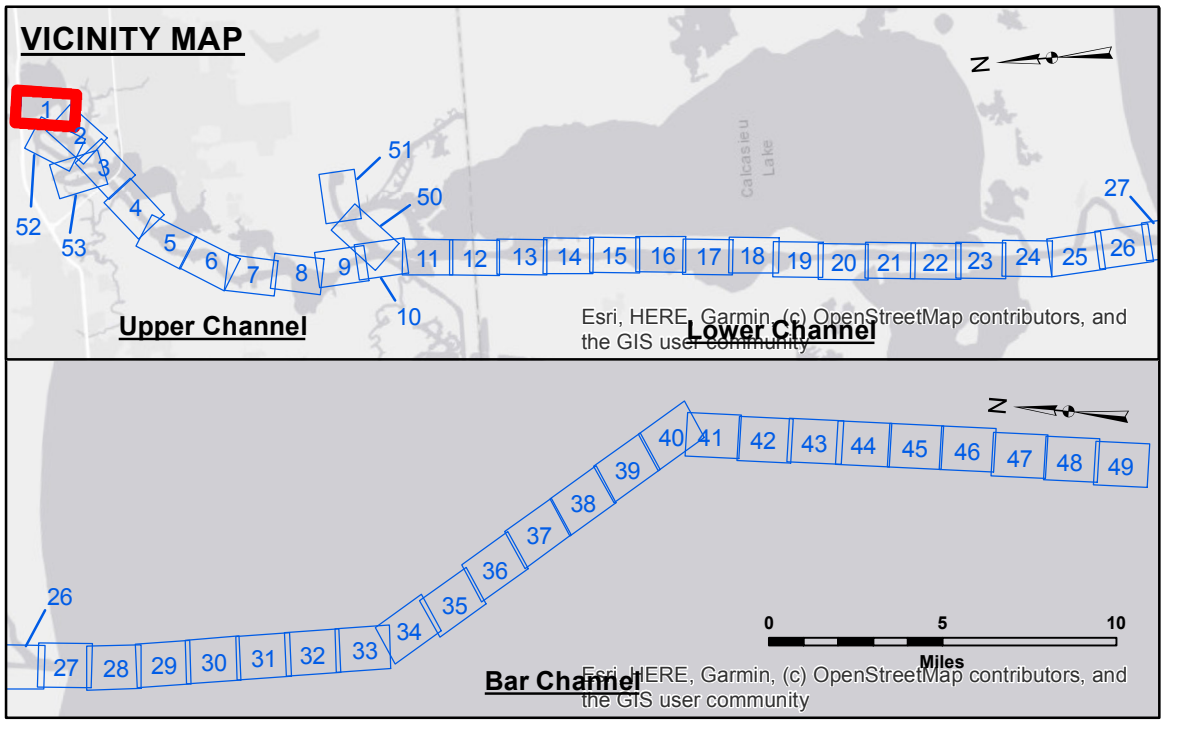
Vertical Datum: The information depicted on this map represents the results of a survey conducted in accordance with the standards of the United States Army Corps of Engineers. The user is responsible for the results of any use of the data for other than its intended purpose.

Data: 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.

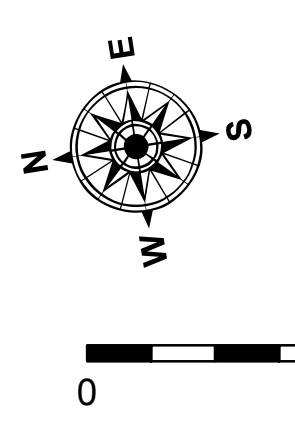
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Submitted:	Surveyed By: RYLAND/MOLLERE
Recommended:	Plotted By: JH
Approved:	Checked By: AC

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT



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
★ Beacon, General	◆ Green Navigation Buoy



Gage Reading: LAKE CHARLES 1.4 MLLW AVG
 Sea Conditions: CALM
 Vessel Name: OB 169
 Survey Type: CONDITION
 Sounding Frequency***: LOW

Vertical Datum:
 Soundings are shown in feet and indicate depths below Mean Lower Low Water (MLLW).
 Datum Relationships for gage 73550 as of December 2013:
 0.0 NAVD83 (OPUS 2010) = 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.

**CALCASIEU SHIP CHANNEL
 UPPER SHEET 1
 CR_01_UPR_20210617_CS
 17 June 2021**

**Sheet Reference Number
 1 of 53**