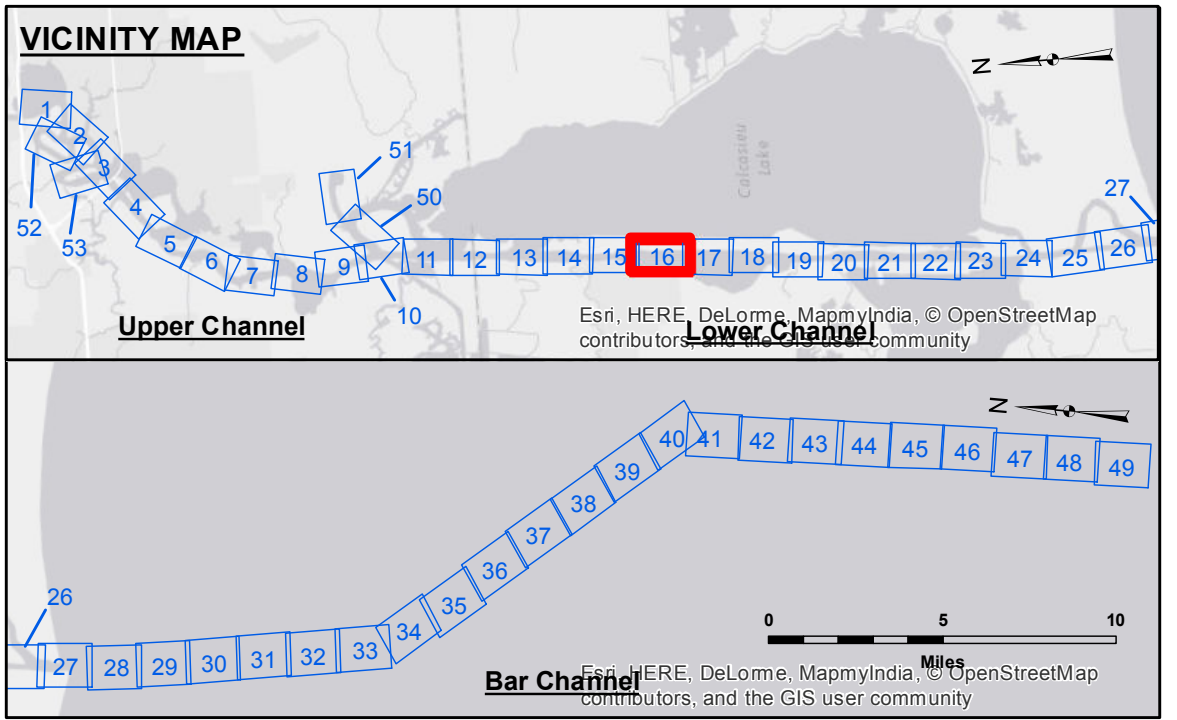


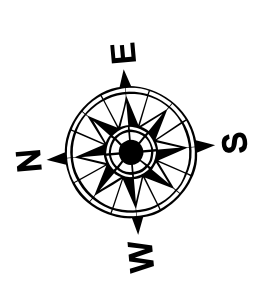
US Army Corps of Engineers District: CEMVN

DISCLAIMER: The data represent the results of data collection for a specific US Army Corps of Engineers project and are not intended for any other purpose. The user is responsible for the results of any application of the data for other than its intended purpose. The application of the data for other than its intended purpose is at the user's risk. Hydrographic survey data is subject to change rapidly due to several factors including but not limited to dredging, accretion, and erosion. The user is responsible for the results of any application of the data for other than its intended purpose. The information depicted on the map represents the results of a survey conducted on the date shown and is not intended to represent the general condition existing at that time.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT		
Submitted:	Surveyed By:	Checked By:
Revised/Updated:	PM, JH	AC
Project Name:	Plotted By:	
Chart, Survey Section	BD	
Approval:	Chief, Waterways Maintenance Section	



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



Gage Reading: HACKBERRY: 1.0 MLG
 Sea Conditions: CALM
 Vessel Name: OB-167
 Survey Type: CONDITION
 Sounding Frequency***: LOW

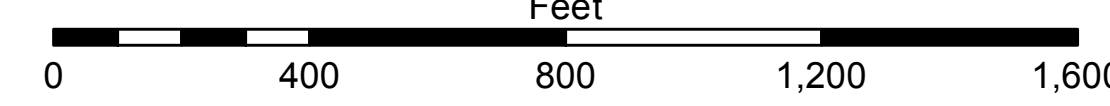
Horizontal Coordinate System:
 North American Datum of 1983 (NAD83), projected to the State Plane Coordinate System (SPCS), Louisiana South Zone. Distance units in U.S. Survey Feet.

Vertical Datum:
 Soundings are shown in feet and indicate depths below Mean Low Gulf Datum (MLG).
 Datum Relationships for gage 73600 as of December 2013:
 0.0' NAVD83 (OPUS 2010) = 1.0' MLLW = 2.0' 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
 LOWER SHEET 16
 CR_16_LWR_20170215
 15 February 2017**

**Sheet Reference Number
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