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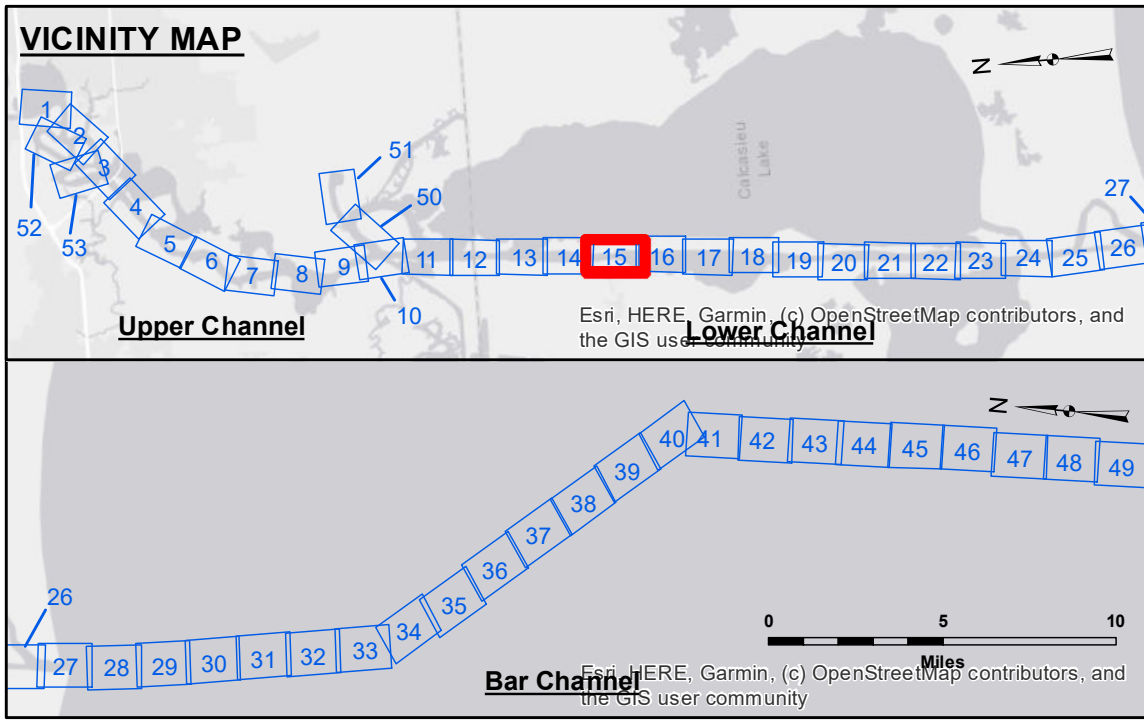
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Submitted:	Surveyed By: JDH/JA
Recommended:	Plotted By: BD
Checked:	Chart Survey Section
Approved:	Chief, Waterways Maintenance Section

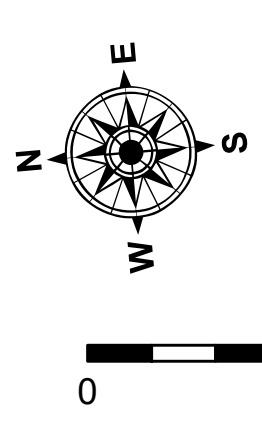
U.S. ARMY CORPS OF ENGINEERS  
NEW ORLEANS DISTRICT

**CALCASIEU SHIP CHANNEL  
LOWER SHEET 15  
CR\_15\_LWR\_20190919\_CS  
19 September 2019**

**Sheet Reference Number  
15 of 53**



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



Gage Reading: HACKBERRY: 2.73 MLLW AVG.  
Sea Conditions: CALM  
Vessel Name: M/V VALENTOUR  
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 Lower Low Water Datum (MLLW). Datum Relationships for gage 73600 as of December 2013: 0.0' NAVD88 (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 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.