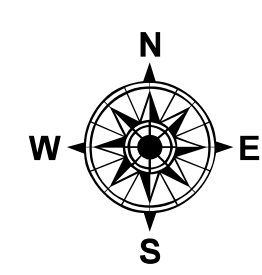
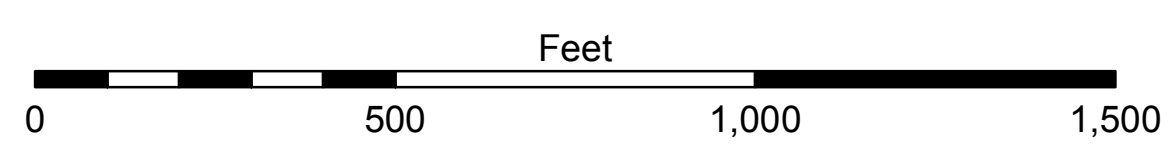


**LEGEND**

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area
— 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: PASS MANCHAC (85420): 1.5 NAVD  
 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 North American Vertical Datum of 1988 (NAVD88).  
 The location of navigation aids are base on and provided by the U.S. Coast Guard.  
 2010 Aerial Photography data source: NAIP Louisiana.  
 Reference is N.O.A.A. Navigation Chart No. 11369.  
 \*\* 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.



**DISCLAIMER:** The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data are not warranted for any purpose other than that for which they were collected, expressed, or implied concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose of the recipient. The user is responsible for the results obtained from the use of these data. The user shall not be held liable under no liability whatsoever to any person by reason of any use of these data. The recipient agrees to indemnify the United States Government for any and all claims, damages, losses, and expenses, including reasonable attorneys' fees, that may be incurred by the United States Government as a result of the use of these data. The recipient may not transfer these data to others without also transferring this disclaimer. The information depicted on this map represents the results of a survey conducted on or about the date of the survey. It is not intended to represent the general condition existing at that time.

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 NEW ORLEANS DISTRICT

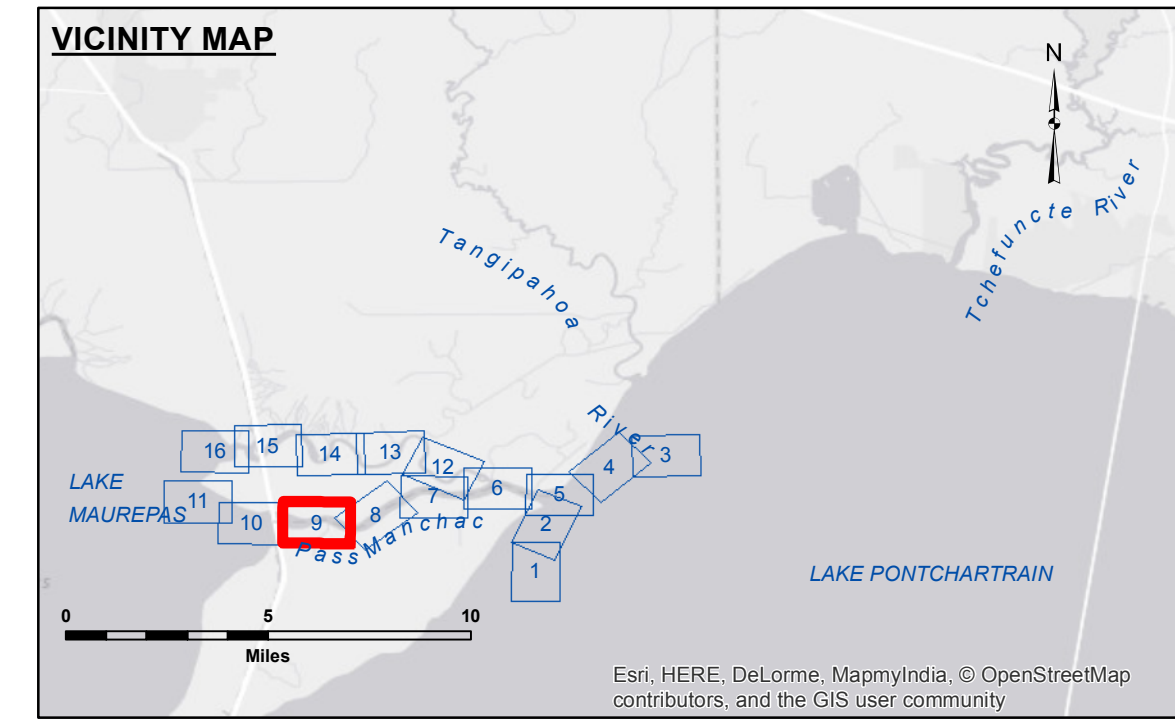
Submitted:	Surveyed By: SPPM
Recommended: Chief Survey Section	Plotted By: AO
Approved: Chief Waterways Maintenance Section	Checked By: RN

**NORTHSORE WATERWAYS**  
**PASS MANCHAC / NORTH PASS**  
**NS\_07\_MAN\_20160414\_PM**  
**14 April 2016**

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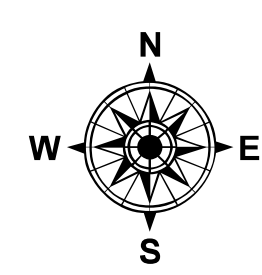




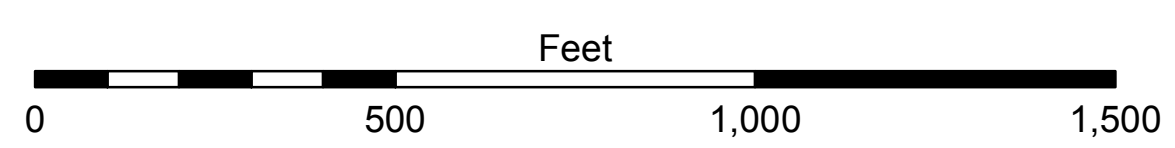


**LEGEND**

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area
— 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: PASS MANCHAC (85420): 1.5 NAVD  
 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.  
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 Reference is N.O.A.A. Navigation Chart No. 11369.  
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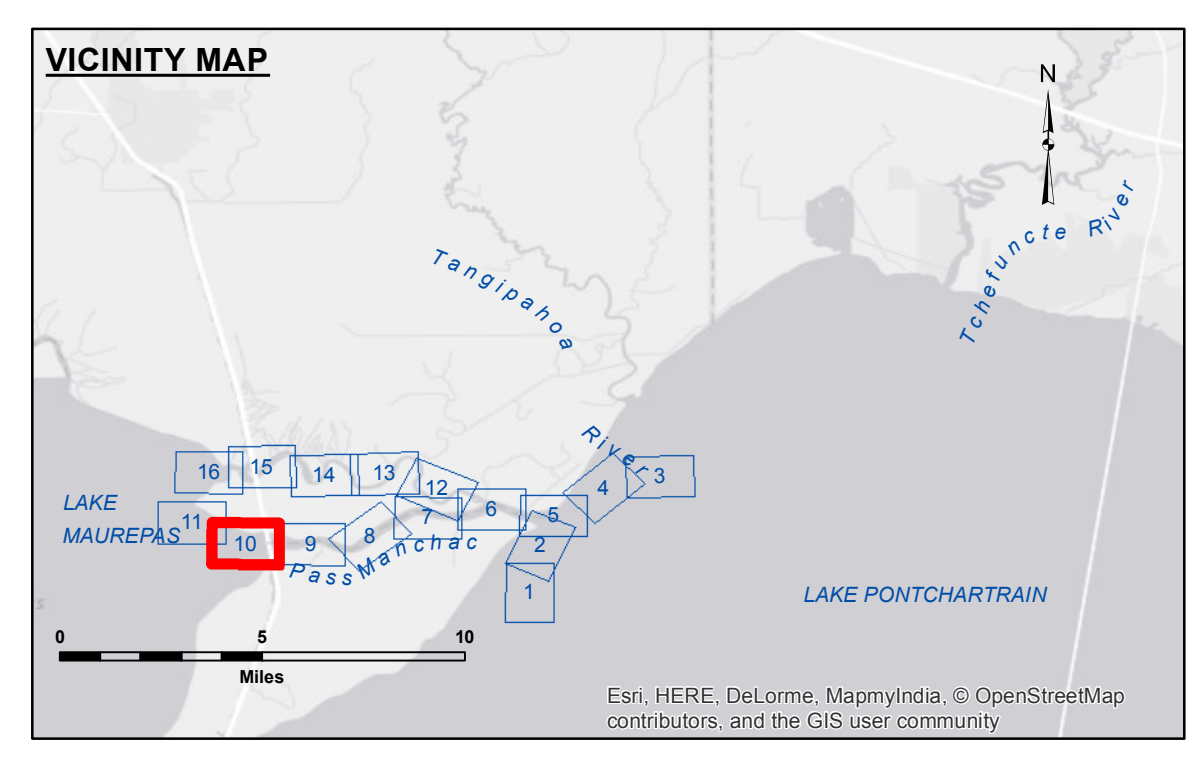
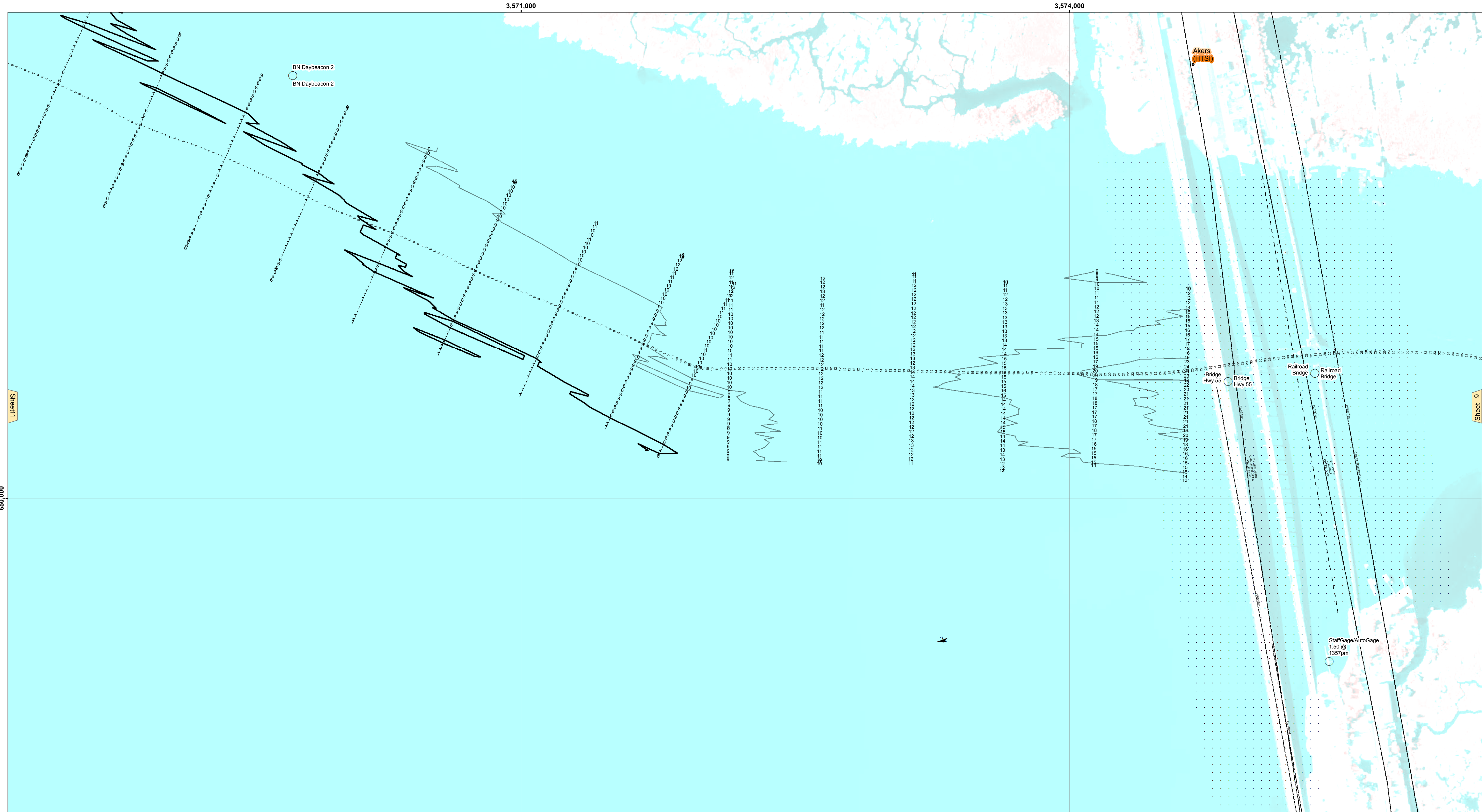
**DISCLAIMER:** The data represents the results of data collection/processing for a specific US Army Corps of Engineers project. It is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results and application of the data for other than its intended purpose.  
 Data Constraints: Hydrographic survey data is subject to change due to several factors including but not limited to changing hydrological conditions which develop after the date of the survey. The US Army Corps of Engineers accepts no responsibility for changes in the hydrological conditions which develop after the date of the survey. Product maintainers should not rely solely upon it.

U.S. ARMY CORPS OF ENGINEERS  
 NEW ORLEANS DISTRICT

Submitted:	Surveyed By: SP,PM
Recommended: Chief, Survey Section	Plotted By: AO
Approved: Chief, Waterways Maintenance Section	Checked By: RN

**NORTHSORE WATERWAYS**  
**PASS MANCHAC / NORTH PASS**  
**NS\_07\_MAN\_20160414\_PM**  
**14 April 2016**

**Sheet Reference Number**  
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**LEGEND**

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area
— 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: PASS MANCHAC (85420): 1.5 NAVD  
 Sea Conditions: CALM  
 Vessel Name: OB-167  
 Survey Type: CONDITION  
 Sounding Frequency\*\*\*: LOW

Vertical Datum:  
 Soundings are shown in feet and indicate depths below North American Vertical Datum of 1988 (NAVD88).

The location of navigation aids are base on and provided by the U.S. Coast Guard.  
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 Reference is N.O.A. Navigation Chart No. 11369.  
 \*\* Shoalest Sounding per Quarter per Reach.

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**NOTES:**

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**Access Constraints:** 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 prepared, or implied concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose and the user assumes all liability whatsoever for any use of the data for any purpose other than that for which they were prepared. The recipient may not transfer these Government provided data. The recipient may not transfer these data to others without also transferring this disclaimer.

The information depicted on this map represents the results of a survey conducted on the date shown. It is considered to represent the general condition existing at that time.

U.S. ARMY CORPS OF ENGINEERS  
 NEW ORLEANS DISTRICT

Submitted:	Surveyed By: SP-PM
Recommended: Chief Survey Station	Plotted By: AO
Approved: Chief Waterways Maintenance Section	Checked By: RN

**NORTHSORE WATERWAYS  
 PASS MANCHAC / NORTH PASS  
 NS\_07\_MAN\_20160414\_PM  
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 3.816-2115(2)12

